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## The Effect of Key Audit Matters on Investor Sentiment in Companies Listed on the Tehran Stock Exchange

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### Abstract


Investor Sentiment (SENT) is recognized as a key determinant of financial decision-making, influencing asset pricing and market volatility. This sentiment, which reflects investors' irrational optimism or pessimism about a firm's stock, can lead to deviations between market prices and a firm's intrinsic value. Prior studies indicate that SENT is affected not only by fundamental factors but also by psychological and behavioral variables. One such factor is Key Audit Matters (KAMs). As a component of the auditor's report, KAMs provide information regarding significant audit risks, which may influence investors' judgments. Investors' reactions to these disclosures may reflect their level of confidence in the transparency and reliability of financial reporting. Accordingly, the objective of this study is to examine the effect of KAMs on SENT in companies listed on the Tehran Stock Exchange (TSE). To achieve this objective, a hypothesis was developed. The study sample consists of 119 firms listed on the TSE over the period 2019–2023. To test the hypothesis, a multiple regression model based on panel data was employed. The empirical results indicate that KAMs have a positive and significant effect on SENT. This finding suggests that the transparent disclosure of KAMs enhances investors' confidence and optimism, thereby significantly strengthening SENT.

**Keywords:** Investor sentiment, Key audit matters, Behavioral biases.

## 1 | Introduction

Investor Sentiment (SENT), as one of the psychological factors influencing financial decisions, represents a combination of individuals' emotions, cognitions, and expectations regarding future market [1–3]. Prior studies have shown that such sentiment can significantly impact stock price volatility and market efficiency [4]. In particular, in emerging markets, where the participation of retail investors is relatively high—SENT plays a more prominent role [5]. Emotional behaviors, such as fear or greed, may lead to irrational decision-making and cause stock prices to deviate from their intrinsic values. This argument underscores the growing importance of identifying and examining the factors that shape SENT [4].

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The traditional model of audit reporting limited the communication between auditors and investors regarding risk-related information [6]. As a result, investors often perceived audit reports as less informative than expected [7], or even as containing no meaningful informational content [8]. Consequently, understanding the auditor's risk identification process from the audit report is challenging for investors, making it difficult to utilize audit reports as an important informational tool fully. Moreover, the economic environment faced by investors has become increasingly complex, and investment risks have intensified. In response to this situation, there has been a growing demand across all segments of society for improvements in financial reporting, highlighting the need to fully enhance the communicative role of financial statements [9]. To make audit reports more useful and informative, expanded and revised reporting practices have been introduced, drawing users' attention to high-risk areas or matters that significantly affect audit strategy or require substantial professional judgment [10]. The primary objective of International Standard on Auditing (ISA) 701 is to improve the informational content of audit reports, enhance audit transparency, and strengthen auditors' accountability. The main rationale for disclosing Key Audit Matters (KAMs) has been to align with international standards aimed at increasing the informational value of audit reports, as required by professional regulators and policymakers. The strategy for disclosing such matters involves identifying and evaluating significant and challenging areas in the audit process and reporting these matters, along with the auditor's response, while informing corporate governance bodies about them [11].

KAMs, as indicators of risk and uncertainty in financial reporting, elicit heterogeneous reactions among investors [12]. One of the primary reasons for this response is the signaling or warning effect of KAMs' disclosures. When auditors explicitly highlight issues such as going concern uncertainties or significant changes in accounting policies, investors interpret these signals as indications of potential problems within the firm [13]. This interpretation may lead to reduced investor confidence and increased caution in financial decision-making, even when the firm is fundamentally in a sound financial position. On the other hand, ambiguity in the disclosure of such matters may also intensify market reactions, as investors may form worst-case expectations in the absence of clear information [14].

Accordingly, it is essential to examine whether investors react to disclosed information about KAMs, and, if so, whether such disclosure is informative. Moreover, the present study contributes to reducing the existing research gap by providing empirical evidence on the effect of KAMs disclosure on SENT. In addition, given the relatively recent introduction of KAMs disclosure requirements in audit reports and the limited number of studies conducted in this area, this research can offer guidance to policymakers and relevant stakeholders in better understanding this process and moving toward an optimal framework, thereby contributing to the existing body of knowledge.

In the following sections, the theoretical foundations and literature review are presented. Subsequently, the research hypotheses, the methodology for hypothesis testing, and the statistical population and sample are explained. Finally, the study's findings and results are presented.

## 2 | Literature Review

In recent years, researchers have devoted considerable attention to SENT. Sentiment is regarded as a behavioral bias in investors that, due to the absence of full rationality, may expose them to opportunistic managerial actions. When SENT increases, investors tend to pay less attention to financial statements and firms' fundamental information and are instead influenced by exaggerated, and sometimes unrealistic, news and media reports (Baker and Wurgler [4], [15]). In classical financial theory, SENT was not considered a factor influencing capital markets. This argument was based on the assumption that either investors' sentiments are dispersed and therefore cancel each other out, meaning that sentiment cannot become coordinated to form a systematic wave affecting the stock market, or, if sentiment does affect the market systematically, mispricing would be corrected by rational arbitrageurs [16].

In recent years, numerous efforts have been made to improve the information disclosed in audit reports. Following the corporate financial scandals of recent decades, the global financial crisis of 2008, the increasing

complexity of the business environment, and the growing sophistication of financial reporting standards, demand from users for more informative disclosures from auditors has increased. In fact, various user groups have sought improvements to audit reports to enhance transparency. To address this need, international standard-setters and regulatory bodies have taken various initiatives. One of the most important developments is the issuance of ISA 701, titled *Communicating KAMs in the Independent Auditor's Report*, by the International Auditing and Assurance Standards Board (IAASB) [17], [18]. According to this standard, a new section titled "KAMs" has been added to the auditor's report, and its implementation became mandatory from December 15, 2016 Kermani [19]. In Iran, Auditing Standard No. 701, titled *Communicating KAMs in the Independent Auditor's Report*, was approved in 2021, and compliance with this standard is mandatory for financial statements whose fiscal year begins on or after March 21, 2022 [20].

Under this standard, KAMs refer to issues that, in the auditor's professional judgment, were of most significance in the audit of the current-period financial statements. These matters are selected from issues communicated with governance bodies. The auditor must determine which matters required significant audit attention by considering: 1) Areas with higher assessed risk of material misstatement or significant risks identified under ISA 315 (Revised), 2) Significant auditor judgments relating to areas involving major management judgments, including accounting estimates with high uncertainty, and 3) The effects of significant events or transactions that occurred during the period on the audit process [21].

KAMs disclose firm-specific information (Zhai et al. [22]) and may vary depending on the industry in which a company operates (Kitiyong and Srijunpetch [23]). The characteristics of KAMs disclosures differ based on auditors' professional judgment regarding what should be disclosed and how it should be communicated [24]. The disclosure of KAMs is also influenced by factors such as Litigation (LITI) risk, auditor-client relationships, the rigor of accounting standards, and regulatory oversight and enforcement activities [25]. As a result, auditors disclose different types of KAMs. These variations may lead to different investor reactions, as different levels of risk are conveyed through these disclosures. Investors are expected to react more strongly to a higher number of disclosed KAMs because they provide important information that highlights areas with greater risk exposure. Although KAMs offer useful information, they also signal higher risk and uncertainty regarding the audited firm. The greater the number of KAMs disclosed, the higher the level of risk information conveyed. In other words, KAMs' disclosure may make investors less comfortable with uncertain, high-risk situations [12]. Therefore, it is expected that KAMs increase investor reactions.

Based on the above discussion, the main objective of the present study is to examine how KAMs affect SENT in companies listed on the Tehran Stock Exchange (TSE). Accordingly, the following hypothesis is developed:

**H1.** KAMs have a positive and significant effect on SENT.

### 3 | Research Background

Kitiyong et al. [12], in a study entitled "The impact of KAMs on SENT," examined data from 334 Thai firms over the period 2016–2017 using multiple regression analysis. The results showed that SENT responds only to three KAM categories and neutral words. However, investors do not react to the total number of KAMs or to words associated with negativity, positivity, LITI, or uncertainty. These findings suggest that the disclosure of KAMs has limited informational value for investors.

Srisuwan et al. [26], in a study entitled "Determinants of KAMs reporting," analyzed data from 343 firms listed on the Stock Exchange of Thailand during 2016–2020 using multiple regression. The results indicated that auditor type (Big Four vs. non-Big Four), audit fees, audit independence, and industry type have a positive and significant effect on the reporting of KAMs. However, board gender diversity, year, Return on Assets (ROA), risk, and firm size do not have a significant effect on KAM disclosure.

Alduneibat [27], in a study entitled "Determinants of the level of KAMs disclosure," examined 108 firms listed on the Oman Stock Exchange (OSE) over 2017–2019 using multiple regression analysis. The results showed a negative relationship between the level of KAM disclosure and profitability as well as modified

audit opinions. In addition, receivables and Provisions (PRO) were found to be the areas with the highest level of KAM disclosure.

He [28], in a review study entitled “Determinants of SENT in capital markets,” identified three key factors: corporate announcements, market seasonality, and Environmental, Social, and Governance (ESG) performance. The findings indicate that corporate announcements serve as an important source of information that directly influences investor behavior and sentiment, while market seasonality reflects cyclical patterns in SENT. Meanwhile, ESG investments reflect investor concerns regarding environmental protection, social responsibility, and corporate governance performance.

Hoang et al. [29], in a study entitled “Investor reactions to KAMs,” examined 120 U.S. investors. The results showed that when a component of KAMs is associated with a low-risk financial (non-financial) issue, investors assess investment risk as higher (lower) compared to situations where a KAMs component is unrelated to low-risk issues.

Liu et al. [30], in a study entitled “User-perceived sentiment in audit reports on KAMs and firm performance,” analyzed 1,606 firm-year observations from the Taiwan Stock Exchange (TWSE) during 2017–2018 using ordinary least squares regression. The results indicated that the positive relationship between user sentiment, KAMs' disclosure, and current market performance was statistically weaker in 2017 than in 2018.

Wuttichindanon and Issarawornrawanich [31], in a study entitled “Determinants of KAMs disclosure,” analyzed 996 firm-year observations from firms listed on the Thailand Stock Exchange during 2016–2017 using multiple regression. The findings showed that firms audited by Big Four audit firms, firms with a higher number of subsidiaries, and firms operating in technology, real estate, construction, and financial industries disclose more KAMs. In contrast, highly profitable firms tend to disclose fewer KAMs. Regarding corporate governance mechanisms, the number of KAMs disclosures is significantly and positively associated with the number of independent directors.

Altawalbeh and Alhajaya [32], in a study entitled “Investor reactions to the disclosure of KAMs,” examined data from 128 firms listed on the OSE in 2017 using panel data regression. The results showed that KAM disclosure significantly affects investors' decisions.

Heidari and Meshayekh [33], in a study titled “Consequences of disclosing KAMs on investors' Judgment and Decision-Making,” conducted an experimental factorial design with 176 participants. The results indicated that KAMs influence the judgment and decision-making of professional investors and reduce their investment intention, while they have no significant effect on non-professional investors. Additionally, earnings performance affected the valuation judgments of both groups, and no interaction effect was found between earnings performance and KAMs.

Safari et al. [34], in a study entitled “Explaining the audit report model on investor behavior with emphasis on behavioral biases,” surveyed 220 investment experts, managers, ordinary investors, and auditors selected randomly in 2022. Using structural equation modeling, the results showed that the type of audit report significantly affects rational behavior. Cognitive bias plays a mediating/moderating role in the effect of audit report type on intuitive decision-making and reactive behavior.

Eskandar and Safdell [11], in a qualitative study titled “The process of disclosing KAMs in the auditor's report,” used grounded theory and in-depth interviews with experts. The findings (47 concepts and 14 categories) revealed that the disclosure process of KAMs in Iran is still far from an optimal level and faces significant challenges, including user-related, standard-related, and professional challenges.

Akramiyarfi et al. [35], in a study entitled “The effect of emphasis of matter paragraphs on investor behavior,” analyzed data from 105 companies listed on the TSE during 2016–2020 using panel regression. The results showed that investors react negatively to emphasis-of-matter paragraphs when firms report high short-term earnings, and they respond more negatively to reported earnings after the issuance of audit reports containing such paragraphs.

Rahimi et al. [36], in a study titled “The role and importance of Audit Report Disclosure (ARD) on investor reaction,” examined companies listed on the TSE during 2016–2020 using panel data regression. The results indicated that investor reactions to audited financial statements are more positive compared to unaudited financial statements.

Shoja et al. [37], in a study entitled “The role and importance of increasing ARD in professional and Non-Professional Investor Decisions (NPID),” used a fuzzy Delphi method and surveyed 30 experts in finance and auditing. The findings showed that the level of disclosure and the assurance provided by auditors significantly affect investors’ decisions and create distinctions between professional and non-professional investors.

Abaspour Thani et al. [38], in a study titled “Designing a model for disclosing key matters in audit reports,” used a questionnaire-based method. The qualitative phase involved 13 academic experts and audit firm partners, while the quantitative phase included 22 experienced brokers with more than five years of experience who evaluated identified components using a fuzzy matrix. The results showed that disclosure of KAMs has a negative, significant effect on business failure among companies listed on the TSE.

Heirani et al. [39], in a study entitled “The effect of KAMs on investors’ perception of management reporting reliability,” surveyed 300 graduates in accounting and finance with 2 to 10 years of experience who actively traded in the TSE. The results showed that investors’ perceptions of management credibility under strict accounting standards do not differ significantly from those under less strict standards. Furthermore, the inclusion of KAMs does not affect perceived credibility under strict accounting standards and does not reduce perceived credibility under accurate accounting standards.

## 4 | Methodology

Given that the results of this study can be used in investors’ decision-making processes, it is considered an applied research. In a descriptive research design, the researcher does not manipulate variables or create conditions for events to occur. Based on this classification, since none of the variables in the present study are manipulated and the analysis is limited to describing the collected data, the research is descriptive in nature. Furthermore, as the main objective of the study is to determine the relationships between variables and their magnitudes, the study is also correlational in both method and nature. The data required for the theoretical background of the research were collected from secondary sources, including books, scientific articles, research reports, theses, credible documents, and digital databases, using a library-based method. The primary (raw) data required for the study were obtained from information published by official institutions such as the TSE (Comprehensive Database of All Listed Companies (CODAL) system), which includes firms’ financial information, market indicators, stock prices, and financial statements, as well as the Rahavard Novin software.

The statistical population of this study includes all companies listed on the TSE during the period 2019 to 2023. The sampling method used in this research is systematic elimination sampling; therefore, to determine the sample size, the following conditions must be met:

- I. Financial data must be available for the entire study period and contain no missing values.
- II. The fiscal year-end must be at the end of March, and no changes in the fiscal year should have occurred during the study period.
- III. Firms must not have experienced a trading suspension longer than three months.
- IV. Firms must not be financial intermediaries, such as investment companies, insurance firms, or banks, as their nature and activities differ from those of other listed companies.
- V. Firms must have been listed on the stock exchange before 2019.

Considering the conditions of the present study and using a systematic elimination approach, a total of 119 companies listed on the TSE were selected as the final statistical sample.

In this study, to test the research hypotheses, a multiple regression model based on panel data Kaviani et al. [40] was employed, and the analysis was conducted in two sections: descriptive statistics and inferential statistics. Descriptive statistics were used to summarize and describe the data in a simple and understandable form through measures such as mean, median, maximum, minimum, standard deviation, and others. Inferential statistics were used to conclude the population based on sample data, test hypotheses, and generalize the results to the broader population. In the inferential analysis, classical assumptions were examined, including multicollinearity using the Variance Inflation Factor (VIF), heteroscedasticity using the Breusch–Pagan–Godfrey test, and autocorrelation using the Breusch–Godfrey test. The research model and hypotheses were tested using Fisher’s F statistic and the t statistic. Preliminary calculations on the collected financial statement data were performed in Microsoft Excel, while final analysis and estimation were carried out in EViews 10.

## 5 | Research Variables

### 5.1 | Dependent Variable

The dependent variable in the present study is SENT. Based on the studies of Kitiiyong et al. [12] and Goudarzi Farahani et al. [41], SENT is measured using the Rhodes Kropf et al. [42] approach as follows.

This study uses non-fundamental components to estimate SENT. Specifically, SENT (non-fundamental component) at the firm level is defined as the difference between a firm’s market value and its fundamental value. A positive (negative) difference indicates that optimism (pessimism) dominates the stock price. The regression model attempts to estimate the fundamental value of equity based on financial variables such as book value of equity, net income, and Financial Leverage (LEV). Any deviation from this predicted value (i.e., the residual) is interpreted as the sentiment component, which arises from non-fundamental factors such as investor emotions, rumors, or herding behavior.

$$mit = \alpha_0jt + \alpha_1jt \text{ bit} + \alpha_2jt \ln |NI|_{it} + \alpha_3jt I [ < 0 ] * \ln |NI|_{it} + \alpha_4jt \text{ LEV}_{it} + \varepsilon_{it}, \quad (1)$$

where:

$m_{it}$ : natural logarithm of the market value of equity of firm  $i$  in year  $t$ ;  $b_{it}$ : natural logarithm of the book value of equity of firm  $i$  in year  $t$ ;  $\ln |NI|_{it}$ : natural logarithm of the absolute value of net income (profit or LOSS) of firm  $i$  in year  $t$ ;  $I [ < 0 ] \times \ln |NI|_{it}$ : a dummy variable used to account for negative net income LOSS. If the firm reports a LOSS, the variable  $I$  equals 1; otherwise, it equals 0;  $\text{LEV}_{it}$ : ratio of total liabilities to total assets of firm  $i$  in year  $t$ ;  $\varepsilon_{it}$ : the regression residual, which represents SENT.

The residual term ( $\varepsilon_{it}$ ) captures the deviation between the market value and the fundamental value of equity, and is interpreted as the SENT component driven by non-fundamental factors.

Positive residual values ( $\varepsilon_{it} > 0$ ) indicate investor optimism, implying that the market value of a firm’s stock exceeds its fundamental value (i.e., the theoretical value estimated by the model). Conversely, negative residual values ( $\varepsilon_{it} < 0$ ) reflect investor pessimism, indicating that the market value of the firm’s stock is lower than its estimated fundamental value.

### 5.2 | Independent Variable

The independent variable in the present study is KAMs. Based on the studies of Kitiwong et al. [12] and Kitiwong and Sarapaivanich [43], the components of KAMs are classified into 12 categories, as follows:

Restate: equals 1 if the financial statements are subsequently restated; otherwise 0.

- I. Property Investment (PVI): Equals 1 if the auditor discloses a key audit matter related to PVI; otherwise 0.
- II. Impairment (IMPA): Equals 1 if the auditor discloses a key audit matter related to IMPA; otherwise 0.
- III. Acquisition (ACQ): Equals 1 if the auditor discloses a key audit matter related to ACQ; otherwise 0.

- IV. Investment Valuation (INVES): Equals 1 if the auditor discloses a key audit matter related to INVES; otherwise 0.
- V. Inventory (INVEN): Equals 1 if the auditor discloses a key audit matter related to INVEN valuation; otherwise 0.
- VI. Accounts Receivable (AR): Equals 1 if the auditor discloses a key audit matter related to AR; otherwise 0.
- VII. PRO: Equals 1 if the auditor discloses a key audit matter related to PRO; otherwise 0.
- VIII. LITI: Equals 1 if the auditor discloses a key audit matter related to LITI and regulatory issues; otherwise 0.
- IX. Revenue (REV): Equals 1 if the auditor discloses a key audit matter related to REV recognition; otherwise 0.
- X. Taxation (TAX): Equals 1 if the auditor discloses a key audit matter related to TAX; otherwise 0.
- XI. Other matters (OTHER): Equals 1 if the auditor discloses a key audit matter related to OTHER; otherwise 0.

If the auditor refers to any of the above components in the audit report, a value of 1 is assigned; otherwise, 0 is assigned. Finally, the disclosed components are counted, and the KAMs variable is defined as the total number of key audit matter components disclosed in the audit report, ranging from 1 to 12.

### 5.3 | Control Variables

Based on the study of Kitiwong et al. [12], the control variables of the present research include financial LEV, ROA, LOSS, Audit Report Lag (ARL), Institutional Investors (INSTINV), and audit firm size:

LEV: defined as the ratio of long-term debt to total assets, Rahman et al. [44]. ROA: measured as net income divided by total assets [6]. LOSS: a dummy variable equal to 1 if the firm reports a LOSS, and 0 otherwise Kitiwong et al. [12]. Audit Report Delay (LOGAUDELAY): the natural logarithm of the number of days between the fiscal year-end date and the audit report date [45]. INSTINVESTOR: the ratio of shares held by INSTINVESTOR to total outstanding shares. This variable is calculated by dividing the number of shares owned by INSTINVESTOR by the total number of common shares outstanding at the beginning of the period Kitiwong et al. [12]. Audit Firm Size (BIG4): a dummy variable equal to 1 if the firm is audited by the Audit Organization (AO) or one of the top-tier audit firms accredited by the Securities and Exchange Organization (SEO), and 0 otherwise [6].

## 6 | Research Model

Based on the study of Kitiwong et al. [12], multiple regression analysis based on panel data is employed to test the research hypotheses, as specified in *Model (1)*.

$$\text{SENT}_{it} = \beta_0 + \beta_1 \text{KAM}_{it} + \beta_2 \text{LEV}_{it} + \beta_3 \text{ROA}_{it} + \beta_4 \text{LOSS}_{it} + \beta_5 \text{LOGAUDELAY}_{it} + \beta_6 \text{INSTINVESTOR}_{it} + \beta_7 \text{BIG4}_{it} + \epsilon_{it}$$

In the above model, the variables are defined as follows:  $\text{SENT}_{it}$ : SENT of firm  $i$  in year  $t$ ;  $\text{KAM}_{it}$ : KAMs of firm  $i$  in year  $t$ ;  $\text{LEV}_{it}$ : LEV of firm  $i$  in year  $t$ ;  $\text{ROA}_{it}$ : ROA of firm  $i$  in year  $t$ ;  $\text{LOSS}_{it}$ : LOSS indicator of firm  $i$  in year  $t$ ;  $\text{LOGAUDELAY}_{it}$ : LOGAUDELAY of firm  $i$  in year  $t$ ;  $\text{INSTINVESTOR}_{it}$ : INSTINVESTOR of firm  $i$  in year  $t$ ;  $\text{BIG4}_{it}$ : audit firm size of firm  $i$  in year  $t$ . If the coefficient  $\beta_1$  is positive and statistically significant at the 95% confidence level, the research hypothesis is not rejected.

## 7 | Research Findings

### 7.1 | Descriptive Statistics

The results reported in *Table 1* present the frequency distribution and percentage of dummy variables. A total of 595 firm-year observations represent the sample size over the study period (2019–2023). The frequency of observations coded as 1 for the LOSS variable is 17, indicating that out of 595 observations, 17 firms reported a LOSS, corresponding to approximately 3 percent of the total sample.

In addition, the frequency of the audit firm size variable is 471, showing that 471 observations were audited by the AO or by top-tier audit firms accredited by the SEO, representing approximately 80 percent of the total observations.

As shown in *Table 2*, the mean value, which reflects the average level of the data, for the SENT variable is 0.013. This value, being close to zero and slightly positive, indicates that, on average, SENT over the study period was mildly positive. This argument suggests a weak but generally optimistic market tendency. The median, which represents the central value of the distribution such that half of the observations lie below and half above it, is 0.020 for this variable. It indicates that half of the observations exhibit sentiment values below this level and half above it. Since the median is positive, it can be inferred that the overall distribution of SENT is relatively tilted toward optimism. The maximum and minimum values represent the highest and lowest observed values in the dataset. The maximum value of this variable is 3.141, while the minimum is -0.981. This relatively wide range indicates substantial variation in SENT during the study period, encompassing both highly optimistic and highly pessimistic market conditions. High positive values likely reflect periods of strong optimism driven by favorable corporate news, improved economic conditions, or profitable financial reports, whereas negative values may reflect periods of pessimism associated with financial distress, corporate losses, or unfavorable industry conditions.

The standard deviation, which measures the dispersion of data around the mean, is 0.447 for this variable. This argument suggests a moderate level of variability in SENT across the observed period. Skewness, which indicates the asymmetry of the distribution, is 1.125 for this variable. The positive skewness suggests that the distribution is right-skewed, meaning that most observations are concentrated in lower values (neutral to slightly positive sentiment), while a small number of observations exhibit very high positive sentiment. The mean number of disclosed KAMs is 2.924. This argument indicates that, on average, firms disclose approximately three KAMs in their audit reports.

The median value of this variable is also 3, suggesting that in half of the firms the number of disclosed KAMs is 3 or fewer, while in the other half it is 3 or more. The consistency between the mean and median indicates a relatively balanced distribution. The maximum number of disclosed KAMs is 7, while the minimum is 0. This shows that in some firms, no KAMs were disclosed, whereas in others up to seven matters were reported. This variation may be attributed to differences in disclosure practices or the nature of firm operations, as well as the relatively recent implementation of auditing standards related to KAMs.

In particular, the recent mandatory adoption of this standard may partly explain the observed heterogeneity in disclosure levels, as some firms may still be in the process of fully adapting to its requirements. The standard deviation of this variable is 1.377, indicating a moderate level of dispersion in the number of disclosed KAMs across firms. The skewness is 0.599, suggesting a slightly right-skewed distribution, meaning that most firms disclose fewer KAMs, while a smaller number of firms report higher values.

**Table 1. Frequency distribution and percentage of dummy variables.**

Variable Name	Variable Symbol	Total Observations	Mode	Frequency	Percentage Frequency
LOSS	LOSS	595	Observations with a single vae	17	0.03
			Zero-valued observations	578	0.97
Size of the audit firm	BIG4	595	Observations with a single	471	0.80
			Zero-valued observations	124	0.20

Source: Research findings

**Table 2. Descriptive statistics of the study variables.**

Variable Name	Variable Symbol	Mean	Median	Maximum	Minimum	Standard Deviation	Skewness
SENT	SENT	0.013	0.020	3.141	_-0.981	0.447	1.125
KAMs	KAM	2.924	3	7	0	1.377	0.599
LEV	LEV	0.478	0.477	0.994	0.017	0.213	0.108
ROA	ROA	0.220	0.207	0.711	0.000	0.158	0.614
LOSS	LOSS	0.028	0	1	0	0.166	5.659
ARL	LOGAUDELAY	4.325	4.454	5.192	3.178	0.406	_-0.823
INSTINVESTOR	INSTINVESTOR	30.287	19.3	99.74	0	30.033	0.600
Audit firm size	BIG4	0.791	1	1	0	0.406	_-1.435

Source: Research findings

## 7.2 | Inferential Data Analysis

To analyze the data for each of the specified models, it is necessary, prior to their estimation and hypothesis testing, to examine the classical assumptions of the model.

### 7.2.1 | Determining the type of panel data (F-Limere test and Hausman test)

As shown in *Table 3*, the significance level of the F-Limere test for the research model is greater than the 5% error level. Therefore, pooled data are used to estimate the models. Pooled data do not require the Hausman test.

**Table 3. Results of the F-Limere and Hausman tests.**

F-Limere		Diagnosis	Hausman		Diagnosis
Statistic	Significance Level		Statistic	Significance Level	
0.223	1.000	pooled	Pooled data do not require the Hausman test.		

Source: Research findings

### 7.2.2 | Heteroscedasticity test

In this study, the Breusch–Pagan–Godfrey test is employed to examine heteroscedasticity. The results reported in *Table 4* indicate that the calculated significance level for the research model is less than 5%. Therefore, the null hypothesis of homoscedasticity is rejected. Accordingly, it can be concluded that heteroscedasticity is present, and the model is estimated using Generalized Least Squares (GLS).

**Table 4. Results of the heteroscedasticity test.**

Result	Test Statistic	Significance Level	Test Name	Classical Assumptions
Heteroscedasticity	4.141	0.000	Breusch–pagan–godfrey test	Homoscedasticity

Source: Research findings

### 7.2.3 | Multicollinearity test

Multicollinearity refers to the presence of a strong correlation among the independent and control variables included in the model. To examine multicollinearity among the variables, the VIF test is employed. Since the VIF values for the study variables are less than 10, it can be concluded that multicollinearity is not a concern in the model.

**Table 5. Multicollinearity test.**

Variable Symbol	VIF
KAM	1.034
LEV	1.503
ROA	1.605
LOSS	1.101
LOGAUDELAY	1.183
INSTINVESTOR	1.053
BIG4	1.034

Source: Research findings

### 7.2.4 | Autocorrelation test

In this study, the Breusch–Godfrey test is used to examine autocorrelation. If the significance level of the Breusch–Godfrey statistic is less than the 5% error level, it indicates the presence of serial autocorrelation among the error terms.

**Table 6. Autocorrelation test.**

Result	Test Statistic	Significance Level	Test Name	Classical Assumptions
Presence of autocorrelation	11.786	0.000	Breusch–godfrey	Autocorrelation test

Source: Research findings

According to the results presented in *Table 6*, the significance level of the Breusch–Godfrey statistic is less than the 5% error level, indicating the presence of serial autocorrelation. Therefore, in the final model estimation, the autocorrelation problem was addressed by applying a second-order autoregressive correction.

## 7.3 | Results of the Research Model

After conducting the necessary statistical tests to determine the appropriate data structure and ensure the validity of the fitted model, the final estimation results of the research models are presented below.

As shown in *Table 7*, the significance level of the Fisher F-statistic for the model is 0.000. Since this value is below the 5% error level, the null hypothesis is rejected at the 95% confidence level, indicating that the model is statistically significant and valid. The adjusted coefficient of determination is 0.481, indicating that the independent and control variables explain more than 48% of the variation in the dependent variable. The Durbin–Watson statistic is 2.211, and since it lies within the range of 1.5 to 2.5, it suggests that there is no autocorrelation problem.

**Table 7. Results of the research model estimation.**

Variable Name	Symbol	Beta Coefficient	Standard Deviation	t-Statistic	Significance Level
Key topics in auditing	KAM	0.027	0.004	6.397	0.000
LEV	LEV	−0.401	0.079	−5.017	0.000
ROA	ROA	−0.210	0.075	−2.797	0.005
LOSS	LOSS	−0.018	0.056	−0.322	0.747
ARL	LOGAU DELAY	−0.110	0.021	−5.059	0.000

Table 7. Continued.

Variable Name	Symbol	Beta Coefficient	Standard Deviation	t-Statistic	Significance Level
INSTINVESTOR	INSTINVESTOR	_-0.001	0.000	1.593	0.112
Audit firm size	BIG4	_-0.058	0.021	_-2.669	0.008
Y-intercept	C	0.635	0.143	4.420	0.000
AR(1) correction	AR(1)	_-0.692	0.113	_-6.124	0.000
AR(2) correction	AR(2)	_-0.610	0.028	_-21.518	0.000
Fisher's f-statistic	3.599	Durbin-watson test			2.211
Significance level of Fisher's f-statistic	0.000	Adjusted R <sup>2</sup>			0.481

Source: Research findings

The research hypothesis posits that KAMs have a positive and statistically significant effect on investors' sentiment. As shown in *Table 7*, the estimated significance level for the variable KAMs is 0.000, which is below the 5% significance threshold. It indicates that the effect of this variable is statistically significant at the 95% confidence level. Moreover, the estimated coefficient for this variable is 0.027, and given its positive sign, it suggests that the examined effect is positive and direct. Therefore, considering both the significance level and the sign of the estimated coefficient for the KAMs variable, it can be concluded that KAMs exert a positive and significant influence on investors' sentiment. Accordingly, based on these results, the research hypothesis is not rejected.

## 8 | Conclusion and Recommendations

This study examined the effect of KAMs on investors' sentiment among companies listed on the TSE. The results obtained from testing the research model indicate that the research hypothesis was not rejected at the 95% confidence level.

### 8.1 | Analysis of the Research Hypothesis Results

The research hypothesis examined the effect of KAMs on investors' sentiment. Based on the obtained results, the hypothesis is not rejected, indicating that KAMs have a positive and statistically significant effect on investors' sentiment. KAMs, as a newly introduced section in the auditor's report, refer to those issues that, in the auditor's judgment, involved the most significant risks and required the most critical audit attention during the audit process. The disclosure of such matters contributes to enhancing the transparency of financial reporting. This transparency can improve investors' sentiment through several channels. First, by disclosing the most important areas of judgment and risk, investors obtain a clearer and more comprehensive understanding of the firm's condition, which in turn reduces information uncertainty. Second, information regarding how management and auditors address these matters can enhance investors' confidence in the quality of corporate governance and the integrity of financial reporting processes. Third, detailed disclosure of KAMs signals that the auditor has played an active and independent role in evaluating the firm's condition, thereby strengthening the perceived credibility of the information. Consequently, the reduction of ambiguity and the increase in trust may lead investors to be more inclined to retain or increase their investments, thereby strengthening their positive sentiment toward the firm. The findings of this hypothesis are inconsistent with

the study by Kittiyong et al. [12] and consistent with the studies of Hoang et al. [29], Liu et al. [30], and Altawalbeh and Alhajaya [32].

## 8.2 | Research Limitations

- I. One of the most important limitations of this study is the relatively recent implementation of ISA 701 and the emerging nature of mandatory key audit matter disclosures in Iran. Some companies are not yet fully familiar with the requirements of this standard, and due to differences in interpretation and a lack of uniformity in reporting practices, different results may be obtained if a standardized reporting framework were fully implemented across firms. Furthermore, this study employs 12 components to measure KAMs; if interviews or a broader set of indicators were used to measure this variable, the results might differ from those obtained in the present study.
- II. Another limitation of this study concerns the measurement method for investors' sentiment, which is based on the Rhodes, Kropf, et al. [42] approach. It should be noted that the use of alternative proxies (such as trading volume-based indicators or market volatility measures) may lead to different results. This limitation arises because each sentiment-measurement method captures specific dimensions of the construct and may not fully reflect the complexity of market sentiment. Therefore, generalizing the findings to other sentiment measurement approaches should be done with caution and requires further complementary studies.

## 8.3 | Research-Based Recommendations

Given the findings of the hypothesis indicating a positive effect of KAMs on investors' sentiment, it is recommended that auditors present KAMs in their reports in a clear, well-documented, and comprehensible manner. This enables investors to gain an accurate understanding of the associated risks while also becoming aware of the firm's actions to manage such risks, thereby strengthening their optimism and trust. It is further recommended that firms provide supplementary explanations, along with concrete examples, of improvements in internal controls or reductions in the risks identified in KAMs. Such disclosures can transform investors' optimism into a more sustainable advantage. Regulatory bodies are also advised to facilitate this process by developing precise guidelines and enforcing targeted disclosure requirements. In this way, investors may benefit not only from reduced information asymmetry but also from increased trust and a more positive outlook regarding the firm's future.

## 8.4 | Suggestions for Future Research

- I. Examining the effect of the tone of KAMs disclosures on investors' risk-taking behavior in the Iranian capital market.
- II. Investigating the relationship between audit report readability and SENT with a focus on KAMs.
- III. Examining the impact of KAMs on stock price volatility.
- IV. Investigating the effect of KAMs on investors' sentiment and market reactions.
- V. Examining the impact of KAMs on audit fees and ARL.
- VI. Investigating the moderating role of corporate governance characteristics in the relationship between KAMs and investors' sentiment.
- VII. Examining the effect of managerial overconfidence on KAMs.

## Conflict of Interest

The authors report no conflicts of interest related to this work.

## Data Availability

All relevant data are presented in this manuscript.

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