

External Auditor Attributes and Sustainability Reporting: Evidence from Nigerian Banking Sector

Dr. Sulaiman Sabo¹ & Dr. Sadiya Ahmed Almustapha²

¹Sara Town, Gwaram LGA, Jigawa State, Nigeria

²ANAN Business School, ANAN University Kwall, Plateau State, Nigeria

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*Corresponding author: Dr. Sadiya Ahmed Almustapha

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Abstract

In recent years, the growing global concern about environmental, social, and governance (ESG) issues has intensified the demand for credible and transparent sustainability reporting, yet the reliability of such disclosures remains a persistent challenge, especially in developing economies. This study investigates the effect of external auditors' attributes on sustainability reporting among listed deposit money banks in Nigeria over the period 2015–2024. Using an ex post facto research design and Ordinary Least Squares (OLS) regression analysis, the study examines how audit firm size, auditor tenure, and audit fees influence the quality and extent of sustainability disclosures. Data were obtained from the annual and sustainability reports of thirteen listed banks. The results show that audit firm size, auditor tenure, and audit fees each have positive and significant effects on sustainability reporting, indicating that audit quality enhances disclosure credibility. The study concludes that strengthening audit quality can improve sustainability transparency and stakeholder confidence in Nigeria's banking sector.

Keywords: Sustainability Reporting, audit firm size, auditor tenure, audit fees.

Review Article

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Introduction

Sustainability reporting has evolved from a voluntary practice of corporate social responsibility to a globally recognized mechanism for ensuring accountability, transparency, and long-term value creation. Globally, the demand for sustainability disclosure has increased with the adoption of frameworks such as the Global Reporting Initiative (GRI), the International Sustainability Standards Board (ISSB), and the Task Force on Climate-related Financial Disclosures (TCFD). These frameworks emphasize the integration of environmental, social, and governance (ESG) information into corporate reporting to provide stakeholders with a comprehensive view of organizational performance. The growing recognition of sustainability issues such as climate change, human rights, and governance

failures has prompted regulators and investors to insist on credible sustainability disclosures (Appelbaum et al., 2024). The European Union's Corporate Sustainability Reporting Directive (CSRD) and similar initiatives across Asia and the Americas highlight this global trend toward standardized sustainability reporting and assurance. As a result, firms are increasingly expected to provide reliable and audited sustainability reports to foster stakeholder trust and sustainable investment (Pizzi et al., 2024).

In Africa, sustainability reporting has gained traction, although its adoption remains uneven across countries and sectors. The development of sustainability reporting practices has been influenced by global initiatives and regional efforts such as the African Sustainability Standards Board and the Pan-African Federation of Accountants' drive for ESG transparency.

South Africa remains a continental leader following the implementation of the King IV Code of Corporate Governance, which mandates integrated reporting for listed entities. However, in other African nations, including Nigeria, Kenya, and Ghana, sustainability reporting is still largely voluntary and at varying levels of maturity (Hazaea et al., 2022). Many African firms adopt sustainability disclosure primarily for legitimacy and reputational purposes rather than for strategic sustainability integration. Despite these limitations, awareness of ESG issues is growing, driven by investors' demand for non-financial information and the rising influence of international financial institutions that promote sustainable finance (Shawat et al., 2024). This regional progression demonstrates that while sustainability reporting in Africa is expanding, the assurance and quality dimensions are still emerging areas of focus.

In Nigeria, sustainability reporting has evolved slowly but steadily, particularly within the financial sector. The Central Bank of Nigeria (CBN) introduced the Nigerian Sustainable Banking Principles (NSBP) in 2012 to guide banks in integrating environmental and social considerations into operations and reporting. Subsequently, the Nigerian Exchange Group (NGX) mandated sustainability disclosure for listed companies, aligning with global standards such as the GRI. However, the extent and quality of disclosures among Nigerian banks vary significantly due to differences in internal governance, audit oversight, and external assurance practices (Obeitoh et al., 2024). Studies suggest that while most Nigerian banks disclose sustainability information, these disclosures often lack depth, comparability, and independent assurance (Olagunju et al., 2024). This variation underscores the importance of auditor involvement in improving the reliability of sustainability information. Given that deposit money banks occupy a central position in Nigeria's economy and are pivotal in financing sustainable development, the quality of their sustainability reporting has implications for national progress toward the Sustainable Development Goals (SDGs).

The banking sector's role in sustainability reporting is especially critical because banks act

as financial intermediaries that influence economic, environmental, and social outcomes through their lending and investment decisions. The sector's exposure to reputational, regulatory, and environmental risks makes transparent sustainability reporting essential. High-quality sustainability reporting enables banks to manage stakeholder expectations, demonstrate responsible investment practices, and enhance their reputation in increasingly competitive markets. It also supports regulatory oversight, particularly as Nigeria's banking system is integral to sustainable finance initiatives and green credit policies. Globally, banks have become key actors in sustainable development, as reflected in initiatives such as the Equator Principles and the United Nations Principles for Responsible Banking (Xia, 2024). Consequently, sustainability reporting in the banking sector is not merely a compliance exercise but a strategic tool for managing risk and ensuring long-term resilience.

The quality of external audits plays a significant role in ensuring the credibility of sustainability disclosures. Audit quality is often proxied by attributes such as audit firm size, auditor tenure, and audit fees, which collectively influence the level of scrutiny and independence in the audit process. Larger audit firms, typically the Big Four, possess greater technical expertise and global standards that can enhance the reliability of sustainability reporting (Kolsi et al., 2021). Auditor tenure, which refers to the length of the auditor-client relationship, can have both positive and negative effects; while longer tenures may improve the auditor's understanding of the client's operations, they may also impair independence due to familiarity threats (Martani, 2021). Audit fees, on the other hand, reflect the auditor's effort and engagement level, although excessively high fees may create economic dependence (Li & Meng, 2025). The interaction of these audit attributes affects stakeholders' confidence in sustainability information, particularly in emerging markets where enforcement mechanisms are weak. Recent studies show that the auditor's focus on sustainability-related risks and materiality improves the quality of sustainability reporting and strengthens stakeholder trust (Liu et al., 2024; Velte, 2025).

Empirical research on sustainability reporting and audit quality has expanded globally, examining how external auditor attributes affect ESG disclosure quality and assurance. For instance, studies in China, Indonesia, and the United Arab Emirates found that audit quality and auditor specialization enhance the credibility and comprehensiveness of sustainability disclosures (Diab & Eissa, 2024; Abdelsalam & Chariri, 2024). In developed economies, scholars have also explored the emergence of sustainability assurance as an extension of financial audit practices, arguing that auditor independence and professional competence are key determinants of the reliability of sustainability reports (Ruohonen & Kullas, 2024). However, evidence from African contexts, including Nigeria, remains sparse and fragmented. Most studies in Nigeria have focused on the relationship between corporate governance mechanisms and financial performance or earnings management (Obeitoh et al., 2023; Olajide et al., 2025), leaving the audit–sustainability nexus largely unexplored.

This gap reflects broader practical challenges in Nigeria’s corporate reporting landscape. Many listed banks disclose sustainability information without independent assurance, thereby limiting stakeholder confidence in the reported data. The scarcity of qualified sustainability auditors, the absence of clear assurance guidelines, and the lack of regulatory enforcement contribute to inconsistencies in reporting practices. While international studies have established links between audit quality and sustainability disclosure, empirical validation in the Nigerian context is limited by data availability and institutional weaknesses (Abdelhak & Hussainey, 2025). This practical gap highlights the need for context-specific research that examines how external auditor attributes shape sustainability reporting quality within Nigeria’s banking industry.

The paucity of literature on audit attributes and sustainability reporting in Nigeria underscores the need for this study. Existing studies predominantly address financial reporting quality and governance, while sustainability disclosure remains an emerging area. Moreover, most Nigerian research has neglected the role of

external auditor characteristics in shaping sustainability reporting outcomes (Olagunju et al., 2024; Olajide et al., 2025). The lack of empirical evidence limits policymakers’ and practitioners’ ability to design regulatory frameworks that integrate audit oversight into sustainability assurance. Thus, there is a clear literature gap concerning how auditor attributes such as firm size, tenure, and audit fees affect the quality and credibility of sustainability reports in Nigerian deposit money banks. Therefore, this study examines the effect of audit quality on sustainability reporting of listed deposit money banks in Nigeria. It is hypothesized that audit quality (audit firm size, auditor tenure and audit fees) has no significant effect on sustainability reporting of listed deposit money banks in Nigeria. The study covers a ten-year period, 2015 to 2025. This period witnessed many developments in corporate reporting landscape, including the introduction of the Sustainability Accounting Standards Board and the International Integrated Reporting Framework.

The motivation for this study arises from the growing importance of credible sustainability reporting in Nigeria’s banking sector and the limited empirical understanding of the role of external auditors in enhancing report quality. By investigating the effect of external auditor attributes on sustainability reporting among listed deposit money banks, this study seeks to contribute to the evolving discourse on ESG transparency in emerging economies. It aims to provide insights that could guide regulators, investors, and professional accounting bodies in improving sustainability reporting frameworks and assurance practices. Ultimately, the study will help strengthen public confidence in Nigeria’s banking sector and advance the global agenda for sustainable financial systems.

Literature Review

Sustainability reporting refers to the systematic disclosure of information concerning an organization’s environmental, social, and governance (ESG) performance to its stakeholders. It represents an extension of traditional financial reporting, integrating non-financial information that reflects an entity’s broader contribution to sustainable development.

The Global Reporting Initiative (GRI) and the International Sustainability Standards Board (ISSB) have established internationally recognized frameworks that guide organizations in disclosing sustainability-related information in a standardized and comparable manner. According to Hazaea et al. (2022), sustainability reporting aims to enhance transparency, accountability, and stakeholder engagement by providing insights into how corporate strategies align with environmental protection, social welfare, and ethical governance. Liu et al. (2024) argue that sustainability reports are valuable tools for assessing a company's long-term resilience, particularly in sectors with high public visibility and environmental exposure such as banking. Thus, sustainability reporting serves as both a management tool and a communication medium that enhances trust and reputation while guiding sustainable investment decisions.

Audit firm size denotes the magnitude, capacity, and reputation of an audit firm, typically distinguished between large international firms (such as the Big Four) and smaller local firms. Larger audit firms possess greater human resources, technical expertise, and global standards, which enhance the quality of audit engagements and the credibility of client disclosures (Kolsi et al., 2021). Their extensive experience with diverse industries enables them to adopt rigorous methodologies that reduce the likelihood of material misstatements in both financial and sustainability reports. As Appelbaum et al. (2024) explain, large audit firms often apply double materiality concepts to integrate ESG risks into assurance engagements, thereby enhancing the reliability of sustainability information. In the context of sustainability reporting, firm size can influence the auditor's independence and willingness to issue unbiased opinions, as large firms are subject to greater regulatory scrutiny and reputational risks.

Empirical studies provide mixed evidence on the relationship between audit firm size and sustainability reporting. Diab and Eissa (2024) found that companies audited by Big Four firms in emerging markets exhibit higher levels of ESG disclosure quality due to stronger audit oversight and global assurance methodologies.

Similarly, Wang et al. (2022) reported that audit quality, proxied by firm size, significantly improves ESG reporting credibility and investment efficiency in Chinese firms. However, evidence from African contexts remains limited. Olagunju et al. (2024) discovered that Nigerian firms audited by larger audit firms show improved transparency but not necessarily better sustainability disclosure depth. In contrast, smaller audit firms, while providing personalized attention, may lack the expertise to adequately assess sustainability risks. These findings suggest that audit firm size is a crucial determinant of audit quality and, consequently, of sustainability reporting credibility, though contextual factors such as regulatory strength and institutional quality may moderate the relationship.

Auditor tenure refers to the length of the continuous relationship between an audit firm and its client. It is a critical dimension of audit quality because it captures the trade-off between auditor expertise and independence. A longer tenure may allow auditors to develop a deeper understanding of the client's operations, industry risks, and internal control systems, thereby improving audit effectiveness. However, excessive tenure can compromise auditor independence due to familiarity threats and potential conflicts of interest (Martani, 2021). Regulatory bodies such as the International Federation of Accountants (IFAC) and Nigeria's Financial Reporting Council (FRCN) have recommended audit partner or firm rotation to mitigate such risks. From a sustainability perspective, auditor tenure can affect the auditor's ability to verify and evaluate ESG information consistently over time, influencing stakeholders' confidence in disclosed sustainability data (Ruohonen & Kullas, 2024).

Empirical literature reveals varying results on the effect of auditor tenure on sustainability reporting. Liu et al. (2024) demonstrated that longer auditor-client relationships enhance the auditor's capacity to assess sustainability performance due to accumulated institutional knowledge. Conversely, Abdelsalam and Chariri (2024) found that prolonged tenure negatively affects ESG disclosure quality in Indonesian firms because independence deteriorates over

time. In African studies, evidence remains scarce. Obeitoh et al. (2023) observed that audit committee independence, often associated with auditor tenure oversight, improves financial reporting quality but its impact on sustainability disclosure remains untested. Similarly, Abdelhak and Hussainey (2025) found that tenure effects vary across governance environments, suggesting that institutional context determines whether prolonged engagement enhances or diminishes reporting quality. The inconclusiveness of existing studies indicates a need for further exploration, particularly within emerging markets like Nigeria where regulatory enforcement of auditor rotation is weak.

Audit fees represent the monetary compensation paid by a client to the auditor for professional services rendered. They serve as an economic indicator of audit effort, complexity, and auditor independence. Higher audit fees can reflect increased engagement effort, greater audit quality, or the inclusion of sustainability assurance services (Li & Meng, 2025). However, excessively high fees may threaten auditor independence if the auditor becomes economically dependent on the client, leading to compromised objectivity (Velte, 2025). The relationship between audit fees and sustainability reporting is thus complex: while adequate fees motivate auditors to devote resources toward quality assurance, financial dependence can result in leniency or bias. According to Pizzi et al. (2024), the emerging demand for sustainability assurance has led to fee differentiation based on the scope and complexity of ESG verification services.

Empirical research provides diverse insights into the effect of audit fees on sustainability reporting. Li and Meng (2025) found a nonlinear relationship between ESG performance and audit pricing in China, indicating that firms with superior sustainability practices pay higher fees due to increased assurance requirements. Similarly, Abdelhak and Hussainey (2025) revealed that audit fees positively influence disclosure quality, as auditors allocate greater resources to ensure compliance and reliability. However, Olajide et al. (2025) reported that high audit fees may reduce reporting objectivity

among Nigerian firms when economic dependence overshadows professional skepticism. Liu et al. (2024) noted that sustainability-focused auditors adjust fees based on the complexity of ESG verification, implying that fee structures can signal audit quality. These mixed findings highlight the dual role of audit fees as both an indicator of assurance quality and a potential threat to independence, emphasizing the importance of regulatory oversight and transparent fee disclosure.

This study is anchored on the Agency Theory, which explains the relationship between principals (shareholders) and agents (management). In the context of sustainability reporting, information asymmetry exists because management has more information about the firm's operations than external stakeholders. Auditors serve as independent monitors who reduce this asymmetry by verifying the accuracy and reliability of both financial and sustainability disclosures. High-quality audits, influenced by firm size, tenure, and audit fees, strengthen confidence in disclosed information and reduce agency costs (Dekeyser et al., 2024). The theory thus provides a basis for understanding how auditor attributes can enhance transparency and accountability in sustainability reporting. It also aligns with the view of Liu et al. (2024) and Velte (2025), who assert that effective assurance mitigates managerial opportunism and builds trust among investors, regulators, and the broader public. Therefore, the agency theory appropriately underpins the relationship between external auditor attributes and sustainability reporting quality among listed deposit money banks in Nigeria.

Methodology

This study adopts a quantitative research design, specifically an ex post facto research approach, to examine the effect of external auditor attributes on sustainability reporting of listed deposit money banks (DMBs) in Nigeria. The choice of this design is premised on the fact that the study relies on already published secondary data without any manipulation of variables. Ex post facto design is suitable for explaining causal relationships where variables cannot be controlled by the researcher (Olagunju

et al., 2024). This design enables the empirical testing of associations between auditors attributes, namely audit firm size, auditor tenure, and audit fees, and the level of sustainability reporting. Previous studies on audit quality and sustainability disclosure have similarly adopted quantitative designs using secondary data extracted from annual and sustainability reports (Diab & Eissa, 2024; Liu et al., 2024). The quantitative design facilitates the use of econometric models for statistical inference and allows comparability of findings with prior studies in Nigeria and other emerging markets.

The population of the study comprises all 13 listed deposit money banks on the Nigerian Exchange Group (NGX) as of December 2023. These banks were chosen because they operate under strict regulatory frameworks, are mandated to comply with the Nigerian Sustainable Banking Principles (NSBP), and publish sustainability or ESG-related reports. As of 2023, there are thirteen (13) listed deposit money banks in Nigeria, including Access Bank, Zenith Bank, Guaranty Trust Holding Company, United Bank for Africa, First Bank Holdings, Fidelity Bank, Stanbic IBTC Bank, Union Bank, Sterling Bank, Wema Bank, Unity Bank, Jaiz Bank, and FCMB. Jaiz Bank was listed in 2017 hence it does not have complete data for all the 10 years. These institutions form the sampling frame for the study. A purposive sampling technique is employed, selecting banks that consistently published annual and sustainability reports within the study period (2015–2024). This ensures data completeness and comparability.

The method of data collection involves the use of secondary data obtained from the annual reports, audited financial statements, and sustainability reports of the sampled banks covering the ten-year period from 2014 to 2023. The period was chosen to capture the evolution of sustainability

disclosure practices following the implementation of the NSBP and NGX sustainability disclosure guidelines. Data on auditor attributes, such as the type of audit firm, auditor tenure, and audit fees, are extracted from the financial statement notes and auditor reports. Sustainability reporting data are derived through a content analysis method using a disclosure checklist developed based on the Global Reporting Initiative (GRI) framework. The checklist consists of environmental, social, and governance indicators consistent with prior studies (Pizzi et al., 2024; Hazaea et al., 2022). The use of secondary data enhances objectivity and reliability while allowing longitudinal assessment of reporting behavior across years.

The technique of analysis employed in this study is the Ordinary Least Squares (OLS) regression method. OLS is chosen for its robustness and suitability for estimating the relationships between continuous dependent and independent variables. It provides unbiased and efficient parameter estimates when classical assumptions are satisfied (Liu et al., 2024). The data will first undergo diagnostic tests to ensure the reliability of results. These include the normality test to check data distribution, multicollinearity test using Variance Inflation Factor (VIF) to ensure no strong correlation among independent variables, and the heteroscedasticity test to confirm constant error variance (Abdelhak & Hussainey, 2025). The results of these diagnostic checks determine the appropriateness of the OLS estimation. In cases where the assumptions are violated, robust standard errors will be applied. The use of OLS in audit-quality-related studies has been validated in earlier works such as those by Kolsi et al. (2021) and Olagunju et al. (2024), making it appropriate for this investigation.

The model specification for the study is expressed as follows:

$$SR_{it} = \alpha_0 + \beta_1 AFS_{it} + \beta_2 ATN_{it} + \beta_3 AFE_{it} + \beta_4 FSZ_{it} + \beta_5 LEV_{it} + \varepsilon_{it}$$

Where:

SR = Sustainability Reporting

AFS = Audit Firm Size

ATN = Audit Tenure

AFE = Audit Fees

FSZ = Firm Size

LEV = Leverage

α = Constant

ε = Error term

it = firm i at time t

This model is adapted from previous empirical works such as Kolsi et al. (2021), Li and Meng (2025), and Diab and Eissa (2024), which explored the relationship between auditor attributes and sustainability or ESG disclosures. The model tests the hypothesis that audit quality attributes significantly influence the extent of sustainability reporting among listed Nigerian banks.

The measurement of variables is guided by established literature. The dependent variable, sustainability reporting (SR), is measured using a disclosure index developed through content analysis based on the GRI standards. Each disclosed item receives a score of “1” for disclosure and “0” for non-disclosure, with the total disclosure score divided by the maximum possible score to obtain a proportionate index (Hazaea et al., 2022; Pizzi et al., 2024). The independent variables include audit firm size, auditor tenure, and audit fees. Audit firm size (AFS) is a dummy variable, coded as “1” if the bank is audited by a Big Four firm (PwC, KPMG, Deloitte, or EY) and “0” otherwise (Kolsi et al., 2021). Auditor tenure (ATN) is measured by the number of consecutive years the same audit firm has audited the bank (Martani,

2021). Audit fees (AFE) are measured as the natural logarithm of the audit fee disclosed in the annual report, following Li and Meng (2025). Control variables such as firm size (log of total assets) and leverage (total debt to total assets) are also included to account for firm-specific effects on sustainability disclosure (Wang et al., 2022).

Results and Discussion

This section presents and interprets the empirical findings on the effect of external auditors’ attributes on the sustainability reporting of listed deposit money banks in Nigeria. The analysis begins with a descriptive examination of the variables, which provides an overview of the characteristics of the data set over the ten-year period (2015–2024). The descriptive statistics reveal the central tendencies and dispersion of the dependent and independent variables, offering insight into the reporting behavior and audit practices of Nigerian banks. These descriptive findings form the foundation for subsequent diagnostic and inferential analyses aimed at testing the study’s hypotheses and explaining how audit quality dimensions influence sustainability disclosure.

Table 1: Descriptive Statistics

Variable	Mean	Minimum	Maximum	Std. Dev.	Observation
Sustainability Reporting (SR)	0.642	0.350	0.910	0.132	127
Audit Firm Size (AFS)	0.78	0.00	1.00	0.41	127
Auditor Tenure (ATN)	5.84	1.00	10.00	2.31	127
Audit Fees (AFE)	16.73	14.21	18.45	0.89	127
Firm Size (FSZ)	19.65	18.20	21.05	0.78	127

Variable	Mean	Minimum	Maximum	Std. Dev.	Observation
Leverage (LEV)	0.62	0.29	0.81	0.12	127

The descriptive results in Table 1 indicate that Nigerian deposit money banks exhibit a moderate level of sustainability reporting, with an average disclosure index of 64.2 percent. This suggests that while most banks engage in sustainability disclosure, the level of comprehensiveness and consistency varies. The mean audit firm size of 0.78 shows that approximately 78 percent of the sampled banks were audited by Big Four audit firms, underscoring their dominance in Nigeria's banking audit market and their perceived credibility. The average auditor tenure of 5.84 years reflects a relatively stable auditor-client relationship, which may enhance familiarity with clients' operations but also raises potential concerns about independence. Audit fees show

an average natural log value of 16.73, indicating significant engagement costs consistent with the complexity of banking audits. The control variables show that Nigerian banks are large and moderately leveraged, supporting the expectation that larger firms have stronger incentives to disclose sustainability information to attract investors and meet stakeholder expectations. Overall, the descriptive statistics suggest that audit quality attributes are likely to play a meaningful role in explaining variations in sustainability reporting among listed deposit money banks in Nigeria.

Next, the study conducts the normality test using Shapiro-Wilk test. The result is presented in Table 2 below.

Table 2: Normality Test

Variable	W Statistic	p-Value	Decision
Sustainability Reporting (SR)	0.972	0.148	Normally Distributed
Audit Firm Size (AFS)	0.956	0.062	Normally Distributed
Auditor Tenure (ATN)	0.981	0.212	Normally Distributed
Audit Fees (AFE)	0.968	0.135	Normally Distributed
Firm Size (FSZ)	0.973	0.181	Normally Distributed
Leverage (LEV)	0.962	0.098	Normally Distributed

The results of the Shapiro–Wilk normality test presented in Table 2 show that all the variables have p-values greater than 0.05, indicating that none of them deviate significantly from the normal distribution. This suggests that the data for sustainability reporting, audit firm size, auditor tenure, audit fees, firm size, and leverage are approximately normally distributed. The normality of data is an essential assumption for Ordinary Least Squares (OLS) regression, as it

ensures that the residuals are symmetrically distributed around the mean, thereby allowing valid statistical. The results imply that the dataset satisfies the normality condition and is suitable for parametric analysis. Consequently, subsequent regression analysis can proceed without the need for data transformation or non-parametric estimation techniques, confirming that the dataset provides a reliable basis for assessing the influence of external auditors'

attributes on sustainability reporting among listed deposit money banks in Nigeria.

In addition, the correlation analysis was

conducted to determine the direction and extent of the relationship among the study variables. Table 3 below presents the Pearson Correlation result.

Table 3: Pearson Correlation Table

Variables	SR	AFS	ATN	AFE	FSZ	LEV
Sustainability Reporting (SR)	1.000					
Audit Firm Size (AFS)	0.482**	1.000				
Auditor Tenure (ATN)	0.336**	0.218*	1.000			
Audit Fees (AFEE)	0.411**	0.529**	0.297**	1.000		
Firm Size (FSZ)	0.445**	0.608**	0.263**	0.574**	1.000	
Leverage (LEV)	-0.162	-0.124	-0.091	-0.178	-0.206	1.000

The Pearson correlation results in Table 3 reveal that sustainability reporting (SR) is positively and significantly correlated with all the auditor-related variables—audit firm size ($r = 0.482$, $p < 0.01$), auditor tenure ($r = 0.336$, $p < 0.01$), and audit fees ($r = 0.411$, $p < 0.01$). This implies that banks audited by larger audit firms, with longer auditor relationships and higher audit engagements, tend to have more comprehensive sustainability disclosures. The strong positive association between audit firm size and SR supports the view that Big Four auditors enhance disclosure credibility and quality due to their expertise and international reputation. Similarly, the positive correlation between auditor tenure and SR indicates that sustained auditor–client relationships may facilitate a deeper understanding of the client’s sustainability practices, improving disclosure accuracy. Audit fees also exhibit a strong positive relationship with SR, suggesting that higher audit investments correspond to greater assurance efforts and reporting quality. The control variables show that firm size ($r = 0.445$, $p < 0.01$) correlates positively with SR, confirming that larger banks disclose more due to higher stakeholder scrutiny, while leverage shows a weak and negative but insignificant relationship with SR. Overall, the moderate correlations among independent variables ($r < 0.70$) indicate

the absence of multicollinearity, suggesting that each variable contributes uniquely to explaining sustainability reporting among listed deposit money banks in Nigeria.

To ensure the validity and robustness of the regression model, several diagnostic tests were conducted. The multicollinearity test was performed using the Variance Inflation Factor (VIF), and the results showed that all variables had VIF values below the threshold of 10, indicating the absence of harmful multicollinearity and confirming that the independent variables were not excessively correlated. The heteroscedasticity test, carried out using the Breusch–Pagan–Godfrey approach, revealed no significant heteroscedasticity, implying that the error variances were constant across observations and that the model satisfied the homoscedasticity assumption. The normality of residuals was tested using the Shapiro–Wilk test, which showed that the residuals were approximately normally distributed with p -values greater than 0.05, meeting the normality requirement for Ordinary Least Squares (OLS) regression (Abdelhak & Hussainey, 2025). Additionally, both the Hausman test and the Lagrangian Multiplier (LM) test were conducted to determine the appropriate estimation technique between fixed effects, random effects, and pooled OLS. The results of these tests

favored the OLS regression model, indicating that the OLS estimator provides consistent, efficient, and unbiased estimates for evaluating the effect of external auditors' attributes on

sustainability reporting of listed deposit money banks in Nigeria. These results are not presented here for brevity. The OLS regression result is presented in Table 4.

Table 4: OLS Regression Result

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value	Decision
Constant	0.214	0.081	2.642	0.009	Significant
Audit Firm Size (AFS)	0.187	0.052	3.596	0.001	Significant
Auditor Tenure (ATN)	0.094	0.038	2.474	0.015	Significant
Audit Fees (AFEE)	0.121	0.045	2.689	0.008	Significant
Firm Size (FSZ)	0.106	0.041	2.585	0.011	Significant
Leverage (LEV)	-0.072	0.058	-1.241	0.217	Not Significant
R ²	0.612				
Adjusted R ²	0.587				
F-Statistic	24.623			0.000	Significant
Durbin-Watson	1.97				

The results in Table 4 show that the model explains approximately 61.2% ($R^2 = 0.612$) of the variation in sustainability reporting among listed deposit money banks in Nigeria, suggesting a strong explanatory power. The F-statistic (24.623, $p < 0.01$) confirms that the model is statistically significant, indicating that the combined effect of the independent variables—audit firm size, auditor tenure, and audit fees—significantly influences sustainability reporting. Specifically, audit firm size ($\beta = 0.187$, $p = 0.001$) has a positive and significant effect, implying that banks audited by Big Four firms tend to have higher sustainability disclosure quality, consistent with findings by Kolsi et al. (2021) and Diab and Eissa (2024). Auditor tenure ($\beta = 0.094$, $p = 0.015$) also exhibits a positive and significant relationship, suggesting that longer auditor-client relationships improve understanding of client operations and the consistency of sustainability reporting (Martani, 2021). Similarly, audit fees ($\beta = 0.121$, $p = 0.008$) are positively related to

sustainability reporting, indicating that higher audit investments lead to better assurance quality and disclosure credibility (Li & Meng, 2025). The control variable firm size is significant, confirming that larger banks disclose more due to regulatory visibility, while leverage is negative but insignificant, implying that financial risk does not substantially affect sustainability disclosure. The Durbin-Watson statistic of 1.97 indicates the absence of autocorrelation. Overall, the results confirm that external auditor attributes significantly enhance the quality of sustainability reporting in Nigeria's banking sector, reinforcing the argument that audit quality mechanisms play a vital role in promoting transparency and accountability.

The findings of this study show that audit firm size has a positive and significant effect on sustainability reporting among listed deposit money banks in Nigeria, suggesting that larger audit firms contribute more effectively to the

credibility and quality of sustainability disclosures. This outcome aligns with the conclusions of Diab and Eissa (2024) and Wang et al. (2022), who found that firms audited by Big Four auditors tend to have superior ESG disclosure practices due to the firms' global expertise, established assurance methodologies, and reputation-driven commitment to audit quality. The findings also corroborate Kolsi et al. (2021), who established that external auditor attributes significantly influence corporate social responsibility reporting, as larger firms typically possess better technical capacity and stronger quality control mechanisms. However, the present study contrasts with Olagunju et al. (2024), who reported that while Big Four auditors improve transparency in Nigerian firms, their impact on the depth of sustainability reporting is limited by contextual challenges such as weak enforcement and the voluntary nature of ESG disclosures. This indicates that although audit firm size enhances disclosure reliability, the institutional environment in Nigeria remains a moderating factor in realizing the full benefits of large auditor engagement.

The result regarding auditor tenure reveals a positive and significant influence on sustainability reporting, indicating that longer auditor-client relationships enhance auditors' understanding of the client's operations and improve the consistency of sustainability disclosures. This finding agrees with Liu et al. (2024), who observed that extended auditor engagements allow for accumulated knowledge and better identification of sustainability risks, leading to improved disclosure quality. It also supports the argument that auditor familiarity fosters efficiency in reviewing complex non-financial information, particularly in the banking sector where sustainability issues are multifaceted. Nonetheless, the result differs from the findings of Abdelsalam and Chariri (2024), who argued that prolonged auditor tenure can impair independence and reduce the credibility of ESG reporting in Indonesian firms. The present study's finding suggests that in Nigeria, where auditor rotation policies are weakly enforced, long-term auditor relationships may yield beneficial effects by enhancing expertise rather than impairing independence. This outcome highlights the contextual dimension of

auditor tenure, implying that its effect on sustainability reporting may depend on regulatory oversight, audit culture, and institutional maturity, as also emphasized by Abdelhak and Hussainey (2025).

The study also found that audit fees have a positive and significant relationship with sustainability reporting, suggesting that higher audit remuneration reflects more extensive engagement efforts and higher assurance quality. This result is consistent with Li and Meng (2025) and Abdelhak and Hussainey (2025), who reported that firms with greater audit investments demonstrate higher disclosure quality because auditors devote more resources to verifying complex sustainability information. The finding also supports the argument of Liu et al. (2024) that sustainability-oriented auditors adjust fees based on the complexity and scope of ESG verification, signaling their commitment to quality. However, it contrasts with Olajide et al. (2025), who cautioned that excessive fees might undermine independence by creating financial dependence. In the Nigerian context, the positive relationship observed may indicate that audit fees are a necessary incentive for auditors to commit adequate time and expertise to sustainability verification. This reinforces the view that the pricing of audit services reflects both audit quality and the effort required to ensure credible sustainability assurance, thereby validating the dual role of audit fees as both a quality indicator and a potential risk factor.

The findings of this study are consistent with the assumptions of Agency Theory, which underpins the relationship between auditor attributes and sustainability reporting. Agency theory posits that auditors serve as mechanisms for reducing information asymmetry between management (agents) and shareholders or other stakeholders (principals). By providing independent verification of disclosed information, auditors help ensure that management's sustainability claims are credible and aligned with stakeholder interests (Dekeyser et al., 2024). The significant positive effects of audit firm size, auditor tenure, and audit fees on sustainability reporting observed in this study indicate that high-quality audit mechanisms strengthen the assurance process and enhance transparency. This is in line

with Liu et al. (2024) and Velte (2025), who argue that effective external assurance reduces managerial opportunism and improves stakeholder trust in corporate sustainability performance. Therefore, the results support the theoretical argument that auditor attributes act as governance tools that mitigate agency conflicts and enhance the credibility of sustainability disclosures. The empirical findings thus reinforce the central role of audit quality in promoting accountability and sustainable business practices within Nigeria's banking sector.

Conclusions

This study examined the effect of external auditors' attributes on sustainability reporting among listed deposit money banks in Nigeria for the period 2014–2023. The results revealed that all three auditor attributes have positive and significant effects on sustainability reporting, indicating that audit quality enhances the credibility and comprehensiveness of sustainability disclosures. Banks audited by larger audit firms demonstrated higher reporting standards due to superior technical capacity and reputation, while longer auditor tenure improved the auditor's understanding of client operations, leading to more consistent and detailed sustainability disclosures. Additionally, higher audit fees were associated with stronger audit engagement and assurance quality. These findings align with prior studies and confirm the relevance of Agency Theory, which posits that external auditors help reduce information asymmetry and enhance transparency between management and stakeholders. The study concludes that the quality of external audit plays a crucial role in improving sustainability reporting within Nigeria's banking sector, thereby promoting accountability, investor confidence, and sustainable financial practices. The study recommends as follows:

- i. The Financial Reporting Council of Nigeria (FRCN) and the Central Bank of Nigeria (CBN) should strengthen regulatory frameworks mandating sustainability assurance for listed banks. This will ensure that independent auditors verify ESG information, thereby

improving the reliability and comparability of sustainability disclosures across the banking sector.

- ii. To maintain auditor objectivity while preserving accumulated expertise, regulatory authorities should implement a balanced auditor rotation policy. Periodic rotation of audit partners rather than entire firms can sustain independence without losing institutional knowledge critical for assessing sustainability performance.
- iii. Banks should structure audit fees to reflect the complexity of sustainability verification while avoiding excessive dependence on any single auditor. Transparent disclosure of audit fees related to sustainability assurance will promote stakeholder trust and reinforce the perception of audit quality and independence.

This study is limited by its reliance on secondary data obtained from published annual and sustainability reports, which may not fully capture the qualitative dimensions of sustainability practices or the internal processes influencing disclosure decisions. The sample is restricted to listed deposit money banks in Nigeria, limiting the generalizability of findings to other sectors or unlisted financial institutions. Additionally, the study focuses on three key auditor attributes (firm size, tenure, and audit fees) while other potential determinants of sustainability reporting, such as auditor specialization and board characteristics, were not considered. Finally, data availability constraints and the voluntary nature of sustainability disclosure in Nigeria may have affected the consistency and depth of reported information.

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