

## The effect of independent audit quality on the quality of financial reporting in the listed companies in Tehran and Baghdad stock exchanges

Siraj Abbas<sup>1</sup>, Nasser Izadnia<sup>2</sup>, Gholamhossein Kiani<sup>3</sup>

<sup>1</sup> PhD Student, Department of Accounting, Faculty of Administrative Sciences and Economics, University of Isfahan, Isfahan, Iran

<sup>2</sup> Associate Professor in Accounting, Faculty of Administrative Sciences and Economics, University of Isfahan, Isfahan, Iran

<sup>3</sup> Associate Professor, Department of Economics, Faculty of Administrative Sciences and Economics, University of Isfahan, Isfahan, Iran

### ABSTRACT

The primary purpose of this research is to investigate the relationship between the quality of the external audit and the quality of the financial reporting done by companies that are traded on the Tehran and Baghdad Stock Exchanges. The experience of the auditor in the sector, the auditor's reputation, and the auditor's length of service were utilized as determining factors for the quality of the external audit. In order to determine whether or not the reporting of financial data can be trusted, discretionary accruals are analyzed. The companies that are members of the Tehran Stock Exchange and the Baghdad Stock Exchange make up the statistical population for the current study. They were chosen using the process of systematic elimination, which was applied to 102 firms that were admitted to the Tehran Stock Exchange and 35 companies that were admitted to the Baghdad Stock Exchange. In order to examine the data, multiple regression analyses were performed. According to the findings of the study, the quality of financial reporting at the Baghdad Stock Exchange is not significantly impacted by the standard of external auditing. In addition, the independence of the Tehran Stock Exchange's financial reporting is directly and considerably impacted by the quality of the audits conducted by external parties. The findings, taken as a whole, suggested that in order for enterprises to function properly in Iraq they need a secure and politically stable environment. This, in turn, has an effect on the accuracy of the reports they provide. On the other hand, the profession of auditing in Iraq is still in its formative stages, and auditors need to have a deeper understanding of their respective industries.

**Keywords:** External audit quality, Financial reporting quality, Auditor's expertise in the industry, Auditor's reputation.

### Corresponding Author:

Nasser Izadnia  
Faculty of Administrative Sciences and Economics,  
University of Isfahan, Isfahan, Iran  
E-mail: n.izadnia@ase.ui.ac.ir

### 1. Introduction

To give logical assurance that financial statements comply with generally accepted accounting principles and standards, it is the responsibility of the auditor to play a role in the quality of the financial reporting process. The final step in financial accounting is the distribution of accounting reports that convey financial data to a variety of consumers both inside and outside of the organization. Through the use of financial statements, it is impossible to fulfill the information needs of all consumers. This purpose cannot be achieved. Having said that, there are certain information requirements that are uniformly shared by users. All users have a large amount of interest in the corporate entity's current economic state, as well as its financial performance and financial flexibility. Improving the reporting standard has the ability to maximize the efficiency of the investments made by businesses, as well as to protect and expand their available resources. With enhanced financial reporting, a company's performance can be more accurately reflected, and investments can be made with greater efficiency.

A better quality of financial reporting can raise information asymmetry and strengthen the ability of lenders and shareholders to oversee and monitor operations [1]. This can be helpful in reducing the likelihood of unethical behavior and moral hazards occurring in a business.

It is the role of managers to be accountable to the users and corporate stakeholders, and publishing financial reports is consistent with that responsibility. As a consequence of this, the process of making decisions and the reduction of risks associated with those decisions are impacted by the transparency of financial accounts. On the other hand, they are thinking about the void that was created by the disagreement in representation between management and ownership. Where can we find evidence that the information that has been disclosed is telling the truth and that the management is being held accountable in a fair manner? The owner has the option of using the monitoring system as a remedy in these kinds of situations, either to completely avoid or significantly reduce the potential for conflict. A monitoring tool that helps limit the amount of asymmetric information is an audit of financial statements. External auditors have an important function in the stock market since they verify the accuracy of the financial statements that are made public by publicly traded corporations, thereby lowering the level of information risk. However, following the corporate financial scandals and the financial crisis in the previous two decades, which led to the collapse of huge firms such as Enron, Adelphi, and Wordcom, the accusatory finger has been directed partly toward the auditors and the quality of the audit [2]. This is because these events led to the failure of large companies such as Enron, Adelphi, and Wordcom.

The standard of the company's independent audits is an important factor in determining the accuracy of its financial statements. The present research takes into account parameters for the quality of an external audit, such as the auditor's experience, reputation, and length of service in the field. Auditing firms can achieve economies of scale by specializing in specific industries in order to better serve their clients. Field auditors have a complete knowledge of their customers' comparable characteristics as well as the needs their clients have. This leads to a reduction in the costs associated with the audit as well as an improvement in the quality of the services provided to the owners of businesses. The ability of staff to recognize and handle audit concerns that are unique to the industry is essential to the cost reduction strategy, as this is the rationale behind the strategy. Customers have a high demand for the specialized services that auditors provide, which, as a result of the auditor's experience in the sector in question, helps to increase the sensitive market share in the industry in question. In addition, compliance with legislation concerning a certain industry and the necessity to complete reporting duties contribute to the intensification of audit market concentration within the aforementioned sector [3].

The tenure auditor prompted both the individuals who are against to this phenomenon and those who are in favor of it to present their cases. Opponents of the idea contend that after the auditor accepts a new client, it is sometimes important for the auditor to get to know the client. This recognition frequently includes levels that make the auditor prone to missing substantial misstatements. When the tenure term is increased, the auditor is provided with comprehensive knowledge regarding the client's risks as well as the operation of the client's systems. Additionally, the auditor is able to modify the audit procedures and processes in order to uncover any distortions. They also argue that a shorter tenure decreases audit quality and raises knowledge asymmetry between the auditor and the client. On the other side, proponents of shifting auditors highlight the need of auditor independence as one of the primary arguments in their favor. They argue that if the auditor has a more intimate relationship with the client than is typical, he may not adjust for business changes and related risks under these conditions, particularly owing to high tenure. This is due to the fact that the auditor has been working with the client for a longer period of time. In situations like these, the auditor will depend less on professional doubt and make less of an effort to obtain proof. Researchers have investigated the phenomena of auditor tenure as one of the markers of audit quality [4], with the purpose of analyzing the arguments that were presented above.

According to the research on auditing, there are two primary drivers (sources of motivation) for auditors, both of which cause them to perform their profession to a higher standard. Litigation, sometimes known as the "big pocket theory," and reputation are these motives. As a result of the first incentive, which is litigation, auditors should give a higher audit quality in order to protect themselves from the possibility of being sued by investors. Because gaining fame and reputation requires spending a lot of time and resources, auditors should provide higher audit quality to maintain their reputation. This is true even though their reputation is destroyed in a short period of time after the failure of the audit is revealed. The second motive is reputation. As a direct consequence of this, it is reasonable to anticipate that auditing firms with stronger reputations will have a stronger motivation to keep their reputations intact and to do audits of a higher quality in order to separate themselves from other auditing firms [5].

The purpose of this study is to evaluate the extent to which the quality of the external audit has an impact on the quality of the financial reporting done by companies that are listed on the stock exchanges in Baghdad and Tehran. As a result, the primary focus of the current research is on determining whether or not external audit quality criteria have a substantial impact on the quality of financial reporting.

## **2. Methods**

### **2.1. Financial reporting quality**

The recent years have seen a rise in the number of financial scandals, which has resulted in an increase in the amount of attention paid to the debate on the subject of financial reporting [3]. In order to inflate profits, fraudulent financial reporting either overstates assets and revenue or understates obligations and expenses. Both of these practices are illegal. Additionally, dishonest financial reporting can be used to lower taxable income by artificially lowering profits. When profits are substantial, the management of companies may decide to underreport those profits in order to raise profits by recognizing them in future periods (this practice is known as earnings management). Forgery, deliberately not recording transactions, or giving false information to the auditor are all examples of complex and organized schemes that can be used to hide fraud. As a result, according to Iran's Auditing Standards No. 240, the risk of not discovering material misstatements due to fraud is significantly higher than the risk of not learning material misstatements due to mistakes. In other words, the risk of not discovering material misstatements due to fraud is far greater than the risk of not learning material misstatements due to mistakes. Concerns about the quality of financial reporting have been brought about as a result of the rise in the number of distortions, which has often been combined with the bankruptcy of large companies. As a result of these concerns, a number of standards and guidelines have been established in the field of auditors' responsibility in discovering distortions in financial statements.

### **2.2. Auditor tenure and quality of financial reporting**

Altering the auditor led to disagreements between those who were against this occurrence and others who supported it. Opponents of the idea contend that after an auditor accepts a new client, it is often vital for them to get to know the employer they will be working for. This recognition frequently involves levels that put the auditor at risk of omitting major errors in the financial accounts. The auditor is provided with comprehensive information regarding the client's risks and the operation of the client's systems as the tenure time grows. In addition to this, the auditor is able to modify the audit techniques and processes in order to identify distortions. They also argue that a shorter tenure decreases audit quality and raises knowledge asymmetry between the auditor and the client.

On the other side, proponents of shifting auditors highlight the need of auditor independence as one of the primary arguments in their favor. They argue that if the auditor has a more intimate relationship with the client than is typical, he may not adjust for business changes and related risks under these conditions, particularly owing to high tenure. This is due to the fact that the auditor has been working with the client for a longer period of time. In these kinds of circumstances, the auditor will depend less on their trained skepticism and make less of an effort to obtain proof [6].

There are two schools of thought when it comes to the connection between the length of time an auditor has been employed and the quality of the financial reports produced. According to the first point of view, auditors may require more conservative practices from their customers in the early years of their employment with new clients due to the fear of filing lawsuits against them that may develop due to insufficient knowledge of the client's operations. This worry may arise as a result of insufficient knowledge of the client's activities. They do not, however, have the motivation to reject the demands of the client's management due to the growth in the number of relationships they have, which may have led to a decline in their level of independence. Positive results are reported by managers when they use this method. This view is supported by the research that was conducted by Hamilton et al. (2005) and Krishnan (2007) [7].

The second point of view is that when an auditor has a long-term connection with a client, the client is more likely to utilize cautious practices. The proponents of this view contend that new auditors are typically required to have greater information about the business activities and internal control systems of the organization; as a result, new auditors are obliged to rely more on the judgments made by managers about financial reporting. Because of this, individuals are more likely to be in agreement with the opportunistic behaviors of the management. Because of this, the number of procedures considered to be conservative can decrease. However, as their tenure grows and they get more notoriety, they become more mindful of their job and are better able to minimize potential audit risks. For instance, they will make a recommendation to the management to implement practices that are more conservative [8].

### 2.3. The reputation of the auditing firm

In an environment in which litigation does not serve as a motivation for boosting audit quality, the reputation of the auditing business is very important. Recent research on the credibility of auditors has placed increased emphasis on the significance of auditing firms. According to these findings, major and well-known auditing organizations are able to withstand pressure from their employers. Because large auditing firms have a sufficient number of clients and can afford to lose some of them. Therefore, the positive association between the reputation of auditing firms and the quality of financial reporting may be explained by both the reputation motivation and the litigation motive. This is due to the fact that large audit firms have more damage coverage in litigation in comparison to small audit firms. Spending a significant amount of time and resources is necessary for audit institutions to build their reputation and credibility. However, this investment is wasted if audit institutions uncover instances of misconduct. As a direct consequence of this, auditors who have a better reputation should have a stronger incentive to keep that reputation intact and should demand higher fees in order to differentiate themselves from other audit institutions and deliver audits of a higher quality.

### 2.4. Research background

Nadel and Turki conducted study in 2022 to investigate the influence of the quality of financial reporting and audit quality on the effectiveness of investment in the economies that are part of the Persian Gulf Cooperation Council [9]. Companies that have participated in the Persian Gulf Cooperation Council for a combined total of 150 years are included for the purpose of these observations in this study. The findings of the study indicate that there is a positive and significant association between the quality of financial reporting and the effectiveness of investment. In addition to the findings, the quality of the audit has a direct effect on investment, which acts as a moderator.

In 2021, Alzben carried out research titled "the impact of the quality of external auditors on the quality of financial reporting." During the period of 2015-2017, data was gathered from a total of 386 businesses located across four European nations [10]. The quality of accruals and discretionary accruals were the two proxies that were used to evaluate the reports. In the first stage of this process, an estimation of a regression model was carried out with the purpose of determining which of the three analyzed variables had the most significant influence on the connection being studied. In the second phase, numerous mediation analyses were carried out to determine whether or not it mediates the impacts of the quality of the CEO and the external auditor. According to the data, each of these three aspects plays a favorable role in the overall picture. The studies also demonstrate that it reduces the amount of influence held by the CEO. The reliability of the data was confirmed by using a variety of tests and measurements for the variables.

In the year 2019, Shezad and Baik conducted research into the relationship between the quality of financial reporting and audit quality and the effectiveness of investment in Pakistan. The findings of this study, when taken as a whole, are in agreement with the evidence suggested by the alignment hypothesis of agency theory and the resource-based view of the firm. This study demonstrates that auditing carried out by big auditors narrows the information gap, which in turn lowers the risk of moral hazard and difficulties associated with adverse selection [11].

During the year 2018, Rajpal and Jain conducted research titled "Features of Auditing and Earnings Management in India." The purpose of this study was to determine whether auditor qualities such as independence and professional excellence are effective deterrents against earnings management in India. It is necessary for there to be more conclusive evidence regarding the relationship between auditor independence and the quality and control of the audit. In the context of Indian businesses, this connection has not been the subject of any research. For this study, panel data were collected from 1600 different companies. This study offers support for the knowledge spillover concept by demonstrating that there is an inverse correlation between the fees charged for non-audit services and earnings management [12].

2018 was the year that Al-Zoubi conducted study titled "Audit Quality, Debt Option Financing and Earnings Management in Jordan." In the course of this research, a representative sample of seventy-two manufacturing firms was utilized from the years 2006 through 2012. The findings indicate that the audit quality (including the size, expertise, independence, and length of tenure of the auditor) and debt financing (including the reduction of debt) improve, which opens the door to the potential of profit management and raises the bar for the quality of financial reporting.

In the year 2021, Bashiri Manesh and Samimi conducted research to determine the influence of audit quality on the tactics used by auditors when confronted with rising audit risk. In this regard, an investigation on the impact of audit quality on fees, delays in reporting, comments, and changes in auditors was carried out using a sample that comprised 832 observations (year-company) throughout the period of 2010-2017. According to the data,

auditors spend more time on audit processes when there is a rise in the audit's overall quality. As a direct consequence of this, the cost of the audit as well as the amount of time it takes to deliver the audit report will both rise. In addition, the results demonstrated that auditors make use of conditional remarks when confronted with ambiguity in the content of financial statements in order to lessen the likelihood of being sued. However, the complexity of the content of the financial statements prevented the application of the client's rejection technique from being observed [13].

During the year 2019, Saleh al-Jenabi conducted study titled "investigating the impact of international financial reporting standards on the quality of financial reporting and the performance of stock exchange companies in Iraq." For this study, sample data were taken from companies that were listed on the Iraq Stock Exchange between the years 2015 and 2019. According to the results of the study, there is no statistically significant connection between adhering to the International Foundation for Financial Reporting Standards and profit management. The switch to the International Foundation of Financial Reporting Standards, on the other hand, has a favorable effect on the value of the income. Because of this, the value of becoming a member of the International Foundation for Financial Reporting Standards is contingent on the accuracy of financial reporting [14].

Abbas (2019) conducted research with the objective of "investigating the relationship between audit quality and profit threshold to achieve profit thresholds in the Iraqi Stock Exchange." Audit quality is an independent variable in this research, and it was measured using variables such as the size of the audit company, the auditor tenure, the status control score, and the audit quality of the institution. For the purpose of measuring the dependent variable, three distinct kinds of thresholds have been utilized: those that aim to avoid and prevent losses, those that aim to avoid and prevent profit reductions, and those that aim to avoid and prevent unexpected profits. The information for this study was compiled over the course of five years, beginning in 2014 and continuing through 2018, using the database maintained by the Iraqi Securities and Exchange Organization as well as the financial statements provided by the company. The findings of the test of the research hypotheses indicate a strong and negative inverse link between audit quality (auditor expertise, audit firm size, and auditor tenure), on the one hand, and profit management, on the other, in order to prevent unexpected profits. In addition, there is a large and unfavorable association between audit quality (auditor expertise, audit firm size, and auditor tenure), and the management of profits to prevent a decrease in profits. Also, there is a correlation that is both negative and significant between audit quality (auditor expertise, audit firm size, and auditor tenure), on the one hand, and profit management to prevent losses, on the other [15]. In the year 2019, Ajel published a research entitled "Investigating the Relationship Between Corporate Governance Factors on the Transparency of Financial Reporting Before and After the Presence of ISIS." The scope of this study encompasses all of the firms that were listed on the Iraq Stock Exchange between the years of 2012 and 2018. In other words, it looks back over a span of seven years. In addition, 35 businesses that are members of the Iraqi Stock Exchange were used to test the assumptions derived from the research. The outcomes of this research indicate that there is a beneficial and statistically significant connection between the characteristics of corporate governance and the transparency of financial reporting. In addition, the findings of the test of the hypothesis suggest that the presence of ISIS has the effect of weakening the connection between characteristics of corporate governance and the transparency of financial reporting. In 2019, Al-Sawalam conducted research on "the relationship between the auditor tenure and the quality of profit in the Iraqi Stock Exchange." In order to accomplish the goals of the study, a total of 38 firms that were listed on the Iraq Stock Exchange between the years 2014 and 2018 were investigated. The findings revealed a counterintuitive yet statistically significant link between the length of an auditor's career and their degree of conservatism. In addition, the findings demonstrate a negative and significant association between the length of an auditor's tenure and the quality of the profits.

Aziz al-Huseinawi, in the year 2019, published a paper titled "examining the impact of international standards of financial reports on increasing the efficiency of the financial performance of Iraqi banks." The results of this study indicated that the worldwide standards of financial reports successfully increase the efficiency of financial performance in evaluating financial performance and then on financial performance indicators. These findings were presented by the researcher who conducted this study. However, what the researcher suggests is that one should rely on the international standards of financial reports; Because it has an active effect on the development of the financial performance of the economic unit; That is to say, the financial analyst primarily relies on the quality of accounting information due to the impact on the process of financial evaluation [16].

### **3. Hypotheses and research model**

1. The auditor's expertise in the industry significantly affects the quality of financial reporting.
2. The auditor's reputation significantly affects the quality of financial reporting.
3. The auditor's tenure significantly affects the quality of financial reporting.

The regression model of the research is given below.

$$\text{FRQ}_{jt} = \alpha_0 + \alpha_1 \text{AUDREP}_{it} + \alpha_2 \text{AUDTEN}_{it} + \alpha_3 \text{AUDSPEC}_{it} + \alpha_4 \text{SIZE}_{it} + \alpha_5 \text{MTB}_{it} + \alpha_5 \text{ROA}_{it} + \alpha_5 \text{LEV}_{it} + \varepsilon_{it} \quad 1$$

Where in:

FRQ *it*: Financial reporting quality of company I in year t

AUDREP *it*: The auditor's reputation of the company in year t

AUDTEN *it*: The auditor tenure of the company I in year t

AUDSPEC *it*: Auditor expertise in the industry

SIZE *it*: Firm size of the firm I in year t

MTB *it*: Ratio of market value to book value of equity of company I in year t

ROA *it*: Profitability of company I in year t

LEV *it*: Financial leverage of company I in year t

#### 4. Definition of variables

**4.1. Financial reporting quality (FRQ):** The level of accuracy of financial reporting is evaluated using the discretionary accruals quality criterion in this particular piece of research. The Jones (1991) model was utilized by the researchers so that they could measure discretionary accruals. Following are the actions that need to be taken in order to compute the measurement of discretionary accruals [17]:

$$TA_{it} = IBEI_{it} - CFO_{it} \quad 2$$

Where in:

TA: Total accruals of the company

IBEI: Earnings after interest and tax of the company

CFO: Operating cash flow

Katari et al. (2005) made use of the model that they proposed, which is a version of the company model developed by Jones (1991). The terms financial performance and performance (according to performance) are used to refer to this concept. In this particular model, the regression equation is utilized to analyze the data. The following formula is used to determine the factors that have an impact on total accruals (TA) [17, 18]:

$$TA_{it} = \beta_0 + \beta_1 \frac{1}{A_{it}} + \beta_2 \frac{\Delta REV_{it} - \Delta AR_{it}}{A_{it-1}} + \beta_3 \frac{PPE_{it}}{A_{it-1}} + \beta_4 \frac{ROA_{it}}{A_{it-1}} + \varepsilon_{it} \quad 3$$

TA: Total accruals of the company

A: Total assets

$\Delta REV$ : change in company i's income in year t compared to last year

$\Delta AR$ : Change in accounts receivable of company I in year t compared to the previous year

PPE: fixed assets of the company I in year t

ROA: return rate of assets

In this step, the estimated values of the parameters of the regression model (i.e.,  $\beta_0, \dots, \beta_4$ ) in the previous step are used to determine the value of non-discretionary accruals items and for each company separately and during each year of the research, the following formula is used:

$$NDA_{it} = \hat{\beta}_0 + \hat{\beta}_1 \frac{1}{A_{it}} + \hat{\beta}_2 \frac{\Delta REV_{it} - \Delta AR_{it}}{A_{it-1}} + \hat{\beta}_3 \frac{PPE_{it}}{A_{it-1}} + \hat{\beta}_4 \frac{ROA_{it}}{A_{it-1}} + \varepsilon_{it} \quad 4$$

NDA: Total non-discretionary accruals of the company

A: Total assets

$\Delta$ REV: change in company i's income in year t compared to last year

$\Delta$ AR: Change in accounts receivable of company I in year t compared to the previous year

PPE: Fixed assets

ROA: return rate of assets

Finally, the following formula is used to calculate discretionary accrual items:

$$DAC_{it} = TA_{it} - NDA_{it}, \quad 5$$

DAC: discretionary accruals

TA: Total accruals of the company I in period t

NDA: total non-discretionary accruals of the company I in period

#### 4.2. Independent variable: Audit quality

The following are the three indicators of auditor's reputation, auditor tenure, and auditor's knowledge in the industry that are utilized in the calculation of audit quality:

**Auditor's reputation:** In order to construct this index, multiple ones are given out if the auditor of the company is from an institution that has been granted approval by the auditing organization. In all other cases, a value of zero will be delivered.

**Auditor tenure:** According to the findings of this study, the term "auditor tenure" refers to the number of consecutive years during which an auditor has examined and audited a certain customer.

**Auditor's expertise in the industry:** According to this study's findings, an auditor's industry experience can be inferred from their market share. The market share is determined by the following formula:

The square root of the entire book value of the assets held by the audit firm's customers operating within a certain industry is then divided by the square root of the total book value of all assets operating within that specific industry.

Market share of auditors=

$$\sqrt{\frac{\text{price of all audit firm owners in a particular industry}}{\text{, total assets of all owners of that industry}}} \quad 6$$

#### 4.3. Control variables

Company size equals the natural logarithm of the company's total assets. The ratio of market value to book value equals dividing the market value of the company's stock by its book value.

Profitability: It is equal to the ratio of net profit before tax to total assets.

Financial leverage is equal to the ratio of total liabilities to total assets.

#### 5. Society and statistical sample

This study looked at data from two different statistical populations. The companies that were first allowed to trade on the Tehran Stock Exchange between the years 1389 and 1399 make up the first statistical population. Following are the criteria that were used in the selection of the 102 businesses that would comprise the statistical sample.

1. For the sake of increased comparability, their fiscal year shall be listed on the Tehran Stock Exchange until the month of March is over.
2. During the time period covered by the research, neither activity nor a change in the fiscal year took place.
3. To make it easier to compare different manufacturing enterprises with one another.
4. The trading symbol for their company has not been halted for more than half a year at this point.

The second statistical group is comprised of businesses that were authorized to trade on the Baghdad Stock Exchange during the years 2010 and 2020. Following are the guidelines that were used in the selection process, which resulted in the selection of 35 businesses as a statistical sample.

1. For purposes of increased comparability, the company's fiscal year should end on the Tehran Stock Exchange at the end of the month of December.
2. During the course of the research, neither the activity nor the fiscal year was altered in any way.

3. To make it easier to compare different manufacturing enterprises with one another.
4. The trading symbol for their company has not been halted for more than three months out of each year.

## 6. Results and discussion

### 6.1. Descriptive statistics of Iran

Descriptive statistics of research data conducted in Iran are presented in Table 1.

Table 1. Descriptive statistics of research variables (Iran) based on research findings

variable name	symbol	mean	middle	maximum	minimum	standard deviation	skewness	kurtosis
financial reporting quality	<i>FRQ</i>	0.4602	0.4599	0.7191	0.2094	0.1230	2.090	6.4487
auditor's reputation	<i>AUDREY</i>	0.7593	0.8115	1	0	0.2671	1.2234	2.504
auditor tenure	<i>AUDTEN</i>	2.8009	2.7643	4	1	0.3995	1.507	3.273
Auditor expertise in the industry	<i>AUDSPEC</i>	0.4037	0.4262	0.7611	0.2216	0.3384	0.2213	4.541
size of the company	<i>Size</i>	14.659	14.543	20.307	8.660	4.508	3.4612	7.184
Profitability	<i>Roa</i>	0.1135	0.0936	0.6819	-0.1115	0.174	1.2260	5.413
Financial Leverage	<i>Lev</i>	0.2574	0.2739	0.457	0.1262	0.6014	8.877	10.785
Market value to book value of equity	<i>MtB</i>	3.911	4.213	4.213	9.127	2.090	3.035	18.182

Several topics of descriptive statistics of variables, including mean, median, maximum observations, minimum observations, standard deviation, skewness, and kurtosis, are discussed in this section. The mean, which reflects the balancing point and center of gravity of the distribution, is the primary central index. The mean is a good indicator that shows how the data are centered, and it is the primary central index. For instance, the average value of the variable known as Lev, which measures financial leverage, is equal to 0.2574. This suggests that the vast majority of the data are centered around this particular spot. The median is yet another important statistic that can be used to gauge the condition of a society. According to the findings, the value 14/543 serves as the median for the firm size variable. This value indicates that half of the data are lower than this value, while the other half are higher than the aforementioned value. The question of the normalcy of the data is brought up in the comparison of the mean to the median, which is an essential element that can be inferred from this comparison. The normality of the variable data can be inferred from the fact that the median value and the mean value are very near to one another.

The dispersion parameters of a set of data are a measurement that can be used to determine the degree to which the data are scattered with respect to one another or with respect to the average. The standard deviation is an important criterion to consider while analyzing dispersion. This parameter's value is equal to 1.913 for the variable market value to the book value of equity, while its value is equivalent to 0.174 for the variable profitability. Both of these values may be found in the table below. This demonstrates that out of all of the factors that were researched, the market value to the book value of equity and profitability have the greatest and least amount of dispersion, respectively. The degree to which the abundance curve is asymmetric is referred to as its skewness. If the coefficient of skewness is 0, then the society is completely symmetrical. If the coefficient is positive, then there will be a skew to the right, and if it is negative, then there will be a skew to the left. If the coefficient is zero, then the society is wholly symmetrical. For instance, the skewness of the firm size variable equals 3.4612, which indicates that this variable is skewed to the right and departs from the point of symmetry by this amount. In other words, the variable is not symmetrical in its distribution. The term "kurtosis" refers to the degree to which the abundance curve is stretched out in comparison to the regular standard curve. The abundance curve will be balanced and normal in terms of kurtosis if the kurtosis is close to zero. If this value is



positive, the curve will be steep; on the other hand, if it is negative, the curve will be shallow. When compared to the normal curve, the variable that has the most significant impact is the quality of the financial reporting, and the variable that has the least significant impact is the reputation of the auditing firm.

### 6.2. Descriptive statistics of Iraq

Descriptive statistics of research data conducted in Iraq are presented in Table 2.

Table 2. Descriptive statistics of research variables (Iraq)

variable name	symbol	mean	middle	maximum	minimum	standard deviation	skewness	kurtosis
financial reporting quality	<i>FRQ</i>	0.3316	0.3187	0.5912	0.1305	0.1768	1.471	4.589
auditor's reputation	<i>AUDREY</i>	0.5832	0.5512	1	0	0.2240	2.115	5.338
auditor tenure	<i>AUDTEN</i>	5.3184	5.3991	7	2	0.5476	3.991	6.412
Auditor expertise in the industry	<i>AUDSPEC</i>	0.2291	0.2358	0.3899	0.1142	0.2914	5.533	7.034
size of the company	<i>Size</i>	6.1543	6.5011	9.294	3.377	2.211	3.224	5.576
profitability	<i>Roa</i>	0.0571	0.0489	0.2691	- 0.2003	0.1429	4.107	4.189
Financial Leverage	<i>Lev</i>	0.4993	0.4831	0.5913	0.2719	0.4213	6.285	7.322
Market value to book value of equity	<i>MtB</i>	1.735	1.219	3.307	1.155	0.8812	2.547	9.109

By comparing the descriptive statistics of Iranian and Iraqi companies, the average of all variables in the Tehran Stock Exchange is higher than in the Iraqi Stock Exchange. Iranian companies are bigger, and the market value of equity is higher.

### 6.3. Default regression tests

The following tables give the results of estimating the regression test's defaults.

Table 5. Summary of the results of Limer and Hausman's F test to check the regression model estimation method

Hausmann's test			Limer's F test			Description
Result	Probability value	statistics	Result	Probability value	statistics	
Fixed effects	0.0239	16.1319	panel data	0.0000	7.948	Research model in Iran
No need for Hausman test			Combined	0.999	0.3077	Research model in Iraq

Table 6. Results of variance heterogeneity test

Estimation method	Limer's F test			Description
	Result	Probability value	statistics	
GLS	Variance heterogeneity	0.0000	1102.12	Research model in Iran

DLS	Variance heterogeneity	0.2154G	41.521	Research model in Iraq
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According to the findings of Limer's F test, the probability of the F statistic occurring in the Tehran Stock Exchange is significantly lower than 5%. Therefore, panel data is utilized for the regression test, and according to the significance level of the Hausman test, the fixed effects approach is used because it is less than 5%. Both of these factors lead to the conclusion that the significance level is less than 5%.

They are also based on the outcomes of Limer's F test due to the fact that the probability of the F statistic in the Baghdad Stock Exchange is greater than 5%. As a result, the data have been combined before being used for the regression test.

Table 6 displays the findings of the heterogeneity of variance test that was carried out on the regression model using Stata version 12 as the statistical program. The H0 hypothesis of this test is denied due to the fact that the likelihood of the statistic produced for the variance heterogeneity (LR) test in Iran has a probability that is lower than the 5% error level. On the other hand, the H1 hypothesis that is based on the variance heterogeneity is accepted according to the findings of this investigation. Accordingly, in order to find a solution to the issue posed by the heterogeneity, the generalized least squares (GLS) method was utilized in order to estimate the variance of the study model in Iran. The H0 hypothesis of this test is not rejected, and the ordinary least squares approach is utilized to estimate the research model. Despite this, the likelihood of the statistic calculated for the heterogeneity of variance (LR) test in Iraq is higher than the 5% error threshold.

#### 6.4. Research hypothesis test

The results of estimating the research model with the Eviuse software after applying the generalized least squares regression approach to solve the variance heterogeneity in Iran and the ordinary least squares method to address the variance heterogeneity in Iraq show the outcomes.

According to Table 7, taking into account the fact that the significance level of the F statistic of the model is lower than the 5% error level in both nations, this model is significant at the 95% confidence level and has a high level of dependability. In addition, the value of the Durbin Watson statistic suggests that there is no autocorrelation between the components of the disturbance because this value is in the range of 1.5 to 2.5. In addition, the coefficient that has been changed for Iran (Iraq) is 0.53 (0.13). According to this value, the set of independent and control variables, which was discussed before, can explain 53 (13) percent of the changes that occur in the variable that is being studied (the dependent variable).

Therefore, research hypotheses have been confirmed in Tehran Stock Exchange, and the quality of the external auditor has a direct and significant effect on the quality of financial reporting. The results of Table 6 show that the significant level of the variable representing the auditor's reputation, the auditor's expertise in the industry, and the auditor tenure is less than 5%, and the coefficient of these variables is less than 5%.

Table 7. The results of the estimation of the research

$FRQ_{jt} = \alpha_0 + \alpha_1 AUDREP_{it} + \alpha_2 AUDTEN_{it} + \alpha_3 AUDSPEC_{it} + \alpha_4 SIZE_{it} + \alpha_5 MTB_{it} + \alpha_6 ROA_{it} + \alpha_7 LEV_{it} + \varepsilon_{it}$						
in Iraq			in Iran			Variable
meaningful	t statistic	Coefficients	meaningful	t statistic	Coefficients	
0.5914	0.5374	0.0628	0.0000	7.455	0.9390	Constant coefficients
0.8125	0.2374	0.0229	0.000	4.2177	0.4023	AUDREP
0.6823	0.4097	0.0061	0.000	3.938	0.3150	AUDTEN
0.003	4.3244	0.1129	0.0428	2.0289	0.2177	AUDSP
0.6720	-0.4238	-0.0024	0.0000	4.128	0.0129	Size
0.2199	-1.229	-0.0085	0.5789	-0.552	-0.0031	LEV
0.1380	-1.487	-0.0406	0.0000	4.986	0.8189	ROA
0.0003	3.629	0.0006	0.0112	2.542	0.0023	MtB
		7.242	0.0000		13.512	F. Fisher statics

1.8464	1.8550	Durbin Watson
0.1549	0.5612	coefficient of determination
0.1304	0.5399	the adjusted coefficient of determination
350	1020	number of observation

Also, the estimation of the model in the Baghdad Stock Exchange showed that the only factor that has a direct and significant effect on the quality of financial reporting is the auditor's experience in the business. This is due to the fact that the significance threshold is less than 5%, and the coefficient of this variable is positive. The reputation and length of service of the auditor have not had an impact on the accuracy of the financial reporting. The boosts of independent audit quality on the quality of financial reporting can be done by internet of things (IoT), cloud computing, data mining, and e-government as future trends [20-24].

## 7. Conclusion

It is anticipated that improvements in both investment growth and operational efficiency will be strongly influenced by the reporting of financial information, which is an essential source of market knowledge. Improving the quality of financial reporting acts as a vehicle for satisfying the requirement to respond to the needs of the community and is therefore highly recommended. Improving the quality of financial reporting makes it easier for investors and other users of financial statements to develop more accurate projections of a company's future cash flows. As a result of the close relationship that exists between accounting and economics, the standard for financial reporting may have major effects on the economy. The usefulness of financial statements in comparison to other financial reports is directly impacted by the quality of the financial reporting. The reliability of the process and the precision of the data are two of the primary characteristics that comprise quality. The criteria that distinguish valuable and beneficial information from other types of data and that increase the utility of financial information are referred to as the quality of financial reporting. Because of the widespread assumption that the standard of financial reporting has a direct impact on the financial markets, it is abundantly obvious that legislators and investors are on the same page regarding the need of high-quality financial reporting. On the basis of this theory, it is anticipated that the experience of the auditor in the industry will lead to an increase in the quality of financial reporting.

For the purpose of putting this hypothesis to the test, a mixed regression model was utilized, and the generalized least squares regression method was utilized for the purpose of estimating it. According to the reflected results, the quality criteria of external audits have a favorable and considerable impact on the quality of financial reporting in Iran. At the Iraqi Stock Exchange, the only factor that directly influences the reliability of financial reporting is the auditor's knowledge of the relevant industry. Neither the auditor's length of service nor their reputation have any bearing on the reliability of financial reporting. The findings of this test of the hypothesis at the Tehran Stock Exchange are comparable to the findings obtained in the study conducted by Amirzad et al. (2017) in [19], and it is predicated on the idea that the auditor's level of industry experience has a beneficial impact on the accuracy of financial reporting. Because of concerns regarding the safety of their employees and the accuracy of the government's reports, businesses in Iraq require an environment that is stable. On the other hand, the profession of auditing in Iraq is still in its infancy, and the country is in need of more specialized knowledge.

## 8. Recommendations

The findings of the hypotheses conducted at the Tehran Stock Exchange suggest that managers of companies should follow the advice given to them to delegate the auditing of their companies to well-known auditing firms that have a larger client base and a more significant market share. Because this increases the quality of the firm's financial reporting, it is beneficial for the company to avoid changing auditors and instead put their faith in experienced auditors who have worked for the company for a significant amount of time. According to the findings of the hypotheses in the Iraqi Stock Exchange, it is advised that the management of the Baghdad Stock Exchange Organization give the basis for the work of foreign audit experts according to the existing conditions in Iraq. This is because the results of the hypotheses in the Iraqi Stock Exchange can be found here. The training of audit institutions by competent auditors on both the internal and external levels can help these institutions function more effectively. In addition, the organization in charge of audits ought to offer training workshops for professional auditors in order to better the quality of financial reporting provided by businesses. This study highlights the substantial association between audit quality and financial reporting quality by presenting recommendations and ideas based on its findings. According to the findings of the study, this connection has

the potential to assist eliminate agency difficulties and information gaps. In addition, the report suggests conducting more research in this particular field. When deciding whether or not to purchase or sell stocks, it is recommended that present investors as well as potential investors take into consideration the quality of any external audits that have been conducted.

The standard for financial reporting is an important problem that may be improved with the help of the findings of scientific study. The Accounting Standards Development Board and participants in the capital market can both benefit from such study, and it can also serve as a platform for more thorough research in the future. The following are some potential areas of focus for further investigation into this subject area:

1. The influence that yearly changes have on the accuracy of financial reporting.
2. The influence of the composition of the audit committee on the accuracy of the financial reports.
3. The influence that the frequency of board meetings has on the thoroughness of financial reporting.
4. Due to the unique aspects of each sector, it has been proposed that, in the course of future study, the investigation of the influence of the quality of external audits on the standard of financial reporting should be carried out on a sector-by-sector basis.

### Declaration of competing interest

The authors declare that they have no any known financial or non-financial competing interests in any material discussed in this paper.

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