AJEMATES
African Journal of Educational Management, Teaching and Entrepreneurship Studies
VOL.17 (2), January-April, 2026; https://ajemates.org

# EFFECT OF AUDIT QUALITY ON EARNINGS MANAGEMENT OF LISTED FINANCIAL SERVICES FIRMS IN NIGERIA

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## ABSTRACT

*The credibility of financial reporting is undermined when earnings management occurs, posing risks to stakeholders, investors, and the overall financial system. This study examined the effect of audit quality on earnings management of listed financial services firms in Nigeria, from 2012 to 2023. The population comprises all the 45 quoted financial service firms in Nigeria while filtering criteria was used to arrive at a sample size of thirty-two (32) financial firms. The hypotheses were tested using robust random effect regression model after conducting some diagnostics tests. The results showed that non-audit service has a significant negative effect on earnings management of listed financial services firms in Nigeria while audit tenure has an insignificant positive effect on earnings management of listed financial services firms in Nigeria. The study recommends among others, that the mandatory audit firm rotation policies should be enforced through the FRCN supported by the CBN. Limiting tenure to a specified number of five (5) years will go a long way in reducing the familiarity threat of auditors' independence. Besides this firm rotation policy, the firms should introduce audit partner rotation policies to bring new eyes and reduce the chance of collusion between auditors and clients over longer periods.*

**Keywords*:*** Audit Quality; Audit tenure; Financial Services; Firms; Earnings Management; Non-Audit Services

## Introduction

Absolute discretionary accrual refers to the deliberate attempts made by financial institutions to manipulate financial reports in such a way that they show an incorrect representation of the financial performance of the company (Okpara *et al*., 2023). Earnings management has been a concern in Nigeria and in most other countries in the world due to the fact that it may mislead various stakeholders in the company. The main regulatory bodies that regulate financial reporting in Nigeria include the Securities and Exchange Commission (SEC) and the Financial Reporting Council (FRC) of Nigeria. These bodies set standards and regulatory frameworks that aim to promote transparency in financial reporting. Earnings management may have serious consequences for financial organizations, such as damaging the organization's reputation, losing investors' trust, facing sanctions from regulators, and facing legal consequences. Auditors have an important part to play in maintaining the reliability of financial reporting by examining financial

statements independently and evaluating the risk of absolute discretionary accrual.

In the last few years, the issue of financial reporting reliability and the occurrence of earnings management in Nigeria's financial industry has been exacerbated. From the perspective of corporate governance, the audit committee plays an important part in raising the reliability of financial reporting and preventing earnings management. An important feature of an efficient audit committee is that it includes financial-savvy members.

Nigeria's financial institutions are at the heart of the country's financial development. Financial institutions in Nigeria are providing a wide range of services, including banking, insurance, investment, and wealth management. Despite this, several issues are affecting the operations of financial institutions in Nigeria. These issues include regulatory compliance, cybersecurity, infrastructure, and economic conditions. Financial institutions are the linchpin to the sustained development and prosperity of the Nigerian economy. In an environment where the role of finance is central to the development of the country, it is vital to ensure quality audits and prevent practices such as earnings management. According to Ayeni-Agbaje & Oluyori (2024), quality audits are an effective tool to prevent deceptive practices, thereby reducing earnings management practices.

Understanding the relationship between audit fees and earnings management is essential in evaluating the effectiveness of the current regulations and generating ideas on how they could be improved. Auditors' provision of non-audit services compromised their independence, which resulted in reduced scrutiny and more opportunistic behavior from management regarding earnings management. Eke *et al*. (2024) contended that the provision of non-audit services by auditors to financial firms in Nigeria is positively related to earnings management practices since NAS fees significantly affect the independence of the auditor, particularly under poor quality regulations. The role of the regulatory environment in Nigeria is significant in determining the relationship between NAS fees and earnings management. between non-audit services and earnings management. There is a possibility that the application of regulations and mechanisms that aim to improve the transparency of non-audit services may impact the relationship between non-audit services and earnings management. Eke *et al*. (2024) further asserted that stringent regulations minimize the adverse impact of non-audit services on earnings management.

Firm size may influence audit quality and earnings management. Large firms may be able to afford high-quality auditors and may be under closer scrutiny by regulators and investors, which may discourage earnings management. Therefore, firm size should be included as a control variable when analyzing the relationship between audit quality and earnings management. The main aim of this study was informed by the significance of effective corporate

governance practices that limit earnings management and enhance financial stability, investors' confidence, and economic growth in Nigeria. Similarly, other emerging countries like Nigeria have over the years encountered serious corporate governance issues, which include financial fraud and business failures (Onwubiko *et al*., 2024). These occurrences underscore the need for effective audit practices to ensure credible financial reporting.

In addition, this study seeks to improve corporate governance practices within the Nigerian financial sector, just like other countries across the globe are trying to improve their standards to reduce earnings management. Currently, Nigeria faces a number of challenges that affect its ability to provide top-notch audit quality. These include a lack of enforcement of auditing standards, inadequate regulation, and a shortage of skilled audit professionals (Onwubiko *et al*., 2024). These factors increase the chances for compromised audit quality and allow for the management of earnings. Earnings management is a major concern for financial reporting. It involves manipulating financial information by a company to attain a particular financial goal (Healy & Wahlen, 1999). This threatens the transparency and reliability of financial reporting. Financial reporting may be distorted to misrepresent a company's financial performance (Roychowdhury, 2006).

Extended audit tenures may undermine the independence of the auditor and increase the likelihood of manipulative accounting practices. The longer the tenure of the auditor, the higher the probability of developing a close working relationship with management. This may undermine the auditor's ability to demonstrate appropriate levels of skepticism in assessing the true validity of management representations. The familiarity threat, in conjunction with the possible economic and psychological factors, may provide an environment where financial manipulation is likely to occur (Neiroukh & Çağlar, 2025). The proponents of the "fresh-eyes" theory propose that the longer the audit tenure, the higher the level of economic bonding with management, which undermines the independence of the auditor and increases the ability of management to engage in earnings manipulation (Temitope *et al*., 2023).

The financial sector of Nigeria has experienced tremendous growth over the last few decades. Financial institutions have played a vital role in the growth of the financial sector. However, some concerns have been raised regarding the possible impact of non-audit services offered by auditing firms to financial institutions regarding the earnings management practices. Earnings management practices have raised concerns regarding the reliability and integrity of the financial reporting practices of financial institutions. Eke *et al*. (2024) stated that as the provision of non-audit services offered by auditing firms is now a common practice, this may lead to a situation where the auditor may face a conflict of interest. They may be

under pressure to favor their non-audit services over their primary responsibility of offering unbiased and independent audits.

Nigeria has seen several instances of financial scandals in recent times, particularly in leading financial institutions, which have led to a lack of investor and public confidence in the system. Some examples include the case of Oceanic Bank International, which was taken over by the Central Bank of Nigeria (CBN) in 2009 due to insider abuse, misappropriation of funds, and misstatement of financial positions. Another example is that of Intercontinental Bank Plc, which was intervened by the CBN due to fraudulent lending practices and mismanagement (Onwubiko *et al*., 2024). Skye Bank Plc had its license revoked in 2018, leading to the formation of Polaris Bank as a bridge bank.

Moreover, gaps in the literature are also identified through empirical studies. Recent studies (Aondoakaa & Achika, 2022; Isito & Patrick, 2022; Wan *et al*., 2022), among others, on audit fees, non-audit services, and discretionary accruals mostly used data up to 2019, with only a few studies using data up to 2021. This also calls for research on the effect of audit quality on earnings management in listed financial services firms in Nigeria using updated data after the implementation of IFRS.

Based on the statement of the problem, the main objective of this study is to examine effect of audit quality on earnings management of listed financial services firms in Nigeria. This study is specifically intended to: (i) evaluate the effect of audit tenure (AUTEN) on earnings management of listed financial services firms in Nigeria; (ii) examine the effect of non-audit services (NAS) on earnings management of listed financial services firms in Nigeria. The hypotheses are formulated for test in line with the specific objectives as follows: $Ho_1$: Audit tenure (AUTEN) has no significant effect on earnings management of listed financial services firms in Nigeria; and $Ho_2$: Non-audit services (NAS) has no significant effect on earnings management of listed financial services firms in Nigeria.

## Literature Review

### Earnings Management

Earnings management is the process of manipulating financial information by management for the achievement of certain objectives, such as meeting earnings targets, overstating profits, and hiding the real financial condition of the business (Shbeilat, 2024). Earnings management includes the application of accounting discretion and judgment for showing a better financial position, which may compromise transparency and mislead investors (Bansal, 2024). Earnings management may take many forms, such as revenue acceleration, improper capitalization of expenses, accruals, reserves, and income smoothing. As explained by Healy & Wahlen (1999), earnings management by management includes the application of various accounting techniques for the manipulation of earnings in order to meet market expectations, sustain the market price of the firm, and increase compensation. These

practices can affect the reliability of the financial reports, which may mislead investors and creditors (Christensen *et al*., 2023). Although some practices may be within the acceptable boundaries of the accounting standards (Roychowdhury, 2006), they become unethical and fraudulent when they include misrepresentation or violation of the reporting standards. In this study, earnings management has been defined as the intentional manipulation of the financial reports to achieve certain financial objectives, such as the attainment of certain levels of profits.

**Audit Tenure**

On the other hand, audit tenure means the duration that an audit firm has been continuously involved in the audit of a particular client. It is the duration of the professional relationship between the auditor and the client, and it has gained significant interest due to its possible effect on auditor independence, professional skepticism, and financial reporting quality (Anwar, 2024). The definitions of audit tenure are consistent between regulatory bodies and scholars. The International Auditing and Assurance Standards Board (2022) states that audit tenure is "the duration for which an audit partner or firm has been involved in an audit engagement without interruption." Similarly, the Public Company Accounting Oversight Board (PCAOB, 2024) defined it as "the consecutive fiscal years the auditor has served as the principal auditor of the company." In the literature, audit tenure has also been defined as the number of years the audit firm has been engaged with the client (Temitope *et al*., 2023). Other researchers, such as Kohlbeck & Wang (2025), Neiroukh & Çağlar (2025), Alhababsah & Alhaj-Ismail (2023), Judge (2024), Badpa *et al*. (2024), also defined audit tenure as the length of time the auditor has been engaged with the client. In this study, audit tenure has been defined as the number of consecutive years the audit firm has been engaged to audit the client.

**Non-Audit Services**

Non-audit services (NAS) are professional services provided by an audit firm to their audit clients that are not directly related to the audit of financial statements. According to Geiger *et al*. (2025), non-audit services are professional services that include tax compliance or planning, risk management, and consulting services, among others. Eke *et al*. (2024) and Friedrich *et al*. (2024) also define non-audit services as professional services provided to the audit clients outside the audit function, which include tax planning, management consulting, and information technology services, among others. On the other hand, Velte (2023) broadly defines non-audit services as any professional service provided by an auditor that is not the financial statement audit, and includes services like transaction services, internal audit outsourcing, due diligence, and others. The definitions highlight that the scope of NAS is broad, covering various advisory and support services provided alongside audit services. It is important to understand the scope of non-audit services as they may lead to potential conflicts of interest, compromising auditor

independence and audit quality. Non-audit services, as defined in this study, are "consulting, tax, advisory, and other professional services provided by audit firms to help clients in various aspects of business operations."

**Empirical Review**

**Audit Tenure and Earnings Management**

The empirical results on audit quality and earnings management practices in Nigeria and other countries are inconclusive. Some studies on audit practices in Nigeria revealed inconsistent results on the relationship between audit firm size, auditor tenure, industry specialization, audit fees, and earnings management. For example, Aondoakaa and Achika (2022) established that audit firm size and sector specialization were not significantly related to earnings management practices for listed industrial goods companies, whereas auditor tenure and client importance were found to be significant. Isito and Patrick (2022) established a significant negative relationship between auditor tenure and earnings management practices. Similarly, Oladejo (2022) established a positive and significant relationship between audit tenure and earnings management practices for deposit money banks. However, other researchers, such as Atagboro and Ihenyen (2021) and Camillus and Celestine (2021), established that audit tenure had no effect on discretionary accruals.

Further evidence also presents divergent results. Lambe *et al*. (2021) found a positive and significant relationship between audit tenure and discretionary accruals. However, Hassan *et al*. (2020) found a negative relationship between audit tenure and earnings management. The same researchers also found a positive relationship between audit industry specialization and earnings management. Soyemi *et al*. (2020) found that longer audit tenure and greater auditor independence reduced accrual-based earnings management. Awa and Obinabo (2019) also found that audit firm size and auditor independence significantly influenced earnings management. Falola (2018), as well as Tyokoso (2017), in earlier research also found divergent results regarding audit firm size, tenure, and specialization in Nigeria. Evidence from other countries such as Turkey, Pakistan, the Netherlands, and Jordan also presents divergent results regarding audit tenure and industry specialization.

Despite the application of proper statistical methods in most studies, certain limitations are common. Most studies utilized multiple periods before and after IFRS adoption, which may affect consistency. Additionally, most studies were conducted using data up to 2020, ranging from 2015, which may not capture recent economic changes in Nigeria. However, the fact that these are foreign studies means that they may not be relevant to the Nigerian environment. All this shows that there is a need to conduct recent studies to obtain more reliable evidence on the relationship between audit quality and earnings management in Nigeria.

**Non-Audit Services and Earnings Management**

Empirical research on non-audit services (NAS) and earnings quality reveals mixed, yet largely cautionary, findings. Wan *et al*. (2022) investigated the association between NAS and accruals quality in Malaysia over the period 2009-2011, applying multivariate regression analysis. The research found that NAS have a negative association with accruals quality, implying that the bonding effect between auditors and clients, in an attempt to protect their mutual economic interest, undermines auditor independence. However, the presence of an entirely independent audit committee mitigates the negative association between NAS and accruals quality. Mohammad and Javad (2021) employed panel data analysis on firms listed on the Tehran Stock Exchange over the period 2011-2016 and found that NAS have a significant negative association with the earnings response coefficient, implying that NAS undermine auditor independence, in spite of their potential to enhance auditor independence due to their information content.

Earlier research has also reported similar results. In his study, Mohammad (2015) revealed that there was a positive association between non-audit service fees and accrual-based earnings management, especially for clients of low-quality audit firms. Hasan and Wan (2015) found that longer audit firm tenure was negatively related to earnings management, but non-audit fees were positively related to earnings management. Similarly, in their study based on the UK, Michael *et al*. (2004) revealed that there was a positive and significant association between purchases of NAS and earnings management. All these research studies have revealed that excessive use of NAS may compromise the independence of the auditor.

While the studies appropriately utilized statistical analyses, they were conducted outside of Nigeria and utilized relatively older data sets, spanning 1996 to 2016. As a result, considering the context and the more recent events affecting the country, the studies may not fully generalize to the current context. This, therefore, highlights the importance of more recent studies conducted specifically for the Nigerian context to offer more current and contextually relevant evidence of the relationship between non-audit services and earnings management.

**Theoretical Framework**

The finding is supported by the agency theory since the theory emphasized the point that the higher the audit fee, the more extensive the auditing effort, and consequently, the more effective the monitoring of the company by the auditors, and the less the discretion of the managers. However, the finding does not support the stakeholder theory since the theory emphasized the point that the provision of non-audit services by the auditing firm might create a conflict of interest, and as a result, the audit service might be compromised. Therefore, the stakeholder

theory emphasizes the point that the impact of NAS on absolute discretionary accruals would depend on the interests and concerns of various stakeholders, including shareholders, investors, regulators, and the public, about non-audit services, objectivity, and the quality of financial reporting.

## Methodology

The research design adopted in this study is an ex-post facto research design, which is suitable for investigating the association that exists between explanatory variables and earnings management, where panel data analysis is employed. The population for this study comprises 45 quoted financial service organizations listed on the Nigerian Exchange Group (NGX) as at 31st December 2023. These organizations included banking, insurance, microfinance, mortgage, brokers, and other financial institutions. Using a filtering method, the researcher selected financial service organizations that met the inclusion criteria, where organizations in the sample had to have been listed at least one year prior to 2012, the IFRS adoption year in Nigeria, and had to have provided information. After applying the inclusion criteria, 13 organizations were filtered out, leaving 32 financial service organizations in the sample. Secondary data was sourced from annual reports, accounts, and the NGX factbook for the years 2012-2023. The random effect model was utilized to investigate audit quality and earnings management. Diagnostic tests such as correlation matrix, VIF, Breusch-Pagan heteroskedasticity test, Shapiro-Wilk normality test, Breusch-Pagan LM test, and Hausman specification test were carried out to ensure model robustness. The study adopted the model from Egbadju and Chijioke (2023) and Oladejo (2022).

## Model Specification

The model anchored the direct relationship between Audit Tenure (AUTEN) and Non-Audit Services (NAS) with Absolute Discretionary Accrual (ADA) with a control variable of Firm Size (FS) as adapted from Bello and Ugoh (2021) as follows:

ADA = $f$( AUTEN, NAS and FS)

Equation is expressed econometrically as follows:

$ADA_{it} = \alpha + \beta_1 AUTEN_{it} + \beta_2 NAS_{it} + \beta_3 FS_{it} + \varepsilon_{it}$ .... (Model)

Where:

$\beta_1$, $\beta_2$ – Coefficients of proxies of independent variables

$\beta_3$ – Coefficient of a proxy of a control variable

$\alpha$ = constant

ADA = an indicator absolute discretionary accrual (a proxy for dependent variable)

AUTEN = Audit fees

NAS = Non-Audit Services

FS = Firm Size

ε = Error term
i = Firms
t = Periods and
*f* = Functional relationship
A-priori expectations: $\beta_1, \beta_2 < 0$

## Variables Measurement and Justification

**Table 1** below explains the variables under study.

| Variable | Acronym | Type of variable | Measurement | Justification |
|---|---|---|---|---|
| Absolute Discretionary Accrual | ADA | Dependent (DV) | Absolute discretionary accruals, calculated using Modified Jones model. $TACit/Ait\text{-}1 = \beta 0\ (1/A_{it}\text{-}1) + \beta 1\ (REV_{it} - RECit)/Ait + \beta 2\ (PPE_{it}/Ait\text{-}1) + \varepsilon_{it}$. | Aondoakaa and Achika (2022), Hamzeh *et al*. (2023), Juan and David (2021), Okonkwo *et al*. (2022). |
| Audit Tenure | AUTEN | Independent Variable (IV) | Audit Firm Tenure was measured using Length of years in which auditor audit their client (sampled financial firms). Auditor's tenures of above five years equal one (1) and zero (0) if not. | Aondoakaa and Achika (2022) and Isito and Patrick (2022). |
| Non-Audit Services | NAS | Independent Variable (IV) | This is measured using a log of non-audit service paid. | Mohammed (2015), Mohammed and Javad (2021) and Wan *et al*. (2022). |

**Source:** Researcher's compilation, 2024.

## Data Presentation and Analysis

The data for the 32 financial service firms on audit tenure (AUDTEN), non-audit services (NAS), firm size, and absolute discretionary accrual (ADA) was used. Descriptive Statistics, Correlation Matrix, Variance Inflator Factor (VIF), Heteroskedasticity Breusch-Pagan, Shapiro-Wilk Normality Test, Breusch-Pagan Lagrangian Multiplier Test, Hausman Test, and Fixed Effect Regression Model are used for data analysis with the help of the data provided in appendix D, and the results are provided in appendix E.

## Descriptive Statistics

Table 3 below is the descriptive statistics that summarises the entire data set.

| Variable | Obs | Mean | Std. Dev. | Min. | Max. |
|---|---|---|---|---|---|
| ADA | 384 | 0.0435651 | 0.0527205 | 0.002 | 0.277 |
| AUTEN | 384 | 0.859375 | 0.3480878 | 0 | 1 |
| NAS | 383 | 0.6553525 | 0.4758749 | 0 | 1 |
| FS | 384 | 7.263867 | 0.7781832 | 5.478 | 10.414 |

**Source:** Researcher's Computation (2023) Using Stata 15

In addition, table 3 shows that the minimum, maximum, and mean values for the absolute discretionary accrual, ADA, are 0.002, 0.227, and 0.0435651, respectively. Contrary to this, (ADA) had a standard deviation of 0.0527205, which is greater than its mean; thus, it can be established that it was skewed to the right. Furthermore, table 3 shows that within the period under review, audit tenure had a minimum, maximum, and mean values of 0, 1, and 0.859375, respectively. The table further revealed that AUTEN had a standard deviation of 0.3480878, which is less than its mean; thus, it can be established that it was skewed to the left within the period under review. In addition, table 3 revealed that non-audit services (NAS) had a minimum, maximum, and mean values of 0, 1, and 0.6553525, respectively.

The table also showed that NAS had a standard deviation of 0.4758749 less than the mean, and this implies that NAS skewed to the left during the period under review.

Table 3 also showed that audit committee financial expertise had a minimum value of 0.111, a maximum value of 0.67, and a mean value of 0.2974453 during the period under review. Table 3 also showed that firm size (FS) had a minimum value of 5.478, a maximum value of 10.414, and a mean value of 7.263867 during the period under review. The table also showed that FS had a standard deviation of 0.7781832, which is less than the mean and hence skewed to the left during the period under review.

**Correlation Matrix**

Table 4 below is the Pearson correlation matrix for the data set in order to show the level of interdependent variables. The decision rule for Pearson Correlation is that when a pair or more of the independent variables is equal to or greater than 0.85, then there is a presence of multicollinearity in the model. When the independent variables are less than 0.85, then there is no presence of multicollinearity in the model.

| Variable | ADA | AUTEN | NAS | FS |
|---|---|---|---|---|
| ADA | 1.000 | | | |
| AUTEN | -0.0018 | 1.000 | | |
| NAS | -0.1417 | -0.0254 | 1.000 | |
| FS | 0.1256 | 0.0243 | 0.1885 | 1.000 |

**Source:** Researcher's Computation (2023) Using Stata 15

The correlation matrix helps to identify how well the proxies for an independent variable are related to the dependent variable. It also helps to identify how well proxies for other independent variables are correlated with each other in order to identify if there is a problem of multicollinearity in the model. The table shows a 0.18% negative weak relationship between audit tenure (AUTEN) and absolute discretionary accrual (ADA) in quoted financial firms in Nigeria, as shown in the correlation coefficient of -

0.0018Moreover, the table reveals that there is a 14% negative and weak association that exists between the NAS and the ADA of quoted financial firms in Nigeria, based on the correlation coefficient of -0.1417. Further, the table reveals that approximately 13% of a positive and weak association exists between the size of the firm (FS) and the absolute discretionary accruals (ADA) of quoted financial firms in Nigeria, based on the correlation coefficient of 0.1256. Lastly, the relationship between the proxies of the independent variable reveals that no presence of multicollinearity exists since the correlation coefficient is below the threshold of 0.80 as suggested by Gujarati (2003).

**Variance Inflator Factor (VIF) Results**

**Table 5:** Variance Inflator Factor (VIF)

| Variable | VIF | I/VIF |
|---|---|---|
| NAS | 1.04 | 0.963952 |
| NAS | 1.04 | 0.963968 |
| AUTEN | 1.00 | 0.998526 |
| Mean VIF | 1.03 | |

**Source:** Researcher's Computation (2023) using STATA 15 software

The decision rule for this test is that if the values of VIF and 1/VIF are up to 10 and 1 and above, then there is a presence of multicollinearity in the model. However, if the values of VIF and 1/VIF are less than 10 and 1 respectively, then there is no presence of multicollinearity in the model. The non-existence of the multicolinearity problem among the exogenous variables is further tested with colinearity diagnostics test that was observed to portray no multicolinearity problem in the data since their VIF and 1/VIF values are less than 10 and 1 respectively (Gujarati, 2003) as presented in table 5. This means that the variables are well selected and fit in the same regression model since the model does not present a multicolinearity problem, which is one of the assumptions for regression analysis to be met.

**Diagnostic Tests**

Before the regression analysis, the assumptions in the multiple linear regression model for panel data are checked. These assumptions are homoscedasticity, multicollinearity, and other assumptions of regression analysis, including normality and validity test for panel data.

**Heteroskedasticity Breusch-Pagan Test**

On the assumption of multivariate analysis, Heteroskedasticity Breusch-Pagan test was conducted. The test is conducted to validate whether the estimated variance of the residuals from regression is dependent on the values of the independent variables or not. If this is the case, then the research is homoscedastic. Heteroscedasticity is the condition where the variation of the error term of individual cross-sectional units is not constant. Gujarati (1995) defines

heteroscedasticity as the condition where the variation of the error term of individual cross-sectional units is not constant. Hair *et al*. (2010), as well as Pallant (2003), have the view that the statistics result must be statistically insignificant if the data is outside the range of heteroscedasticity. The Breusch-Pagan Heteroscedasticity test is conducted to solve the problem. The null hypotheses of heteroscedastic variance were tested. If the p-value is less than 0.05, then it accepts the null hypothesis, and the residual is heterogeneous.

Table 6 below shows the diagnostic test results using Heteroskedasticity Breusch-Pagan. The decision rule of heteroscedasticity is that if the P-value ≤ 0.05, there is a problem of heteroscedasticity but if the P-value > 0.05, there is no problem of heteroscedasticity.

| **Type of test** | **Chi2(1)** | **Prob>chi2** |
|---|---|---|
| Heteroskedasticity Breusch-Pagan | 20.79 | 0.0000 |

**Source:** Researcher's Computation (2024) using STATA 15 software

The Heteroskedasticity Breusch-Pagan test is a statistical test used to check whether the variance of a variable in a regression model does not change or varies at different points in time. However, it was evident from table 6 that the data was heteroskedastic because it revealed that there was no constant variance in the model. Therefore, it is evident that the simple linear regression model would not be applicable in this case. This can be verified from the heteroskedasticity test in table 6, where it revealed that there was a chi2 of 20.79 and a probability value of 0.000 for the model to be statistically significant at a 1% alpha level (p-value < 0.05). The robust regression method was used to estimate the model because it does not meet the assumptions of a classical linear regression model in terms of homoskedasticity.

**Normality**

It is vital to check for normality in the variables across two or more variables (Coakes & Ong, 2011; Pallant, 2003). For the normality of the distribution of the data to hold, normality is a prerequisite in multivariate analysis. If not checked, it may lead to a false relationship existing between the variables of interest in the research, hence altering the findings of the research (Gujarati, 1995). The normality of the data is checked using the Shapiro Wilk normality test and the normal distribution curve as shown in table 7 and figure 1 below:

**Shapiro-Wilk Normality Test**

Table 7 and figure 1 below present the results of the normality test conducted with the use of the Shapiro-Wilk Normality test and the normal distribution curve. The decision rule is that if the P-Value > 0.05, then the residual is normally distributed.

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African Journal of Educational Management, Teaching and Entrepreneurship Studies
VOL.17 (2), January-April, 2026; https://ajemates.org

Otherwise, the residual is not normally distributed if the P-Value is equal to or < 0.05.

| Variable | Obs | W | V | Z | Prob>Z |
|---|---|---|---|---|---|
| Residual | 384 | 0.95563 | 11.777 | 5.857 | 0.000 |

**Source:** Researcher's Computation (2024) using STATA 15 software

Figure 1: Normal Distribution Curve

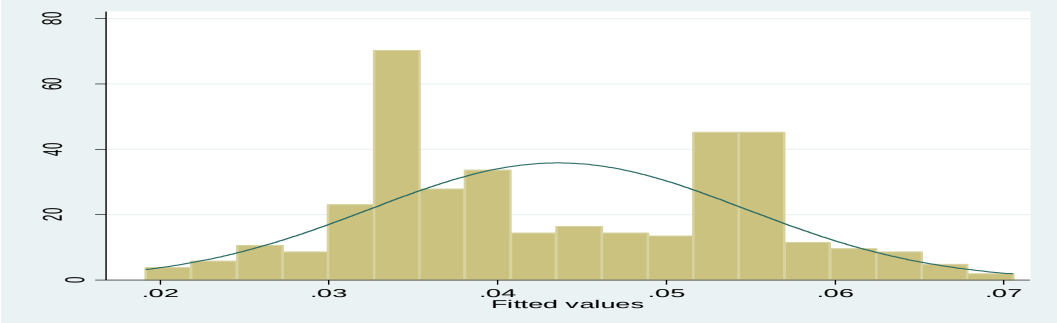



Table 7 above shows the residual and the z value of 5.857 with the corresponding probability of the value of 0.000 that is less than 0.05 which signifies that the residual is not normally distributed around their mean. This is further collaborated by the normal distribution curve as shown in figure 1 above. This suggests that one of the assumptions of the linear regression technique of a normally distributed residual has been violated, and therefore a robust regression technique should be used.

**Pooled Effect Vs. Random Effects Models: Breusch-Pagan Lagrangian Multiplier test**

The first step that should be followed while analyzing panel data is to identify the best approach of the panel that should be used. It is identified whether the pooled effect model or the random effect model is to be used. It is identified based on the result obtained from the Breuschi-Pagan Lagrangian Multiplier test. The Lagrangian Mutiplier test is used to check whether the random effect model is present or not. If the value of the test is more than the critical value, then the random effects model is used.

**Breusch-Pagan Lagrangian Multiplier Test**

Table 8 below shows the result of the Breusch-Pagan Lagrangian Multiplier Test that has been conducted. The decision rule of the Breusch-Pagan Lagrangian Multiplier Test is that if the value of the P-value is equal to and less than 0.05, then the random effect model is appropriate, otherwise the pooled ordinary least square regression is appropriate.

| Variable | Chibar2 | P-Value |
|---|---|---|
| ADA | 8.21 | 0.0021 |

**Source:** Researcher's Computation using STATA 15 software

Table 8 indicates that the computed Breusch-Pagan Lagrangian Multiplier test with chibar2 values of (8.21) and the corresponding probability of (0.0021) is higher than the critical values of all the models (p=0.000); hence, the null hypothesis is rejected. The significance of the chi-square of the Lagrangian Multiplier test indicates that the variance of the random effect model is not equal to (0); hence, the Random Effect Regression Model (REM) is more appropriate compared to the pooled effect model.

**Hausman Specification Test**

Table 9 below presents the result of a Hausman specification test conducted.

| | |
|---|---|
| Chi2 | 8.21 |
| Prob. Chi2 | 0.0905 |

**Source:** Researcher's Computation using STATA 15 software

The decision rule of Hausman specification test is that when the prob. Chi2 is equal to and more than 0.05, the random effect model is appropriate, otherwise the fixed effect model is more appropriate. The data used in this study is panel, and the panel data may cause an error that is clustered and even correlated over time. This is due to the fact that each financial firm may have its own entity-specific characteristic, which may determine the audit quality, i.e., the unobserved heterogeneity. This may cause the outcome variable or even the explanatory variable to be biased. Therefore, there is a need to control this. The Hausman test was carried out, and the results show that the random effect model is more adequate than the fixed effect model. This is based on the fact that the Chi2 is 8.21 with a p-value of 0.0905 in table 9, which is not significant at all levels of significance.

**Table 10:** Random Effect Regression Results: Audit Quality and Earnings Management

| | Model 1 | | |
|---|---|---|---|
| Variables | Coefficient | Z-value | P-value |
| AUTEN | 0.0015 | 0.19 | 0.847 |
| NAS | -0.0156 | -2.52 | 0.012 |
| FS | 0.0116 | 2.58 | 0.010 |
| Constant | -.0316 | -0.96 | 0.340 |
| R-Squared | 0.4290 | | |
| Wald $Chi^2$ | 11.38 | | |
| Prob>Chi2 | 0.0099 | | |

Note: Model 1 (IVs, MV and DV) and Model 2 (IVs, MV*DV). *p<0.05, **p<0.01

As seen in table 10 model 1 above, results revealed an overall coefficient of determination (R-sq) of 0.4290, this indicated that (audit tenure, non-audit services, and firm size) used in this study has a combined effect of about 43% on the systematic changes in the dependent variable; absolute discretionary accruals in the period under review. The Wald chi2 value of 11.38 and prob. Chi2 of 0.0099 indicate that this model is appropriate and reliable for decision-making purposes.

**Discussion of Findings**

**Audit Tenure and Earnings Management**

The study also revealed that audit tenure has an insignificant positive effect on earnings management for listed financial services firms in Nigeria. This implies that audit tenure would increase earnings management for listed financial services firms in Nigeria by 0.0015. This finding is not consistent with the researcher's a-priori expectation but is consistent with the moral hazard theory. This is because the theory asserted that as auditors develop long-term relationships with client firms, there may exist a decreased incentive for auditors to carefully scrutinize financial statements and management assertions. Long audit tenure may lead to a state where auditors may become complacent and trusting of management, resulting in a decreased audit quality, and an increase in earnings management practices such as absolute discretionary accruals.. The finding is in agreement with the findings of Emmanuel and Emem (2020), Jack and Micah (2021), and Okereke (2022). However, the finding is in variance with the findings of Egbadju and Chijioke (2023), Hamzeh *et al*. (2023), and Okereke and Uzoma (2023).

**Non-Audit Services and Earnings Management**

The study revealed that the service has a significant negative effect on the earnings management of the listed financial service firms in Nigeria. This means that the increase in the service will lead to the decrease in the earnings management of the listed financial service firms in Nigeria by -0.0156 units. The finding is consistent with the a-priori expectation of the researcher but is not consistent with the stakeholder theory. The stakeholder theory argued that the provision of the non-audit service by the auditing firm could lead to conflicts of interest, which could affect the audit service provided by the auditing firm. Therefore, the stakeholder theory argued that the effect of the non-audit service (NAS) on the absolute discretionary accruals is influenced by the interest and concern of various stakeholders, such as shareholders, investors, regulatory bodies, and the public, about the provision of the non-audit service. The finding is consistent with the empirical findings of Ozcan (2019). However, the finding is not consistent with the findings of Falola (2018), Masoyi *et al*. (2015), Mohammad and Javad (2021), and Soyemi *et al*. (2020).

## Conclusion and Recommendations

The longer the association, the greater the earnings management. This is based on the argument that the longer the auditors spend with the client, the higher the risk of loss of independence and objectivity. Longer association may lead to familiarity threats, where the auditors become too familiar with the client, compromising the ability to critically analyze financial information. The longer the association, the less effective the audit in preventing earnings management, and therefore, financial statement credibility.

The greater the involvement of auditors in non-audit services, the lower the earnings management. This is based on the argument that the greater the involvement of auditors in non-audit services, the better the client is able to improve operational efficiencies and financial transparency, therefore reducing the risk of earnings management. On the other hand, the greater the involvement of auditors in non-audit services, the greater the risk of loss of independence and objectivity.

## Recommendations

Based on the above conclusion, the following recommendations are made:

(i) Mandatory audit firm rotation policies should be enforced by the FRCN with the support of the CBN. Restricting the period to a certain number of five (5) years will go a long way in reducing the familiarity threat to the independence of auditors. In addition to the above firm rotation policy, the firms should also implement audit partner rotation policies to bring new eyes to the firm to reduce the possibility of collusion between the auditors and the clients over a period of time.

(ii) Financial services firms should selectively engage auditors to provide non-audit services that are critical to improving the firm's financial reporting process. In addition, non-audit services should be strategically utilized to improve areas of operational and financial risk.

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