

The Moderating Role of Governance Structures on the Impact of Duration of CEO Service on Quality of Audits: Evidence from the Iraq Stock Exchange



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Abstract: This study aims to explore the role of corporate governance in moderating the effects of financial manager tenure and auditing firm tenure on audit quality in organizations listed on the Iraqi Stock Exchange. The analysis includes all companies and banks listed on the exchange during the period from 2016 to 2023. Employing a multivariate regression model in EViews software, the research provides practical insights into the interplay of governance structures, leadership tenure, and audit quality. The findings reveal a notable association between extended CEO tenure and the engagement of lower-quality audit firms, often linked to practices like discretionary accruals. However, in banks with strong corporate governance frameworks, this negative relationship is mitigated, indicating that governance mechanisms can buffer against potential declines in audit quality. Interestingly, this moderating effect is not observed in non-banking companies. These results underscore the need for regulators to consider additional institutional factors, such as the dynamics between audit firms and client personnel, when designing policies on audit firm rotation. Strengthening corporate governance practices, particularly in non-banking sectors, may enhance audit quality and reduce risks associated with long-tenured leadership and audit firm relationships.

Keywords: Audit tenure, CEO tenure, audit quality, Iraqi Stock Exchange member companies and banks.

1. Introduction

Over the past two decades, Iraq has made significant strides toward economic liberalization, with a focus on privatization and developing the financial market to enhance investor confidence and attract more investment. In this context, external auditing plays a crucial role as a key component of corporate governance, bridging the gap between financial information providers (managers) and users (stakeholders) [1]. The growing complexity of markets and the establishment of larger commercial entities in the early nineteenth century significantly influenced the separation of ownership and management. This led to the creation of the auditing profession, which became essential in overseeing the relationship between owners and managers [2].

The importance of auditors in preparing financial statements has been widely acknowledged by legislators, auditing bodies, and users of financial statements [3, 4]. Financial scandals have raised concerns about the reliability of financial statements and audit quality. Agency theory suggests that auditing is vital for protecting shareholders' interests, as they may not have direct oversight of managerial activities. Consequently, external auditing and corporate governance mechanisms are necessary to safeguard their interests [5, 6]. In summary, external auditing is seen as a fundamental tool for ensuring the accuracy of financial statements, which helps investors make informed decisions and fosters trust in the financial stability of companies.

Identifying the factors that influence audit quality is crucial for assisting financial statement users in their decision-making. In developing countries, where legal protections for investors are typically weaker than in developed nations, the tenure of chief financial officers (CFOs) and auditing firms can serve as effective corporate governance mechanisms to protect shareholders' wealth. The Audit Oversight Board of listed companies on the Iraqi Stock Exchange has noted failures in maintaining impartiality and professional skepticism during audits, although the board cannot directly link these failures to the tenure of audit firms.

DeAngelo (1982) defines audit quality as the likelihood of detecting errors in a client's financial matters and reporting them in the audit [7-10]. Thus, audit quality is influenced by the auditor's independence, which is shaped by their objectivity and impartiality [11-13]. However, research results have been mixed regarding the impact of long-term audit engagements on professional skepticism and audit quality [14]. On one hand, some studies indicate that longer auditor tenures can improve audit quality [15, 16], as auditors gain deeper knowledge of the client's operations, leading to better communication and trust, which enhances the audit process. On the other hand, concerns have been raised about the loss of auditor independence with prolonged client relationships. The Iraq Stock Exchange Organization's report suggests that long-term auditor-client relationships may lead to the auditor identifying with management's interests, making it harder for them to maintain objectivity. This is supported by the idea that a long-standing relationship can reduce auditor independence, with potential risks such as financial dependence on the client [2]. Furthermore, long-term familiarity may reduce auditor effort and innovation, leading to a decrease in audit quality [17].

Another critical factor influencing the relationship between auditors and clients is the professional interaction between auditors and client personnel, particularly the CFO. As the CFO is responsible for preparing financial reports and interacting with audit partners, their tenure can significantly affect audit quality [18]. Research suggests that a longer tenure for CFOs can negatively impact audit quality, as it may increase the likelihood of earnings management [19], which ultimately affects the reliability of the audit. Therefore, this study seeks to explore whether the duration of the relationship between the CFO and the auditing firm influences audit quality in companies listed on the Iraqi Stock Exchange and whether corporate governance moderates these relationships.

2. literature review and Hypothesis Development

2.1. Explaining the Relationship between the Chief Executive Officer (CEO) tenure and audit quality

The tenure of a company's CEO is a critical indicator of managerial effectiveness, reflecting the number of years an individual has served in this role. Prolonged tenure allows the CEO to gain deep insight into the company's operations, which can result in more efficient management due to the team's familiarity with the business environment and internal processes [20]. When a CEO has extensive experience in managing the company, their understanding of its workings and activities improves, leading to enhanced operational efficiency, reduced

management costs, and overall improvement in the quality of management. Hasan (2020) suggests that longer CEO tenure enhances industry-specific knowledge and expertise, which subsequently raises the overall quality of management [21].

In contemporary business environments, the role of the board of directors is increasingly critical to effective corporate governance, influencing not only the firm's operations but also contributing to the broader economy. The size and composition of the board are essential factors in evaluating its performance and efficiency [22]. Furthermore, research by Wang et al. (2020) explored the relationship between CEO tenure and corporate social responsibility (CSR) performance in 63 family-owned businesses in Taiwan. Their findings revealed that as CEO tenure increased, CSR performance tended to decline. They also noted that the CEO's ownership stake did not significantly affect the duration of their tenure [23].

Based on these discussions, the first hypothesis of this study is formulated as follows:

H1: The Chief Executive Officer (CEO) tenure significantly affects audit quality.

2.2. *Explaining the Relationship between auditing firm tenure and audit quality*

Achieving reasonable assurance that financial reports are free from material misstatement is a fundamental objective of auditing, with audit quality serving as a key indicator of this goal. Addressing significant deficiencies uncovered during the audit process is a critical measure of audit quality (Klein, 2019), aligning with the overall purpose of auditing. The quality of financial reports plays a vital role in fostering trust in markets and among investors. Independent auditing aims to enhance confidence in these reports, ensuring their reliability. Maintaining high audit quality and consistent audit execution is essential for sustaining trust in the auditor's independent assurance. If a company faces financial difficulties but its financial report accurately reflects these challenges, it raises questions about the roles of both management and auditors. Since managers are accountable for the accuracy of financial reporting [24], supporting the audit process benefits both managers and audit committees. Auditors must obtain reasonable assurance that there are no material misstatements in the financial reports, maintain skepticism regarding accounting estimates and methods, and address any deficiencies identified. This ensures that investors and other stakeholders can trust the financial information provided [25].

The CFO and audit firm play a significant role in the financial reporting process, and the relationship between these two entities is crucial in determining audit quality (Zhu, 2018). The auditor tenure theory and the concept of mutual trust highlight the complexities of the relationship between the audit firm and CFO. The long-term relationship between these parties may have varying effects on financial reporting and audit decisions. From the perspective of auditor tenure theory, CFOs may have incentives to manage earnings and exert pressure—either economic or social—on auditors, potentially leading to biased reporting and diminished audit quality. Conversely, the mutual trust perspective suggests that long-term interactions between auditors and CFOs can foster improved information flow and enhance audit quality [26].

The goal of mandatory audit firm rotation is to reduce the duration of the auditor-client relationship, promoting increased professional skepticism and potentially improving audit quality. However, the literature on this topic offers mixed results, with some studies indicating that longer auditor tenure can reduce audit quality. Nonetheless, research also points to the possibility that the early stages of an audit-client relationship might show a decline in audit quality, which raises concerns about mandatory rotation. Notably, Gipper et al. (2018) found potential benefits in rotating audit partners every five years [27]. Current studies have explored various factors influencing audit quality, such as optional accruals, earnings management, debt costs, investor responses, restatements, and

more. Johnson et al. (2019) and Gul et al. (2009) found no significant relationship between audit firm tenure and the quality of optional accruals [17, 28]. Siegel (2007) identified a negative link between auditor-client relationship length and the likelihood of restatements. Myers et al. (2003) found that optional accruals improved with longer audit firm tenure [29], while Lee (2010) documented a positive relationship between earnings conservatism and auditor tenure [30].

Bell et al. (2015) also found a positive relationship between audit firm tenure and audit quality, suggesting that longer tenures lead to better understanding of the client's business, improving the consistency and reliability of audits [3]. Tsui et al. (2023) examined auditor tenure's impact on audit quality, considering factors like independence, integrity, objectivity, and competence. Their study revealed that longer auditor tenure generally results in higher audit quality, as auditors gain deeper insight into the client's business environment and risk factors [31].

Tran et al. (2019) conducted a cross-sectional analysis of companies listed on the Hong Kong Stock Exchange, comparing audit quality among auditors. They found that audits performed by the Big Four firms were of higher quality than those conducted by other firms [32]. Davis et al. (2009) demonstrated that audit firm tenure significantly influences the management of discretionary accruals, which can impact compliance with analyst predictions and audit quality [26]. Their findings suggest that longer audit tenure reduces the use of discretionary accruals for meeting or missing targets, signaling improved audit quality. However, they observed a turning point after 15 years, where audit quality begins to decline. The non-linear nature of the relationship between audit firm tenure and audit quality is confirmed by Brockman et al. (2022), who found that this relationship is more complex than initially assumed [33].

Research by Qi and Zhang (2018) on the long-term effects of the SOX Act suggested that the timely detection and correction of financial distortions has decreased over time, although not entirely eliminated. They also found a positive correlation between longer audit firm tenure and fraud in larger clients [34]. In another study, Coles et al. (2019) reported that extended audit tenures lead to a decrease in audit quality, particularly for clients with higher litigation risks. Additionally, short-term auditor-client relationships often exhibit a decrease in audit quality during the initial years of the relationship [35].

In conclusion, the relationship between audit firm tenure and audit quality remains contentious, with studies indicating both positive and negative effects. The overall quality of audits is influenced by the duration of the auditor-client relationship, with certain risks and benefits emerging at different stages of the relationship. Understanding these dynamics is crucial for shaping policies on audit firm rotation and for ensuring the continued effectiveness of audits in providing reliable financial information to stakeholders.

According to what has been discussed, the following is the second research hypothesis.

Hypothesis 2: The auditing firm tenure significantly impacts audit quality.

2.3. *The Role of Corporate governance on the Relationship between CEO tenure and audit firm tenure and audit quality*

Corporate governance is a critical framework for balancing the interests of shareholders and management, aiming to address and mitigate agency problems. Managers play a central role in strategic decision-making within organizations, making corporate governance and its mechanisms of significant importance. It consists of a set of guiding principles and control mechanisms that define the rights and responsibilities of various stakeholders, such as managers, employees, shareholders, and other individuals or entities influencing the company's operations. Corporate governance establishes the rules and procedures for decision-making, goal-setting, resource allocation,

and control systems, all of which are designed to align with the expectations of those providing financial resources and ensure the return on their capital [36].

The origins of corporate governance can be traced back to the research of Berle and Means (1932), who highlighted the separation of ownership and control in modern corporations. Essential corporate governance mechanisms, such as monitoring managers and providing incentives to align their interests with those of shareholders, are crucial for improving governance and mitigating agency problems. Several studies have examined corporate governance and its various mechanisms [37, 38], with particular focus on factors like board independence, meeting frequency, CEO duality, and board gender diversity, all of which are linked to enhanced governance and reduced agency costs. In the contemporary business environment, where ownership and control are separated, an effective corporate governance system is indispensable. It ensures management oversight, reduces agency costs, and aligns management's interests with those of the shareholders.

While there is no universally agreed-upon definition of corporate governance, investors commonly define it as a system of individuals, processes, and activities designed to oversee the management and utilization of a business's assets [39]. A robust corporate governance structure ensures that company resources are used efficiently for the benefit of absentee owners and that financial and operational performance is reported transparently and accurately. This structure also ensures compliance with Generally Accepted Accounting Principles (GAAP) and maintains the integrity of financial statements. Effective corporate governance mechanisms are expected to reduce earnings management by providing effective oversight in the financial reporting process. As a result, corporate governance impacts various facets of the company, including the tenure of managers and auditors.

Previous research has shown that auditor tenure is associated with reporting quality metrics, such as accounting conservatism [40]. However, a more nuanced analysis of this relationship indicates that the association with higher-quality financial information is often limited to specific subsets of information. For companies with fewer resources or weaker external oversight, the relationship may turn negative [30]. Concerns about long auditor tenure often stem from issues related to auditor independence. Shockley (2021) concluded that non-audit fees do not significantly impact the likelihood of auditor rotation, suggesting that independence may not be as compromised as often assumed [41]. Furthermore, Imen and Anis (2021) found that the emphasis on auditor independence is more closely tied to the quality of corporate governance mechanisms than to the length of auditor tenure [42].

Since the selection and rotation of auditors are functions of corporate governance, the overall impact of corporate governance on the quality, transparency, and frequency of disclosure within companies is well-documented [23]. Strong corporate governance structures prevent excessive managerial and auditor tenures, as extended tenures could compromise independence, ultimately reducing the quality of information and audits. Thus, a robust corporate governance system plays a moderating role in the relationship between manager tenure, auditor tenure, and audit quality. Based on the discussions above, the third and fourth hypotheses are proposed as follows:

H3: Corporate governance Moderate the relationship between CEO tenure and audit quality.

H4: Corporate governance Moderate the relationship between audit firm tenure and audit quality.

3. Methodology

The present study is applied in terms of its objective and semi-experimental in terms of research methodology. The research approach is comparative and inductive, allowing for the exploration of relationships and drawing conclusions based on observed data. Theoretical underpinnings of the research align with confirmatory research,

as the study seeks to test existing hypotheses and theories. Statistically, the study follows a descriptive and correlational research design, employing multiple linear regression for hypothesis testing.

To test the hypotheses, data related to the financial reports of companies listed on the Iraqi Stock Exchange were collected. The final statistical sample was determined based on the information provided in Table 1. This data serves as the foundation for the analysis, ensuring a robust evaluation of the research questions and hypotheses.

Table 1. The number of companies

Companies Listed on the Iraqi Stock Exchange	Number of Companies
Total number of companies	136
Companies or Banks for which the required information for this research is not available.	(52)
Companies or Banks that became members of the Iraq Stock Exchange after 2016	(26)
Total sample(Banks and Companies)	58

Basic information and data for hypothesis testing were obtained from the Iraqi Stock Exchange database. The data analysis approach incorporates both cross-sectional and year-to-year (panel data) perspectives, enabling a comprehensive understanding of trends over time. To test the hypotheses, the multivariate linear regression method was employed, complemented by descriptive and inferential statistical techniques to examine the produced data.

Descriptive analysis utilized frequency distribution tables to summarize the data, providing an overview of the variables in question. For inferential analysis, various tests were applied, including the F-Limer test, the Husmann test, the normality test, and multiple linear regression tests, to rigorously test the research hypotheses.

The sample comprised 58 entities, including 29 companies and 29 banks, leading to a total of 464 observations (232 for company years and 232 for bank years) spanning the research period. This robust sample allows for a detailed examination of the relationships between CEO tenure, audit firm tenure, and audit quality within the context of corporate governance on the Iraqi Stock Exchange.

3.1. Research Model

Equation (1) was used to test Hypothesis 1, and Equation (2) tested Hypotheses Model 1.

$$AudQuality_{it} = \beta_0 + \beta_1 CEOTenure_{it} + \beta_2 AUDTenure_{it} + \beta_3 SIZE_{it,t} + \beta_4 SLEV_{i,t} + \beta_5 QUICK_{it} + \beta_6 LOSS_{it} + \beta_7 ROA_{it,t} + \beta_8 BIG_{it} + \beta_9 GROWTH_{it} + \beta_{10} CFO_{it} + \beta_{11} BIG_{it} + \beta_{12} Age_{it} + \sum year + \varepsilon_{i,t}$$

$$AudQuality_{it} = \beta_0 + \beta_1 CEOTenure_{it} + \beta_2 AUDTenure_{it} + \beta_3 CG_{i,t} + \beta_4 CEOTenure_{it} * CG_{i,t} + \beta_5 AUDTenure_{it} * CG_{i,t} + \beta_6 SIZE_{it,t} + \beta_7 SLEV_{i,t} + \beta_8 QUICK_{it} + \beta_9 LOSS_{it} + \beta_{10} ROA_{it,t} + \beta_{11} BIG_{it} + \beta_{12} GROWTH_{it} + \beta_{13} CFO_{it} + \beta_{14} BIG_{it} + \beta_{15} Age_{it} + \sum year + \varepsilon_{i,t}$$

The Dependent Variable

AudQuality_{i,t}:

The dependent variable in this study is audit quality, which is measured as follows:

AudQuality: In this study, audit quality is measured based on the absolute value of the discretionary accruals model proposed by Dechow and Dichev (2002), as follows:

$$WCA_{i,t} = \gamma_0 + \gamma_1 CFO_{i,t-1} + \gamma_2 CFO_{i,t} + \gamma_3 CFO_{i,t+1} + \gamma_4 \Delta REV_{i,t} + \gamma_5 PPE_{i,t} + \varepsilon_{i,t}$$

where WCA is the Working Capital Accruals, $CFO_{i,t-1}$, $CFO_{i,t}$, $CFO_{i,t+1}$ represent the cash flows from operations of the firm in the previous year, current year, and next year respectively. $REV_{i,t}$ represents the revenue, $PPE_{i,t}$ indicates the property, plant, and equipment, and ε (model error) denotes the residual error from the regression model. In this equation, the WCA in each year is determined based on the firm's financial statements.

$$WCA_{i,t} = \Delta CA_{i,t} + \Delta Cash_{i,t} + \Delta CL_{i,t}$$

ΔCA = Changes in current assets at year t and t-1.

$\Delta CASH$ = Changes in cash and cash equivalents at year t and t-1.

ΔCL = Changes in current liabilities at year t and t-1.

It is important to note that this model is examined at the industry level, and the selection of industry variables is based on the characteristics of the relevant industry.

To calculate AudQuality, the negative absolute value of the residual error from the fitted regression is utilized.

Independent Variable

CEOTenure (CEO Tenure)_{i,t}:

The number of years a CEO has been in office at a company.

AUDTenure (Auditor Tenure)_{i,t}:

The number of years an auditor has been serving a company.

Moderator Variables

Corporate Governance (CG)_{i,t}:

To operationalize the corporate governance quality index, a coding and scoring method was employed. In this approach, each component of corporate governance is assessed based on its operational definition, and a score of either zero or one is assigned accordingly. A score of "one" is assigned when a specific corporate governance mechanism or practice is in place, while a "zero" is assigned when it is absent or does not meet the criteria defined for effective governance.

Once all the components of corporate governance are coded, the scores for each component are summed up. The final corporate governance score represents the overall quality of governance within the organization, with higher scores indicating better governance practices. This method provides a clear, quantifiable measure of corporate governance quality, which can be used to analyze its impact on audit quality and other related variables in the study.

Table 2. Corporate governance indicators

Component name	Operational definition
Board Directors Independence	The presence of non-executive members relative to the total number of board members. If this ratio is above the average of other companies, it is assigned a value of one; otherwise, it is assigned a value of zero.
CEO duality	Differentiation of the CEO role as chairman of the board. If the CEO does not hold the position of chairman, it is assigned a value of one; otherwise, it is assigned a value of zero
Audit Committee Expertise	Utilization of accounting and financial expertise in the audit committee. If the audit committee includes accounting and financial experts, it is assigned a value of one; otherwise, it is assigned a value of zero
Board Expertise:	Utilization of accounting and financial expertise on the board of directors. If the board includes accounting and financial experts, it is assigned a value of one; otherwise, it is assigned a value of zero.

Control Variables:

LEV_{i,t}: This variable equals the ratio of total debts to total assets in the current year.

SIZE_{i,t}: calculated as the natural logarithm of the company's operating income and sales.

QUICK_{i,t}: calculated as current assets divided by current liabilities.

LOSS_{i,t}: If the bank or company reports a loss, it equals one, and otherwise, zero.

BIG_{i,t}: Auditor size; equals one if the Iraqi Board of Audit has audited the company, otherwise, it is zero.

GROWTH_{i,t}(Cash growth): equals one if the company's cash increased compared to the previous year, otherwise, it is zero.

ROA_{i,t}: The result of dividing the net profit by the total assets' book value.

CFO_{i,t}: Cash flow from operations; homogeneous with the total assets of the company.

Age_{i,t}: calculated as the natural logarithm of the year under review minus the year of establishment of the company of interest .

Year: Dummy variable for the year.

4. Results

This study employs two models to examine the relationship between CEO tenure (CEOTenure), audit firm tenure (AUDTenure), and audit quality, with the moderating role of corporate governance (CG). The panel data used in this analysis includes 58 companies and banks listed on the Iraqi Stock Exchange, covering the period from 2016 to 2023. The models incorporate several key variables to explore the impact of governance and tenure on audit quality.

The variables utilized in the models are as follows:

- **CEOTenure**: The length of time the CEO has served at the company.
- **AUDTenure**: The duration of the relationship between the company and its audit firm.
- **Audit Quality**: A measure of the reliability and accuracy of the company's financial reporting, which may be influenced by the duration of the auditor's tenure and the effectiveness of the corporate governance structure.
- **Corporate Governance (CG)**: An index of corporate governance quality, as operationalized through coding and scoring of key governance components.
- **Control Variables**: Other relevant factors that may influence the audit quality, including firm size, industry type, and financial performance indicators.

4.1. Data on Descriptive Statistics

The descriptive statistics of the main variables of this research are presented in Table 2. One of the key variables examined in this study is Tobin's Q, which serves as a measure of a company's value creation or destruction. A Tobin's Q score greater than 1 indicates that the firm is creating value, while a score below 1 suggests that the firm is destroying wealth.

In this study, the mean value of Tobin's Q is reported as 3.360. This indicates that, on average, the companies in the sample are creating value, as their Tobin's Q scores are above 1. This finding suggests positive performance and value generation by the companies within the studied period (2016-2023).

Table 3. Descriptive statistics of main variables companies

Banks	Companies
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Max	Min	Mean	Max	Min	Mean	Varbilae
-0.001	-0.403	-0.066	-0.001	-0.392	-0.085	AudQuality
7.000	1.000	2.507	7.000	1.000	3.147	AUDTenure
7.000	1.000	2.652	7.000	1.000	2.583	CEOTenure
1.696	0.019	0.416	1.889	0.014	0.346	Lev
25.260	17.521	22.989	27.105	13.380	20.931	SIZE
0.793	-0.068	0.034	0.914	-0.968	0.055	ROA
0.542	-0.289	0.059	0.672	-0.419	0.046	CFO
4.330	2.639	3.524	4.330	2.639	3.524	Age
3.582	0.000	1.793	11.019	0.156	2.431	QUICK

Table 4. Descriptive statistics of qualitative variables

Percentage %	Frequency	Status	Varbilae('Companies)
70.86	163	0	Loss
29.14	69	1	
100.00	232	Total	
45.90	104	0	BIG
54.10	128	1	
100.00	232	Total	
38.10	90	0	GROWTH
61.90	142	1	
100.00	232	Total	
Percentage %	Frequency	Status	Varbilae('Banks)
83.16	193	0	Loss
16.84	39	1	
100.00	232	Total	
29.18	65	0	BIG
70.82	167	1	
100.00	232	Total	
47.23	108	0	GROWTH
52.77	124	1	
100.00	232	Total	

4.1. Data Analysis and Main Results

Table 5 presents the results of the Levin, Lin, and Chu (LLC) unit root test, which is used to analyze the stability of the variables in this study. The test is crucial for determining whether the time-series data exhibits a unit root, which would indicate that the data is non-stationary.

The results in Table 5 show that all variables are stable, as evidenced by the significance level being less than 0.05 for each variable. This indicates that the null hypothesis of a unit root is rejected, meaning the variables do not exhibit a unit root and are stationary. Hence, the variables are suitable for further analysis in the study, as non-stationary data could lead to unreliable results in regression models.

Table 4. The results of Levin, Lin Vecho's unit root

Variable	Companies	Banks
Variable	0.000	0.000
Audit Quality	0.000	0.000
AUDTenure	0.000	0.000
CEOTenure	0.000	0.000

Lev	0.000	0.000
SIZE	0.000	0.000
ROA	0.000	0.000
CFO	0.000	0.000
Age	0.000	0.000
QUICK	0.000	0.000
Loss	0.000	0.000
BIG	0.000	0.000
GROWTH	0.000	0.000

The study utilized the Durbin and Wu–Hausman test to examine potential endogeneity issues in the research equations. Endogeneity refers to a situation where an explanatory variable is correlated with the error term, which can lead to biased estimates in regression analysis.

The results of the Durbin and Wu–Hausman test, as reported in Table 6, show that the p-value is larger than 0.05. This suggests that there is no endogeneity in the models used in this study. In other words, the explanatory variables are not correlated with the error term, and the regression results are reliable and unbiased.

Table 6. Results of Durbin–Wu–Hausman test

Result	p-value	χ^2	Test	Equation
H0 is rejected (there is no endogeneity)	0.506	$\chi^2 = 1.634$	Durbin	1(Companies)
H0 is not rejected (there is no endogeneity)	0.571	F=0.878	Wu-Hausman	
H0 is rejected (there is endogeneity)	0.876	$\chi^2 = 0.289$	Durbin	2
H0 is rejected (there is endogeneity)	0.912	F=0.124	Wu-Hausman	
H0 is rejected (there is no endogeneity)	0.498	$\chi^2 = 1.734$	Durbin	1(Banks)
H0 is not rejected (there is no endogeneity)	0.439	F=0.951	Wu-Hausman	
H0 is rejected (there is endogeneity)	0.811	$\chi^2 = 0.309$	Durbin	2
H0 is rejected (there is endogeneity)	0.867	F=0.171	Wu-Hausman	

Based on the integration test results presented in Table 7, the null hypothesis of data integration is rejected at the 99% confidence level. This indicates that the data is not stationary and requires a panel data model for further analysis. The rejection of the null hypothesis implies that the variables exhibit some form of non-stationarity, which is a common characteristic in time-series data or panel data involving multiple entities over time.

Therefore, in order to estimate the coefficients of the models accurately and avoid potential issues arising from non-stationary data, a panel data model should be employed for the analysis. This model allows for the incorporation of both cross-sectional and time-series variations, providing more robust and reliable estimates.

Table 7. The results of pooling.

Equation	F Statistic	p-value
1 Companies	1.869	0.005
2 Companies	4.869	0.000
1 Banks	13.724	0.000

2 Banks	12.765	0.000
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The results from the Hausman test presented in Table 8 provide insights into which model is more efficient for estimating the research equations for companies and banks.

- For the first and second models in Companies, and the first model in Banks, the Hausman test statistics (8.176, 8.417, 15.333, and 23.856) are greater than the critical value in the table. As a result, the null hypothesis (which suggests that the proper model is the random-effects model) is not rejected. Therefore, the random-effects model is considered the more efficient model for these specific research models.
- However, for the second model in Banks, the Hausman test statistic is not greater than the critical value in the table, leading to the rejection of the null hypothesis. This suggests that the fixed-effects model is the more efficient model for this particular case.

In summary, the random-effects model is more appropriate for most of the models, while the fixed-effects model should be applied for the second model in the Banks research model due to the rejection of the null hypothesis.

Table 8. The results of the Hausman test

Equation	χ^2 Statistic	p-value
1 Companies	8.176	0.963
2 Companies	8.417	0.812
1 Banks	15.333	0.167
2 Banks	23.856	0.041

Table 9. The results of the first model

Variable (BF)	Equation (1): Companies					Equation (1): Banks			
	Coef	Std. Err	Statistic t	Prob	VIF	Coef	Std. Err	Statistic t	Prob
	CEOTenure	-0.028***	0.002	-11.394	0.000	1.183	-0.036***	0.002	-16.654
AUDTenure	-0.013***	0.022	-4.609	0.000	1.261	-0.027***	0.002	-13.473	0.000
Lev	0.001	0.003	0.002	0.997	1.231	0.002	0.017	0.154	0.877
SIZE	-0.001	0.003	-0.219	0.826	1.367	-0.003	0.003	-1.017	0.310
ROA	-0.023	0.018	-1.311	0.190	1.083	0.124***	0.033	3.713	0.000
CFO	-0.036	0.033	-1.084	0.279	1.137	0.003	0.021	0.164	0.869
Age	-0.051	0.032	-1.084	0.279	1.231	-0.026***	0.009	-2.663	0.008
QUICK	0.001	0.001	0.255	0.798	1.069	0.001	0.001	0.586	0.558
Loss	0.006	0.012	0.521	0.602	1.083	0.005	0.001	0.548	0.584
BIG	0.028	0.023	1.209	0.227	1.089	0.015	0.017	0.879	0.380
GROWTH	0.004	0.004	1.043	0.297	1.148	0.001	0.002	0.283	0.771
_cons	0.400	1.180	0.340	0.735	---	0.811	2.055	0.390	0.694
χ^2 Statistic	21.678(0.000)					77.35(0.000)			
R ²	0.516					0.796			
Adjusted R ²	0.492					0.782			
Durbin-Watson Statistic	1.950					1.575			
AIC	768.21					1021.46			

*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Resource: Research findings

As presented in Table 9, the Variance Inflation Factor (VIF) values indicate that the independent variables are not collinear, as all VIF values are below 5. This suggests that multicollinearity is not a concern in the model.

Additionally, the Durbin-Watson test values of 1.57 for banks and 1.95 for companies suggest the absence of serial correlation among the disturbance terms, which is a positive sign for the reliability of the regression models.

Regarding the first and second hypotheses:

- The tenure of the financial manager and auditor (independent variables) in both banks and companies exhibits a negative and significant relationship with audit quality (dependent variable). The coefficients for the relationships are as follows:
 - For banks: -0.03 and -0.02
 - For companies: -0.02 and -0.01

These negative coefficients suggest that as the tenure of the financial manager and auditor increases, the quality of auditing decreases.

Based on these findings, the first and second hypotheses of the research are accepted at a 95% confidence level, confirming the negative relationship between tenure and audit quality.

Finally, the adjusted R-squared values indicate that the models explain a significant portion of the variation in the dependent variable:

- 78% of the variation in audit quality is explained in the banks model.
- 49% of the variation in audit quality is explained in the companies model.

These adjusted R-squared values show that the models fit the data well, with a stronger explanatory power for banks compared to companies.

Table 10. The results of the second model

Variable (BF)	Equation (2):					Equation (2):				
	Companies					Banks				
	Coef	Std. Err	Statistic t	Prob	VIF	Coef	Std. Err	Statistic t	Prob	
CEOTenure	-0.036***	0.006	-5.875	0.000	2.243	-0.047***	0.005	-8.976	0.000	
AUDTenure	-0.021***	0.006	-3.488	0.000	2.191	-0.036***	0.005	-6.902	0.000	
CG	0.051***	0.012	4.006	0.000	2.112	0.042***	0.007	6.006	0.000	
AUDTenure * CG	0.004**	0.002	1.458	0.146	3.211	0.003**	0.001	2.110	0.036	
CEOTenure * CG	0.004***	0.001	1.649	0.104	3.265	0.004***	0.001	2.667	0.008	
Lev	-0.001	0.003	-0.062	0.949	1.231	0.009	0.015	0.618	0.536	
SIZE	0.001	0.003	0.076	0.939	1.367	-0.001	0.003	-0.493	0.621	
ROA	-0.025	0.017	-1.482	0.139	1.083	0.080**	0.031	2.549	0.011	
CFO	-0.041	0.032	-1.287	0.199	1.137	-0.012	0.020	-0.624	0.533	
Age	-0.060	0.032	-1.867	0.063	1.231	-0.023***	0.010	-2.176	0.030	
QUICK	0.004	0.001	0.331	0.740	1.069	-0.001	0.001	-0.249	0.802	
Loss	0.006	0.012	0.513	0.608	1.083	-0.001	0.009	-0.200	0.841	
BIG	0.026	0.024	1.083	0.280	1.089	0.038*	0.020	1.885	0.062	
GROWTH	0.002	0.003	0.741	0.459	1.148	0.001	0.002	0.218	0.827	
_cons	0.536	0.127	4.220	0.000	----	0.508	0.078	6.487	0.000	
χ^2 Statistic	23.03(0.000)					42.984(0.026)				
R ²	0.571					0.905				
Adjusted R ²	0.548					0.884				
Durbin-Watson Statistic	1.537					1.685				
AIC	782.21					1392.443				

*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Resource: Research findings

As shown in Table 10, the results for the third and fourth hypotheses are as follows:

- In the **second model**, **corporate governance** is found to **moderate the relationship** between **CEO tenure** and **auditor tenure** with **audit quality** in **banks**. This indicates that corporate governance plays a significant role in influencing how CEO and auditor tenures affect audit quality within the banking sector. However, **no significant relationship** was found in **companies**, suggesting that corporate governance does not have the same moderating effect in the corporate sector.

Therefore, the **third and fourth hypotheses** are **accepted** for **banks**, with a **95% confidence level**.

The **adjusted R-squared values** for the models indicate the following:

- **88%** of the variation in audit quality is explained by the independent variables in the **banks model**, demonstrating a strong explanatory power.
- **54%** of the variation in audit quality is explained in the **companies model**, indicating a moderate level of explanatory power.

Additionally, the Variance Inflation Factor (VIF) values (< 5) confirm that there is no multicollinearity among the independent variables in the research, ensuring that the relationships between the variables are not distorted by multicollinearity.

5. Discussion and Conclusion

The results of the first hypothesis of this study, which examined the relationship between CEO tenure, auditor tenure, and audit quality, demonstrated a significant relationship. This suggests that both CEO tenure and auditor tenure influence the quality of audits. From a theoretical perspective, longer auditor tenure provides auditors with increased familiarity and understanding of the entity's operations, which can help reduce audit risks. Such knowledge allows auditors to conduct more thorough audits by employing stronger audit procedures. However, this familiarity can also lead to collusion between auditors and management, particularly in cases of earnings management and financial statement manipulation, ultimately compromising audit quality. This concern highlights the potential value of implementing mandatory auditor rotation, which is currently lacking in Iraq.

The findings of this study align with those of Tsui et al. (2023), who found that increasing CEO tenure leads to a delay in financial reporting. This, in turn, increases the likelihood of earnings management, reducing the quality of financial information [39]. The findings are also consistent with those of Faccio et al. (2022), suggesting that high-quality financial statements from large institutions are not necessarily a result of superior audit services but rather stem from the stakeholders' interest in providing accurate financial statements [43]. Similarly, Lento et al. (2021) found that longer CEO tenure increases the risk of earnings management, which decreases financial reporting quality [44].

However, the results diverge from Wang et al. (2020), who emphasized the role of corporate governance mechanisms, such as the board of directors and audit committees, in mitigating conflicts of interest between managers and shareholders. According to agency theory, the board of directors plays a critical role in overseeing management activities, and their composition influences the effectiveness of corporate control mechanisms [23].

The study also found that corporate governance can moderate the negative effects of CEO and auditor tenure on audit quality, particularly in banks. The findings indicate that in banks with stronger corporate governance, the negative impact of longer CEO and auditor tenures on audit quality is lessened. This underscores the positive

relationship between internal corporate governance and audit quality, with the board of directors playing a key role in selecting high-quality auditors.

These results are in line with studies by Tran et al. (2019), who found that companies with stronger governance mechanisms tend to choose large auditing firms, prioritizing audit quality [32]. Additionally, Collier (2018) showed that effective governance can reduce auditor turnover, which enhances audit quality [45]. Leng (2021) also concluded that firms with strong corporate governance are more likely to seek high-quality audits, supporting the findings of this study [38].

Based on these results, it is recommended that users of financial statements carefully consider CEO tenure when analyzing audited companies. Regulators and brokers in the Iraq Stock Exchange should also implement laws that encourage listed companies to rotate auditors periodically to improve the integrity of financial reporting. Moreover, considering the positive relationship between internal corporate governance and audit quality, it is advisable for shareholders of banks to focus on the composition and financial expertise of board members when selecting the board. These characteristics can significantly enhance the efficiency of the board of directors and audit committees, leading to improved audit quality

Ethical Considerations

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

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Conflict of Interest

The authors report no conflict of interest.

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