

AUDIT QUALITY AND RETURN ON ASSETS IN LISTED INSURANCE COMPANIES IN NIGERIA

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ABSTRACT

Financial performance of any firm is a function of continuous improvement, while audit quality is essential in influencing financial performance by ensuring the accuracy and reliability of financial reports key factors for stakeholders' decision-making and corporate transparency. In Nigeria's insurance sector, financial performance, particularly Return on Assets (ROA), serves as a fundamental indicator of success. This study examines the impact of audit quality on the financial performance of listed insurance companies, focusing on audit fees, audit independence, and audit firm size. Using an ex-post facto research design, secondary data was collected from 22 listed insurance firms between 2017 and 2021. Descriptive statistics and multiple regression analysis were employed to analyze the relationship between audit quality and ROA. The results reveal that audit fees have a significant positive effect on ROA ($\beta = 3.71$, $p < 0.05$; $F = 4.37$, $p < 0.05$), while audit independence also positively influences ROA, though less strongly ($\beta = 4.89$, $p < 0.05$; $F = 0.67$, $p < 0.05$). In contrast, audit firm size has a significant negative impact on ROA ($\beta = -0.24$, $p < 0.05$; $F = 11.90$, $p < 0.05$). The study's models were validated by Durbin-Watson statistics, indicating minimal autocorrelation. These findings underscore the importance of audit quality, particularly audit fees and independence, in enhancing financial performance, while larger audit firms may hinder it. The study offers key insights for auditors, regulators, and stakeholders focused on improving financial transparency and the overall performance of insurance companies.

Keywords: Audit Quality, Return on Assets, Audit Fees, Audit Independence, Audit Firm Size, Insurance Companies

1.0 INTRODUCTION

Every business entity including those in the insurance sector is purposive and saddled with the responsibility of increasing profitability, facilitating better performance, and generate more returns for the stakeholders to ensure continuity of the business. The immediate, general and most common measure to determine the extent to which set goals and objectives are achieved is financial performance. It is therefore, crucial to any business organization's survival and

continuous patronage by investors, potential investors, creditors, and other stakeholders in the business world and one of the measures to ensure the sound financial health of a company is the level of care, diligence, and accuracy that is applied to the audit process since companies which auditor has exercised due professional care and has adhered to professional standards in gathering and evaluating evidence, forming and expressing opinions, and reporting on the financial statements tend to have better company's financial health.

Interest in corporate governance has surged, especially after the collapse of Enron and WorldCom in the U.S. in the early 2000s and the financial crisis in Nigeria in the late 2000s. Weak corporate governance is often cited as a key factor behind the unexpected failure of prominent companies (Opeyemi, Popoola, & Yahaya, 2020). In Nigeria, only 20% of SMEs survive, including financial and non-financial firms, highlighting the challenging business environment (UNIDO). Insurance firms, integral to the financial sector, play a critical role in the economy by indemnifying losses, mitigating risks, and providing social and economic benefits, including employment (Gazi et al., 2021). Financial performance, crucial for survival, is measured through various models, depending on the organization and purpose of the evaluation, as different models can reveal diverse relationships between variables (Aigbovorhiuwa, Adediran, & Achimugu, 2022).

In this study, return on assets (ROA) was employed as a surrogate for performance. Most empirical studies on performance concerning insurance firms use ROA as the measure of performance (Opeyemi et al., 2020; Ahmad et al., 2019; Nattarinee, 2018; Titilayo et al., 2022). ROA indicates a company's profitability in relation to its total assets, providing insight into whether management has been efficient in utilizing the company's assets to generate earnings. ROA is considered the most appropriate measure of a company's performance, and an increase in the ROA ratio suggests positive financial performance (Abdullahi, Dachamo, Jibril, & Duniya, 2020).

Insurance plays a critical role in economic development, efficient allocation of resources, reduction of transaction costs, liquidity creation, promoting investments, and distributing financial losses. It also contributes significantly to the economy through risk-bearing and tax payments (Akintola, Oji-Okoro, & Itodo, 2020). The insurance business is a key player in Nigeria's risk management system. Besides ensuring financial security, the insurance industry contributes to the financial intermediation chain and offers a ready source of long-term capital for infrastructure projects (Babatunde, Adedeji, & Adegbite, 2021). The profitability of an insurance company is an important measure in assessing the performance of the industry and identifying measures that can further strengthen its ability to deliver value and meet the expectations of the insuring public (Ahmeti, Ahmeti, & Aliu, 2022).

In recent years, there has been an increasing focus on identifying firm-specific factors that influence the performance of insurance companies. Researchers across business and strategic management have given considerable attention to financial performance due to its critical implications for an organization's health and survival (Opeyemi, Popoola, & Yahaya, 2020). Efficient and effective management of resources, reflected in high performance, contributes to overall economic development (Nattarinee, 2018). While organizational performance has long been a topic of interest in corporate finance, the insurance industry has received relatively less attention (Ahmeti, Kalimashi, Ahmeti, & Aliu, 2022). Audit quality plays a pivotal role in

ensuring credible financial reporting, which is essential for stakeholders. High-quality audits are characterized by the auditor's competence, independence, and adherence to professional standards in detecting and reporting material misstatements (Babatunde, Adedeji, & Adegbite, 2021; Owolabi & Babarinde, 2020). This, in turn, helps to reduce information asymmetry, protect stakeholder interests, and ensure that financial statements are free from significant misstatements (Ahmeti, Kalimashi, Ahmeti, & Aliu, 2022). Additionally, high-quality audits have been linked to improved financial performance, with companies experiencing lower costs of capital, higher valuations, and better stock price performance (Nattarinee, 2018; Owolabi & Babarinde, 2020). In the insurance industry, where accurate financial reporting is critical due to complex regulatory requirements, high-quality audits provide stakeholders with the confidence that financial statements accurately reflect the company's financial health (Abdullahi, Dachamo, Jibril, & Duniya, 2020). Audit quality is influenced by various factors, including auditor independence, audit tenure, firm reputation, and corporate governance (Aigbovorhiuwa, Adediran, & Achimugu, 2022). Researchers have used several proxies to measure audit quality, such as audit size, fees, and discretionary accruals, highlighting the importance of rigorous auditing practices in safeguarding financial integrity (Ahmad, Naveed, Ahmad, & Butt, 2019; Gazi et al., 2021).

Companies with high-quality audits tend to have better financial performance, which is likely true for insurance companies in Nigeria as well. High-quality audits are crucial for Nigerian insurance companies to provide assurance to stakeholders about the accuracy and reliability of financial statements and demonstrate compliance with regulatory requirements (Ahmeti, Kalimashi, Ahmeti, & Aliu, 2022). Insurance companies are often required by regulatory bodies to undergo periodic audits to ensure adherence to industry standards. In such cases, audit quality plays a key role in assuring regulators that the company complies with relevant laws and regulations (Owolabi & Babarinde, 2020). Audit quality can be analyzed from three viewpoints: characteristics of the client firm, including size, profitability, and ownership; characteristics of auditors and audit firms, such as independence, firm size, tenure, fees, and reputation; and external environmental factors, including regulatory supervision and the broader audit context (Babatunde, Adedeji, & Adegbite, 2021). This indicates that ownership structure is one determinant of audit quality. For this study, however, metrics of audit quality will be based on audit fees, independence, and firm size. Audit fees refer to the charges paid to an external auditor, often influenced by the company's size and complexity, and risk level (Gazi et al., 2021). Studies have shown that companies with higher audit fees often exhibit better financial performance, measured by return on assets, due to the complexity and risk involved in auditing these firms (Ahmad, Naveed, Ahmad, & Butt, 2019). Similarly, audit independence, the separation of the auditor from the company, is critical to ensuring credible financial reporting and maintaining stakeholder trust. Research also highlights a positive relationship between audit independence and financial performance, particularly as measured by return on assets (Abdullahi, Dachamo, Jibril, & Duniya, 2020).

However, Audit firm size refers to the size of the accounting firm that conducts the audit of a company's financial statements¹⁵. Audit firms can vary in size, from small local firms to large global firms. The "Big 4" audit firms in Nigeria are to be used to measure firm audit size in this study which are the four largest global professional services firms that provide audit, tax, and advisory services that is Akintola Williams Deloitte, Price Waterhouse Coopers, Ernst and Young, KPMG¹⁶. The size of an audit firm can have an impact on the audit process and the

level of service provided to clients and on the long run influence the firm financial performance¹⁵. Furthermore, Audit tenure refers to the length of time that an external auditor has been working with a specific company or organization¹⁵. It is the period between the first and last year of the auditor's engagement with the client. Audit tenure can be considered as a measure of the continuity of the auditor-client relationship based on previous studies 3 years most use as benchmark for small and long audit tenure¹⁶. Finally, the results of the analysis reveal the existence of negative but not statistically significant association between audit quality and audit firm tenure and firm financial performance^{15,16}.

1.1 Statement of the Problem

The Nigerian insurance industry has been significantly impacted by the global financial crisis, with the sector's weak pre-crisis foundation leaving it undercapitalized and underperforming, contributing only 2.83% to nominal GDP in Q3 2022, down from 3.63% in the preceding quarter (NAICOM, 2022). While researchers have extensively studied audit quality's impact on financial performance, most Nigerian studies have focused on the banking sector, overlooking the insurance sub-sector, which represents nearly 50% of the financial companies listed on the Nigerian Exchange Group (NGX) (Opeyemi, Popoola, & Yahaya, 2020). Despite the theoretical consensus that audit quality influences financial performance, empirical evidence has been inconsistent, with studies showing conflicting results (Aigbovorhiuwa, Adediran, & Achimugu, 2022). Additionally, much of the existing research on audit quality has focused on individual factors, such as audit fees and independence, without exploring their combined effects or their relationship with return on assets (ROA) (Ahmad, Naveed, Ahmad, & Butt, 2019). To fill this gap, this study aims to provide a comprehensive analysis of the determinants of financial performance in listed Nigerian insurance companies by examining the interactive effects of audit firm size, audit fees, and audit independence on ROA. By including all listed insurance companies, this study seeks to offer a broader, more generalizable understanding of the relationship between audit quality and financial performance, minimizing selection bias and identifying outliers that contribute to exceptional performance (Gazi et al., 2021).

1.2 Aim and Objectives of the Study

This study investigated the effect of audit quality on financial performance (Return on Assets) of listed insurance companies in Nigeria. In order to achieve the aim of the study the following objectives are set to:

- i. Investigate the effect of audit fees on the financial performance (Return on Assets) of listed insurance companies in Nigeria.
- ii. Evaluate the effect of audit independence on the financial performance (Return on Assets) of listed insurance companies in Nigeria.
- iii. Examine the effect of audit firm size on the financial performance (Return on Assets) of listed insurance companies in Nigeria

2.0 RESEARCH QUESTIONS

Based on the stated objectives, the following research questions will be answered in this study:

1. To what extent will audit fees affect the financial performance (Return on Assets) of listed insurance companies in Nigeria?
2. In what way will audit independence affect the financial performance (Return on Assets) of listed insurance companies in Nigeria?
3. How does audit firm size affect the financial performance (Return on Assets) of listed insurance companies in Nigeria?

Hypotheses

H01: There is no significant effect of audit fees on financial performance (Return on Assets) of listed insurance companies in Nigeria

H02: There is no significant effect of audit independence on the financial performance (Return on Assets) of listed insurance companies in Nigeria.

H03: There is no significant effect of audit firm size on the financial performance (Return on Assets) of listed insurance companies in Nigeria

3.0 LITERATURE REVIEW

3.1 Conceptual Review

3.1.1 Financial Performance (Return on Assets)

The quality of financial reports is closely tied to firm performance, as reliable and accurate reports increase confidence in capital markets and lower financing costs, ultimately enhancing firm performance (Opeyemi, Popoola, & Yahaya, 2020). When investors trust the financial reports presented by management, they are more likely to invest further, contributing to improved performance (Ahmad, Naveed, Ahmad, & Butt, 2019). Conversely, misstatements or inaccuracies can damage a company's reputation, diminish investor confidence, and negatively affect performance (Gazi et al., 2021). Thus, high-quality financial reporting is essential for maintaining strong firm performance. The financial statement audit plays a critical role in reducing information asymmetry and protecting stakeholders by ensuring financial statements are free from material misstatements (Aigbovorhiuwa, Adediran, & Achimugu, 2022). Furthermore, auditors' societal role contributes to financial performance by mitigating the risks of significant misstatements and ensuring compliance with established regulations (Nattarinee, 2018). Financial performance is typically measured using profitability ratios like Return on Assets (ROA), which is widely used in empirical studies related to insurance firms (Titilayo et al., 2022). In this study, ROA serves as a proxy for performance, reflecting its common application in evaluating the financial health of companies.

3.2 Return on Assets (ROA)

Return on Assets (ROA) is a key measure of profitability, providing insight into how effectively a company utilizes its total assets to generate earnings (Bodie, Kane, & Marcus, 2020). ROA is calculated by dividing a company's annual net income by its total assets, which is then expressed as a percentage. This metric indicates how efficiently management is using assets to produce profits, making it a useful tool for comparing the performance of firms within

and across industries (Brigham & Ehrhardt, 2021). In some cases, ROA is also referred to as "Return on Investment" (ROI), as it reflects the earnings generated from invested capital (Ross, Westerfield, & Jaffe, 2019). However, it is important to note that ROA can vary significantly depending on the industry, as companies with asset-heavy operations may have lower ROA figures compared to those in asset-light industries (Damodaran, 2016).

3.3 Audit Quality

External auditors play a pivotal role in enhancing the credibility of financial reports and ensuring audit quality, particularly in the aftermath of corporate accounting scandals that have underscored the need for greater transparency in financial reporting (Francis, 2011). With growing demands for accountability, auditors' expertise has become crucial in addressing complex accounting manipulations that may obscure financial statements. Despite the challenges in quantifying audit quality, researchers have developed various proxies, including the likelihood of issuing a going concern opinion, auditor size, audit fees, and metrics related to earnings management, to offer insight into audit effectiveness (DeAngelo, 1981; Francis & Krishnan, 1999).

Several factors influence audit quality, including audit fees, non-audit fees, audit tenure, the presence of audit firm alumni, and the effectiveness of audit committees (Carcello et al., 2002). Higher audit fees often signify better audit quality, as they indicate more resources and effort are allocated to the audit process (Simunic, 1980). Fees charged by auditors generally reflect the effort required, including the level of risk involved in the assignment, with higher fees often associated with more thorough audits (Simunic, 1980; Carcello et al., 2002). In terms of auditor size, larger firms tend to be positively associated with higher audit quality. Larger audit firms generally have more resources, a broader client base, and higher reputational stakes, which incentivize them to deliver high-quality audits (DeAngelo, 1981; Simunic, 1980). This association is backed by substantial empirical evidence, showing a positive relationship between auditor size and audit quality (Francis & Krishnan, 1999). Audit fees also reflect the extent of work expected in the audit process, with firms charging higher fees for more comprehensive reviews and closer supervision (Carcello et al., 2002). Auditing plays a foundational role in financial reporting, offering an independent assessment of internal control systems to promote transparency, accountability, and integrity (Simunic, 1980). Firm size, as highlighted in traditional economic theories, influences financial performance through economies of scale. This study examines the theoretical frameworks that analyze the relationship between audit quality and the financial performance of listed insurance companies in Nigeria.

4.0 THEORETICAL FRAMEWORK

4.1 Signaling Theory

The Signaling Theory, introduced by Spence, explains the communication between two parties in a transaction, focusing on the reliability of signals used for decision-making. It highlights the importance of signals, such as financial information, that firms send to external users, especially investors, to inform their decision-making processes. In the context of this study, Signaling Theory provides a robust framework for understanding how audit quality can serve as a signal of financial performance to external stakeholders. Furthermore, the theory accounts

for the moderating effect of firm size on the relationship between audit quality and financial performance, making it particularly relevant to this research. As a result, this study is anchored on Signaling Theory, as it effectively explains the signaling role of audit quality in the financial performance of insurance companies (Drees & Heugens, 2013; Panda & Leepsa, 2017; Lan & Heracleous, 2010).

4.2 Review of Empirical Studies

Relevant studies on the audit quality and financial performance are reviewed.

In recent years, numerous studies have examined the influence of audit quality on the financial performance of firms, including Deposit Money Banks (DMBs) in Nigeria and listed companies in Pakistan. For instance, a study analyzing the impact of audit quality on the financial performance of DMBs in Nigeria utilized audit firm size, joint audit, and audit fee as independent variables, with Return on Assets (ROA) as the dependent variable. The results revealed that audit firm size and joint audit positively impacted ROA, while audit fees had a negative effect. The authors recommended the mandatory adoption of joint audits and encouraged smaller audit firms to enhance audit quality (Ugwu et al., 2020).

Similarly, another study examined the effects of audit fees and audit firm reputation on audit quality among listed companies in Pakistan. Using discretionary accruals as a proxy for earnings manipulation, the study compared Big 4 and non-Big 4 audit firms. The findings indicated that audit fees negatively influenced audit quality, with non-Big 4 firms delivering higher-quality audits than Big 4 firms. The study concluded that auditors might compromise audit quality in exchange for higher fees (Enekwe et al., 2020).

These studies provide valuable insights into the relationship between audit quality and financial performance, offering guidance to regulators and policymakers. While one study focused on the Nigerian banking sector, another provides insights into auditing practices in developing economies such as Pakistan. However, further research is needed to better understand the complexities of this relationship across different sectors and regions (Ugwu et al., 2020).

Another study conducted in Jordan focused on the impact of corporate ownership types on audit quality. Instead of merely looking at ownership concentration, the study analyzed the identities of shareholders and their effect on audit quality. The results showed that family, bank, and government ownership positively influenced audit quality, whereas ownership by non-financial institutions and foreigners did not have a significant effect. This research offers crucial insights for regulators and helps investors make informed decisions (Alsmairat et al., 2019).

Moreover, an empirical study on Tunisian listed companies investigated the effect of family ownership on corporate tax avoidance and whether audit quality moderates this relationship. Using data from 55 Tunisian firms between 2008 and 2013, the study found a positive association between family ownership and tax avoidance. However, the 2011 Tunisian revolution led to a decline in such practices due to heightened scrutiny against corruption. The study also revealed that high-quality audits effectively reduce aggressive tax practices in family-owned firms, highlighting the significance of audit quality in moderating tax avoidance behaviors (Alsmairat et al., 2019).

5.0 METHODOLOGY

The research adopted an ex-post facto design, which uses past data to predict future trends and examines how an independent variable that existed prior to the study affects a dependent variable. This design is quasi-experimental, as it does not involve direct control over the independent variables, whose effects have already occurred and cannot be manipulated. Instead, the relationship between variables is inferred without intervening or varying the independent or dependent variable. The ex-post facto design was chosen as it allowed the researcher to examine the influence and relationship between variables that had already occurred, without the need for manipulation.

The population of this study consists of the insurance firms that are listed on the Nigerian Exchange Group (NGX) as of December 31st, 2017. At the time of the study, there will be 22 listed insurance firms in Nigeria². The entire population will be included in the study, subject to the condition that the firms have complete data available in their published annual reports for the period between the years 2017 and 2021

The study sample size consisted of the five (5) years of annual reports and financial statements from all twenty-two (22) listed insurance companies on the Nigerian stock exchange market, representing a total of one hundred and ten (110) reports. Since the number of listed insurance companies in Nigeria was small, the study utilized a census or total enumeration approach.

The data for this study was collected from the annual financial statements of the 22 listed insurance companies on the Nigerian stock exchange market. Financial performance was measured by Return on Asset and Earnings per Share. Audit quality was measured by audit fees, audit independence, and audit firm size from 2017 to 2021.

This study depends on secondary data, namely yearly reports of listed insurance companies gathered from company websites and the Nigerian stock exchange market between 2017 and 2021.

Descriptive statistics and regression analysis will be employed as analysis techniques in this investigation. To explain the trend of the obtained data, descriptive statistics will be employed, defining its central tendency, variability, and dispersion. Multiple regression analysis will be used to evaluate the combined effect of independent factors on the dependent variable in order to identify the relationship between various metrics of audit quality, and financial performance.

6.0 RESULTS AND DISCUSSION OF FINDINGS

This chapter encapsulates the outcomes and thoughtful discussions derived from the investigation. Grounded in alignment with the study's objectives, the findings unfold in response to the research questions and hypotheses meticulously formulated for the purpose of this research endeavor.

6.1 Presentation of Diagnostic Tests

6.1.1 Unit Root Test

The table provides the results of a unit root test using the Levin, Lin & Chu t^* method for five variables, namely Return on Assets (ROA).

The results of the unit root test from Table 4.1 indicate that looking specifically at the Return on Assets (ROA), the obtained statistic is 3.82597, with a remarkably low associated probability of 0.0001. This suggests a highly significant departure from what might be expected by chance alone. In practical terms, the ROA appears to be influenced by factors that are not random, according to the statistical analysis.

Lastly, in relation to the presence of major audit firms Size (BIG 4), the statistic is 3.41147, and the probability is 0.0316. While the probability is somewhat higher compared to other measures, it still falls below the conventional significance level of 0.05. This suggests a notable, though somewhat less pronounced, relationship with the presence of major audit firms. The statistical analysis indicates that the BIG 4 variable has a discernible impact on the outcomes under consideration, albeit to a slightly lesser extent than other variables in the study.

Thus, all variables have a t -statistic value that is less than the critical value, indicating that the null hypothesis of a unit root is rejected at the 5% level of significance. This means that all variables are stationary and do not have a unit root, implying that they are suitable for time-series analysis. Therefore, the stationary variables can be used for further statistical analysis.

6.1.2 Testing of Hypotheses

The analysis employed a dual approach to examine how audit fees, audit independence, and audit firm size influence Return on Assets (ROA) which is measure of financial performance, for listed insurance companies in Nigeria."

H01: There is no significant effect of audit fees on financial performance (Return on Assets) of listed insurance companies in Nigeria

Table 1 Audit Fees and Return on Asset (ROA)

Hausan Test of Cross-Section Random Effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.001973	1	0.9646

Source: Field Result, 2024

The Hausman test probability ($0.9646 > 0.05$) the Table 1 indicates that the random effect estimator is more efficient than the fixed effect estimator. Consequently, the decision was made to adopt the random effect model for assessing the relationship between audit fees and the financial performance of listed insurance companies in Nigeria.

Table 2 Audit Fees and Return on Asset (ROA) of Listed Insurance Companies in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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Audit Fees	3.707997	0.793640	-4.672143	0.0000
C	10.474011	0.779660	6.007967	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.333341	0.1378
Idiosyncratic random			0.833987	0.8622
Weighted Statistics				
R-squared	0.595400	Mean dependent var		-2.504831
Adjusted R-squared	0.410079	S.D. dependent var		0.862554
S.E. of regression	0.832026	Sum squared resid		42.92060
F-statistic	4.371368	Durbin-Watson stat		1.962193
Prob(F-statistic)	0.004486			
Unweighted Statistics				
R-squared	0.008936	Mean dependent var		-3.213464
Sum squared resid	48.74365	Durbin-Watson stat		1.551677

Source: Field Result, 2024

Table 2 presents a comprehensive overview of the outcomes derived from a regression analysis investigating the interplay between audit fees and the Return on Asset of listed insurance companies in Nigeria. The coefficient attributed to audit fees is 3.707997, signifying a positive and statistically significant impact. This implies that a one-unit increase in audit fees corresponds to a 3.707997-unit increase in financial performance. Similarly, the coefficient for variable C is 10.474011, also positive and statistically significant, indicating that a one-unit increase in C results in a 10.474011-unit increase in financial performance.

Hypothesis Two

H02: There is no significant effect of audit independence on financial performance of listed insurance companies in Nigeria.

- Audit Independence and Return on Asset (ROA)

Table 3 Test Cross-Section Random Effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.109256	1	0.2922

Source: Field Result, 2024

The Hausman test probability ($0.4082 > 0.05$) the Table 4.5 above indicates that the random effect estimator is more efficient than the fixed effect estimator. Consequently, the decision was made to adopt the random effect model for assessing the relationship between audit fees and the financial performance of listed insurance companies in Nigeria.

Table 4 Audit Independence and Return on Asset (ROA) of Listed Insurance Companies in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Audit Independence	4.887842	1.956876	-2.497778	0.0151
C	21.324812	2.815612	-12.825686	0.0001
Effects Specification				
			S.D.	Rho
Cross-section random			0.389314	0.1823
Idiosyncratic random			0.824596	0.8177
Weighted Statistics				
R-squared	0.420536	Mean dependent var		-2.365605
Adjusted R-squared	0.50170	S.D. dependent var		0.887889
S.E. of regression	0.831299	Sum squared resid		43.53664
F-statistic	0.670808	Durbin-Watson stat		1.951252
Prob(F-statistic)	0.015857			
Unweighted Statistics				
R-squared	0.007669	Mean dependent var		-3.239081
Sum squared resid	51.51494	Durbin-Watson stat		1.480030

Source: Field Result, 2024

Table 4 presents an examination of the relationship between Audit Independence and Return On Asset (ROA) within listed insurance companies in Nigeria. The coefficient for Audit Independence is 4.887842, indicating a positive impact. This suggests that a one-unit increase in Audit Independence corresponds to an increase of 4.887842 units in Return On Asset (ROA). The constant term (C) has a coefficient of 21.324812, suggesting that a one-unit increase in C leads to an increase of 21.324812 units in ROA.

The effects specification includes random effects, featuring a standard deviation (S.D.) for the cross-section random effect at 0.389314 and an estimated correlation (Rho) of 0.1823. The idiosyncratic random effect has an S.D. of 0.824596 and a Rho of 0.8177.

Examining the weighted statistics, the R-squared is noted at 0.420536, indicating that the model explains 42.05% of the variance in Audit Independence concerning Return On Asset (ROA) within listed insurance companies. Additionally, the adjusted R-squared is 0.50170, suggesting

a positive value and implying Audit Independence 50.1% of the variability in Return on Assets (ROA), when considering other variables

The Durbin-Watson statistic for weighted statistics is 1.951252, closely approaching the ideal value of 2, indicating a limited presence of autocorrelation in the residuals and supporting the reliability of the model.

In the specified regression model, where the dependent variable is Return On Asset (ROA) and the independent variables are Audit Independence and C, the p-value for the F-statistic is 0.015857, falling below the significance level of 0.05, the hypothesis was rejected. This implies that the overall impact of Audit Independence and Return On Asset (ROA) of Listed Insurance Companies in Nigeria, suggesting a meaningful relationship.

H03: There is no significant effect of audit firm size on financial performance of listed insurance companies in Nigeria

- Audit Firm Size and Return On Asset (ROA)
- Audit Firm Size and Return On Asset (ROA)

Table 5: Test Cross-Section Random Effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.764854	1	0.1840

Source: Field Result, 2023

The Hausman test probability ($1.764854 > 0.05$) the Table 5 indicates that the random effect estimator is more efficient than the fixed effect estimator. Consequently, the decision was made to adopt the random effect model for assessing the relationship between Audit Firm Size and the financial performance of listed insurance companies in Nigeria.

Table 6. Audit Firm Size and Return On Asset (ROA) of Listed Insurance Companies in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Audit Firm Size	-0.235915	0.245557	-3.960736	0.0404
C	0.116779	0.183500	-16.98515	0.0000
Effects Specification			S.D.	Rho
Cross-section random			0.358745	0.1632
Idiosyncratic random			0.812254	0.8368
Weighted Statistics				
R-squared	0.443065	Mean dependent var		-2.404502

Adjusted R-squared	0.350032	S.D. dependent var	0.859058
S.E. of regression	0.820931	Sum squared resid	41.78356
F-statistic	11.903602	Durbin-Watson stat	1.742101
Prob(F-statistic)	0.025509		

Unweighted Statistics

R-squared	0.004779	Mean dependent var	-3.213464
Sum squared resid	48.94808	Durbin-Watson stat	1.487110

Source: Field Result, 2024

Table 6 shows the regression analysis investigates the association between Audit Firm Size, represented by the variable "Audit Firm Size," and Return On Asset (ROA) within listed insurance companies in Nigeria. The coefficient for Audit Firm Size is -0.235915, and it is statistically significant with a t-statistic of -3.960736 and a probability (Prob.) of 0.0404. This suggests that there is a negative relationship between Audit Firm Size and ROA, indicating that, on average, larger audit firms are associated with a lower Return On Asset among the listed insurance companies.

The constant term (C) has a coefficient of 0.116779, which is also statistically significant with a t-statistic of -16.98515 and a probability of 0.0000. This implies that even when Audit Firm Size is zero, there is still a baseline positive impact on ROA.

In terms of effects specification, the analysis considers both cross-section random and idiosyncratic random effects. The standard deviation (S.D.) for the cross-section random effect is 0.358745, with an estimated correlation (Rho) of 0.1632. The idiosyncratic random effect has an S.D. of 0.812254 and a Rho of 0.8368.

Examining the weighted statistics, the R-squared is 0.443065, indicating that the model explains 44.31% of the variance in Return On Asset (ROA) concerning Audit Firm Size. The adjusted R-squared is 0.350032; Audit Firm Size contributes to 35.0% of the variability in Return on Assets (ROA) after adjusting for the number of independent variables.

The Durbin-Watson statistic for weighted statistics is 1.742101, suggesting a moderate presence of autocorrelation in the residuals.

Considering the p-value for the F-statistic (0.025509), which falls below the significance level of 0.05 and implicating rejecting the null hypothesis, the overall impact of the independent variable (Audit Firm Size) on Return On Asset (ROA) is deemed statistically significant. This underscores the relevance of Audit Firm Size in influencing the financial performance of listed insurance companies in Nigeria.

The results indicate a statistically significant negative relationship between Audit Firm Size and Return On Asset (ROA) among listed insurance companies in Nigeria. The findings suggest that larger audit firms may be associated with lower financial performance in this context.

7.0 DISCUSSION OF FINDINGS

From objective one of this study, it was revealed that audit fees has significant influence on performance metrics (return on assets and return on investment). Thus, insurance companies should consider paying fair audit fees. This is in agreement with many studies as most show that audit quality is linked to improved financial performance. Ahmeti, Ahmeti, & Aliu (2022) study found that audit quality has a positive impact on financial performance, even after controlling for other factors such as firm size and leverage. While Ahmeti, Kalimashi, Ahmeti, & Aliu (2022) posited that Audit quality has a significant impact on the profitability of listed companies in Nigeria. Owolabi, & Babarinde (2020) found that internal audit quality is positively associated with financial performance in insurance companies.

8.0 CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, it is evident that audit-related factors significantly influence the financial performance of listed insurance companies in Nigeria. The analysis reveals a negative association between the size of audit firms and Return on Assets (ROA), suggesting that larger audit firms are generally linked to lower ROA. However, a consistently positive impact on ROA is observed, irrespective of audit firm size. Additionally, the study identifies a positive correlation between audit fees and ROA, indicating that higher audit fees contribute to improved financial performance. In contrast, greater audit independence is associated with lower ROA, further reinforcing the negative relationship between audit firm size and ROA. The weighted statistics for ROA concerning audit quality measures emphasize the model's explanatory power, highlighting the significant relationship between audit quality measures specifically, audit fees, audit independence, and audit firm size and the financial performance of listed insurance companies in Nigeria.

Based on the findings of the study, several inferred recommendations can be drawn for listed insurance companies in Nigeria:

By investigating why higher audit fees may coincide with improved financial outcomes, it endeavors to ascertain whether more expensive audits indeed lead to enhanced financial reporting quality. Moreover, the research seeks to explore potential mechanisms through which audit fees influence financial performance, including their potential role in deterring earnings management or enhancing risk assessment. Additionally, it will scrutinize whether there exists an optimal audit fee range that strikes a balance between cost and improved financial outcomes.

REFERENCES

- Abdullahi, M., Dachamo, G. P., Jibril, M. A., & Duniya, B. (2020). Moderating effect of audit quality on corporate attributes and financial performance of listed manufacturing firms in Nigeria. *Accounting and Taxation Review*, 4(1), 13-29.
- Ado, A. B., Rashid, N., Mustapha, U. A., & Ademola, L. S. (2020). The impact of audit quality on the financial performance of listed companies in Nigeria. *Journal of Critical Reviews*, 7(9), 37-42.

- Ahmad, N., Naveed, A., Ahmad, S., & Butt, I. (2019). Banking sector performance, profitability, and efficiency: A citation-based systematic literature review. *Journal of Economic Surveys*, 0(0), 1-34. <https://doi.org/10.1111/joes.12346>
- Ahmeti, A., Ahmeti, S., & Aliu, M. (2022). Effect of internal audit quality on the financial performance of insurance companies: Evidence from Kosovo. *International Journal of Applied Economics, Finance and Accounting*, 12(2), 63-68.
- Ahmeti, A., Ahmeti, S., & Aliu, M. (2022). Effect of internal audit quality on the financial performance of insurance companies: Evidence from Kosovo. *International Journal of Applied Economics, Finance and Accounting*, Online Academic Press, 12(2), 63-68.
- Ahmeti, A., Kalimashi, A., Ahmeti, S., & Aliu, M. (2022). Impact of internal audit quality on the financial performance of insurance companies: Evidence from Kosovo. *Journal of Accounting, Finance and Auditing Studies*, 8(2), 175-189.
- Aigbovorhiuwa, T., Adediran, S. A., & Achimugu, A. (2022). Board characteristics and firm performance of quoted insurance companies in Nigeria. *International Journal of Public Administration and Management Research*, 7(5), 1-22.
- Akintola, A. A., Oji-Okoro, I., & Itodo, I. A. (2020). Financial sector development and economic growth in Nigeria: An empirical re-examination. *Economic and Financial Review*.
- Arumona, O. J., & Nev, M. J. (2021). Effect of audit fee on financial performance of quoted consumer goods in Nigeria. *International Journal of Business and Entrepreneurship*, 1(1), 35-51.
- Babatunde, M. A., Adedeji, L. O., & Adegbite, I. O. (2021). Audit quality and performance of banks in Nigeria: 2012-2019. *Journal of Accounting Information and Innovation*, 7(7), 1-13.
- Dauda, M. Y.; Ojo, L. O.; Oyedokun, G. E. & Ajayi-Owoeye, A. O. (2018). Audit Firm Characteristics and Earnings Management of Listed Oil and Gas Companies in Nigeria. *Journal of Accounting*, 7(2). A publication of Nigeria College of Accountancy of Association of National Accountants of Nigeria
- Erinoso, O. M., & Oyedokun, G. E. (2022). Environmental Disclosure, Audit and Financial Performance of Listed Oil and Gas Companies in Nigeria. *African Economic and Management Review*, 2(3), 1–10. <https://doi.org/10.53790/aemr.v2i3.66>
- Gazi, A., Alam, M. D., Hossain, G. M., Rahman, M., Nahid, M. D., & Hossain, A. (2021). Determinants of profitability in the banking sector: Empirical evidence from Bangladesh. *Universal Journal of Accounting and Finance*, 9(1), 1377-1386. <https://doi.org/10.13189/ujaf.2021.090616>

- John, O. A., & Abimbola, J. A. (2022). Determinants of audit quality in Nigeria: Evidence from the listed consumer goods sector. *Academy of Accounting and Financial Studies Journal*, 26(1), 1-14.
- Nattarinee, K. (2018). A literature review of financial performance measures and value relevance. In D. Procházka (Ed.), *The impact of globalization on international finance and accounting* (pp. 385-393). Springer.
- Ojo, L. O., Oyedokun, G. E., & Fodio, M. I. (2020). Effect of audit committee characteristics on financial reporting quality of quoted consumer goods companies in Nigeria. *Uniben Journal of Accounting*, 4(1), 12-27. A publication of the Department of Accounting, University of Benin.
- Oyedokun, G. E., & Yunusa, G. O., (2017). Determinant of audit quality of quoted industrial goods sector in Nigeria. *Research Journal of Financial Sustainability Reporting (RJFSR)*, 2(1). A publication of the Department of Accountancy, Faculty of Management Sciences, Enugu State University of Science & Technology.
- Oyedokun, G. E.; Yunusa, G. O., & Adeyemo, K. A. (2018). Determinant of audit quality of quoted Industrial Goods. *Research Journal of Finance and Accounting*, 9(22), 77-85. A publication of the International Institute for Science, Technology, and Education (IISTE)
- Oyedokun, G.E., Ojo, L. O., & Ugoh, T.T. (2020). Effect of Ownership Structure on Audit Quality of Quoted Deposit Money Banks Nigeria. *Journal of Banking & Finance*, 7(2), 60-71. A publication of the Department of Banking & Finance, Nasarawa State University, Keffi.
- Oyedokun, G.E., Okwuosa, I., & Isah, S (2019). Effect of audit characteristics on financial reporting quality of listed consumer goods company in Nigeria. *Fountain University Osogbo Journal of Management (FUOJM)*, 4(3), 161-180. A Publication of Departments of Accounting & Finance and Business Administration, Fountain University, Osogbo. [www.osogbojournalofmanagement.com](http://osogbojournalofmanagement.com/index.php/ojm/article/view/132/108) Available at <http://osogbojournalofmanagement.com/index.php/ojm/article/view/132/108>.
- Opeyemi, A. M., Popoola, A., & Yahaya, O. A. (2020). Firm specific attributes and financial performance of listed insurance companies in Nigeria. *Gusau Journal of Accounting and Finance*, 1(2), 16-16.
- Owolabi, S. A., & Babarinde, T. A. (2020). Effect of corporate governance on audit quality in Nigerian banks. *International Journal of Multidisciplinary and Current Educational Research*, 2(5), 290-296.
- Sari, S. P., Diyanti, A. A., & Wijayanti, R. (2019). The effect of audit tenure, audit rotation, audit fee, accounting firm size, and auditor specialization on audit quality. *Riset Akuntansi dan Keuangan Indonesia*, 4(3), 186-196.

Tiamiyu, M. A. & Oyedokun, G. E. (2019). Impact of Audit Evidence and opinion on audit reporting quality. Being paper presented at the 1st International Conference on Business and Governance, organized by the Faculty of Management Sciences, University of Lagos, May 8-10, 2019