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Corporate Governance Attributes and the Likelihood of Fraud on Financial Statements of Listed Deposit Money Banks in Nigeria

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Abstract
Frequent occurrences of banks winding up and merging in Nigeria have cast doubt on the adequacy of existing corporate governance mechanisms, which necessitates an investigation into how governance attributes influence the integrity of financial reporting. Therefore, this study examined the effect of corporate governance attributes on financial statement fraud likelihood of listed deposit money banks in Nigeria for the period 2014 - 2023. An ex-post facto research design was adopted for the study. This study utilized census sampling techniques to take all the 15 deposit money banks listed on the Nigerian Exchange Group (NGX). The data used in this study were secondary derived from the annual reports and accounts of deposit money banks listed in Nigeria. The study used logistic regression to analyze data. The logistic regression results revealed that independent directors, audit committee independence and financial expertise have a significant effect on financial statement fraud likelihood of listed deposit money banks in Nigeria. The board size and gender diversity have no significant effect on financial statement fraud likelihood. The study concluded that independent directors, audit committee independence and financial expertise reduce the likelihood of financial statement fraud while board size and gender diversity have no influence on the likelihood of financial statement fraud. The study recommended that deposit money banks in Nigeria should focus on appointing independent directors and audit committee members with strong financial expertise. Although board size and gender diversity may not directly influence fraud risk, active involvement of all directors in fraud prevention is essential.

Keywords: Audit Committee Financial Expertise, Audit Committee Independence, Board Size, Financial Statement Fraud, Independent Directors.

1. Introduction

The challenge of financial statement fraud is not only a persistent global issue but one that has far-reaching consequences, contributing to corporate collapses, economic instability, and a severe loss of trust among stakeholders (Ajayi-Nifise et al., 2024; Jo et al., 2021). Fraud cases such as Brooge Energy (U.S SEC, 2023), Oando Plc (SEC, 2019), Kubient, (United States Attorney's Office, 2024) and Tingo Group (U.S. SEC, 2023) exposed critical deficiencies in corporate governance, particularly in the oversight of financial reporting. The desire to meet aggressive earnings targets, poor internal controls, and inadequate transparency within corporate structures are frequently cited as the primary catalysts for financial statement fraud (Amafade, 2024; Wan & Arshad, 2014). Such fraudulent reporting practices often involve inflating assets, understating liabilities, or manipulating earnings, misleading both investors and regulators. In response, several nations have strengthened their corporate governance frameworks and enhanced regulatory oversight, although financial statement fraud remains a substantial threat to global economic stability (Afrila, et al, 2024; Ajayi-Nifise et al., 2024).

In Nigeria, financial statement fraud is particularly pronounced within the banking sector, which has experienced significant collapses despite regulatory intervention. Skye Bank, Heritage Bank, and

Diamond Bank of Nigeria are notable examples of institutions that collapsed due to poor corporate governance and internal control deficiencies (Gbadebo et al, 2023; Akande, 2016). Thus, Skye Bank's collapse was primarily due to inadequate board oversight and poor risk management practices. In 2016, the Central Bank of Nigeria (CBN) intervened by replacing the bank's top management and board members after the bank failed to meet key prudential ratios and exhibited persistent liquidity challenges. The CBN cited the bank's inability to meet minimum liquidity and capital adequacy requirements as reasons for the intervention. Heritage Bank's license was revoked in 2024 after weak audit committee financial expertise allowed ₦590 billion in non-performing loans to accumulate. Diamond Bank merged with Access Bank amid concerns over weak board independence, poor leadership, and ineffective risk oversight highlighted by Moody's. Despite the Central Bank of Nigeria's (CBN) stringent regulatory requirements, financial statement fraud remains a recurring problem within Nigerian banks. Some of the factors contributing to this include the pressure on management to meet earnings expectations, inadequate enforcement of governance standards, and weak oversight by boards and audit committees (Elemeforo, 2023; Ekpulu & Iyoha, 2021). These challenges have led to a loss of public confidence and investor trust, ultimately harming the country's economic stability.

Board attributes are the characteristics and composition of the corporate board of directors that influence a board's effectiveness in corporate governance. However, the role of board attributes, such as board size, independent directors, and gender diversity, is critical in mitigating financial statement fraud. Research has shown that larger boards with a diverse range of expertise can be more effective in overseeing corporate governance practices (Rizvi, 2023; Owonifari et al., 2023). However, excessively large boards may dilute individual accountability and slow down decision-making processes (Sule & Monye-Emina, 2022; Aliyu et al., 2021). The presence of independent directors is crucial in promoting transparency and minimizing conflicts of interest, as these directors are less likely to be influenced by internal management (Chang, 2023; Zaman et al. 2018). Gender diversity on boards has gained increasing recognition as a factor that promotes ethical decision-making, with several studies indicating that gender-diverse boards are more likely to uphold higher governance standards and reduce the risk of fraudulent activities (Darmawan, 2024; Kaituko et al., 2023).

Audit committee attributes are the characteristics and composition that determine the effectiveness of an audit committee in overseeing financial reporting and governance. Audit committee attributes, such as financial expertise and independence, are equally crucial in addressing financial statement fraud. Committees that have members with financial expertise are more equipped to identify potential red flags in the financial reporting process, making it harder for management to manipulate financial statements (Yawuri et al., 2024; Purwiyanti & Laksito, 2022). Audit committee independence ensures that members provide unbiased oversight, acting as an essential check on management's actions (Egolum et al., 2021). However, the absence of financial expertise or independence within audit committees can result in weak internal control systems, increasing the likelihood of financial statement fraud (Madugba et al., 2021; Olaoye & Dada, 2019). These factors highlight the importance of a robust and independent audit committee in safeguarding financial reporting integrity. Audit committee financial expertise and independence were used as proxies for audit committee attributes for this study.

The motivation for studying the effect of corporate governance attributes on financial statement fraud likelihood within Nigeria's deposit money banks stems from the persistent failures of these institutions, even when regulatory and governance frameworks appeared strong. Many banks in Nigeria, including Heritage Bank Plc, Diamond Bank Plc and Skye Bank Plc, received clean audit reports shortly before their collapse, emphasizing the weaknesses in board and audit committee oversight (Ogbaisi, & Ezuem, 2021; Uwuigbe et al., 2019; Anichebe et al., 2019). Furthermore, recurring financial scandals in this sector underscore the need for a deeper understanding of corporate governance attributes such as board size, independent directors, board gender diversity, audit committee financial expertise, and independence affect financial statement fraud likelihood in Nigeria's deposit money banks. Therefore, drawing from the main objective of examining the effects of corporate governance attributes (board size, independent directors, board gender diversity, audit committee financial expertise and audit committee independence) on the financial statement fraud likelihood of listed deposit money banks in Nigeria.

2. Literature Review

Financial Statement Fraud

Financial statement fraud is characterized by the intentional manipulation of financial information to mislead stakeholders, with analytical tools such as the Beneish M-Score and the F-Score have demonstrated effectiveness in uncovering financial anomalies and potential irregularities (Rezaee, 2018; Wells, 2017; Beneish, 1999; Dechow et al., 2011). The relationship between governance attributes and fraud prevention is critical; larger boards may offer diverse perspectives that enhance oversight, but they can also introduce coordination challenges that dilute accountability (Jensen, 1993). O'Sullivan and O'Dwyer (2023) found that smaller boards tend to exhibit higher levels of accountability, reducing the potential for fraud. Similarly, board independence is crucial for effective monitoring, as independent directors can provide objective scrutiny of financial practices (Beasley, 1996). Albrecht et al. (2021) indicated that firms with a higher proportion of independent directors are less likely to experience financial misstatements. Gender diversity on boards has also been associated with improved ethical decision-making, with findings from Gul et al. (2022) suggesting that female directors enhance overall board effectiveness in risk management. Furthermore, the presence of financial expertise within audit committees aligns with the need for robust fraud detection mechanisms, as knowledgeable committee members are better equipped to understand and assess financial anomalies (Carcello et al., 2006). Lastly, Zhang et al. (2023) demonstrated that the independence of audit committees significantly contributes to reducing earnings manipulation, reinforcing the importance of strong governance structures in minimizing financial statement fraud. Collectively, these governance attributes contribute to a comprehensive framework that can significantly reduce the likelihood of financial fraud, complementing quantitative detection methods.

Corporate Governance Attributes

Corporate governance comprises the structures, processes, and systems by which companies are directed and controlled, aiming to align corporate operations with shareholder value, ethical standards, and regulatory compliance. Effective governance establishes checks and incentives to mitigate agency problems, where managers may act in their interests over those of shareholders (Fama & Jensen, 1983). The Cadbury Report (1992) accentuated the importance of transparency, accountability, and fairness within governance frameworks, which help prevent financial misconduct and foster trust among stakeholders. Strong corporate governance practices, thus, play a vital role in safeguarding corporate integrity, particularly by reducing the likelihood of financial statement fraud. Therefore, board size, independent directors, board gender diversity, audit committee financial expertise and audit committee independence are corporate governance attributes for this study.

Board size is often examined in relation to fraud risk, with larger boards offering a variety of perspectives and expertise that can improve oversight. However, larger boards may also encounter coordination challenges, potentially diminishing their effectiveness in fraud detection (Jensen, 1993). Agency theory underscores the risk of “free riding” in larger boards, where individual accountability may be reduced, leading to less efficient monitoring (Fama & Jensen, 1983). Supporting this perspective, Uzun et al. (2004) found that smaller, well-coordinated boards are linked to a lower likelihood of financial fraud, as they may better balance diverse views with efficient communication.

Independent directors, gender diversity, and audit committee expertise further strengthen governance structures by contributing to fraud prevention. Independent directors, through objective oversight, play a crucial role in mitigating management influence, supporting accountability as per stewardship theory (Donaldson & Davis, 1991). Studies suggest that gender diversity on boards promotes ethical decision-making (Liu et al., 2016), while financial expertise in audit committees enhances their ability to detect irregularities, reducing fraud risk (Carcello et al., 2006). Agency theory also emphasises the role of independent audit committees in limiting management influence (Jensen & Meckling, 1976), a view supported by Klein (2002), who found that independence within the committee reduces earnings manipulation. These findings collectively suggest that an integrated approach to governance encompassing board size, independent directors, gender diversity, audit committee financial expertise and audit committee independence support a strong framework for safeguarding corporate integrity.

Empirical Review

Using an ex-post facto research design, Ohiokha and Eguasa (2024) examined the relationship between corporate governance mechanisms and financial statement fraud, specifically focusing on oil marketing companies listed on the Nigerian Exchange Group (NXG). Composition of board of directors, audit committee size, block ownership, board gender diversity and shareholders expectation were used as proxies for corporate governance mechanisms. The study data were sourced from the annual published reports and accounts of a population of 26 oil marketing companies listed on the NXG. 24 oil marketing companies listed in the NXG were sampled using a simple random method. Analysis of the data was done using a panel data multiple regression model. The results of the regression analysis show that Shareholders' expectation has a negative relationship with financial statement fraud, while the composition of the board of directors, audit committee size, audit committee meetings, block ownership and board gender diversity have no significant relationship with financial statement fraud of listed oil marketing firms in Nigeria. Although the study focused on oil marketing firms which may not fully capture the dynamics of board size, independent directors, audit committee financial expertise, and independence as they manifest in the more regulated and structurally complex banking sector, limiting its generalizability to deposit money banks in Nigeria.

In the same vein, Yawuri et al. (2024) utilised panel regression to examine the effect of audit and board committee expertise on financial statement fraud of seven oil and gas firms listed on the Nigerian Exchange Group (NGX) from 2013 to 2022. Financial statement fraud, the dependent variable, was measured using the Beneish M-score model, while audit and board committee expertise were assessed based on members' accounting and financial backgrounds. The findings revealed an insignificant relationship between audit committee expertise, board composition, and financial statement fraud. However, the study overlooked the key governance dimensions like board size, independence, gender diversity, and audit committee independence, which are more pronounced and impactful in the highly regulated banking industry. Moreover, the study’s findings cannot be applicable to the banking sector because of its unique features and environment.

Nyamumbo (2024) assessed the relationship between audit committee characteristics and fraudulent financial reporting in a developing region, using 672 firm-year observations from 56 firms listed in East African Community countries from 2012 to 2023. Logistic regression analysis with panel data and OLS validation revealed that audit committee size and meeting frequency were positively linked to a higher likelihood of financial statement fraud (FSR). However, audit committee gender diversity and financial expertise showed a negative relationship, indicating that more financial expertise and female representation were associated with a reduced likelihood of FSR. The study provides a cross-country evidence from East Africa, highlighting the mitigating role of audit committee gender diversity and financial expertise on fraud, yet its broader regional context may limit direct applicability to the Nigerian banking sector's stricter governance and regulatory environment.

Kiprotich and Kinuthia (2024) investigated the impact of audit committee characteristics on fraudulent financial reporting in Kenyan listed firms. The study focused on the effects of audit committee gender diversity, financial expertise, size, and independence, using the Fraud Pentagon theory as its foundation. Employing an explanatory and longitudinal research design, the study analysed secondary panel data from audited financial statements of 40 firms from 2012 to 2021. The data was analysed using both descriptive and inferential statistics. The results revealed that audit committee independence, gender diversity, financial expertise, and size had a negative and significant influence on fraudulent financial reporting in Kenyan listed firms. While the study addresses key audit committee attributes using longitudinal data, their exclusion of broader board-level variables like board size and independent directors, which this study included. Furthermore, their focus on general Kenyan firms, may limit relevance to the governance complexities specific to Nigeria’s deposit money banks.

Ebaid (2023) explored the link between board characteristics and financial statement fraud of listed firms on the Saudi stock exchange. The study analysed the financial statements of 67 companies listed on the Saudi Stock Exchange for six years, from 2014 to 2019. The study measured financial statement fraud with the modified Beneish M-score model. Using panel data techniques, the relationship between financial statement fraud and four board attributes (independence, size, meeting frequency, and gender diversity) was examined. The findings indicated that board size has a positive and significant relationship with financial statement fraud. Board independence has a negative and significant relationship with financial statement fraud while, board gender diversity and frequency of meetings have no significant relationship with financial statement fraud of listed companies in Saudi. The study provided strong empirical analysis on key board attributes using panel data and the Beneish M-score, but its omission of audit committee variables such as financial expertise and independence and focus on non-financial Saudi firms limits its findings applicability to the Nigerian banking sector’s governance structure and fraud risk environment.

Also, Kaituko et al. (2023) assessed the moderating effect of audit fees on the relationship between board structure and the likelihood of financial statement fraud (LFSF). The study utilized logistic regression and analysed data from 15 manufacturing firms listed on the East African Community partner states from 2007 to 2021. The Beneish M-Score served as a proxy for measuring LFSF. The results indicated that board gender diversity, financial expertise, independence, meeting frequency, and audit fees are significant in reducing the likelihood of financial statement fraud. However, the study effectively integrates audit fees and board characteristics using a logistic regression analysis is appropriate, but their exclusion of board size and audit committee-specific variables, coupled with a focus on manufacturing firms, limits direct applicability to Nigeria’s banking sector where governance demands are stricter.

Zadeh et al. (2023) examined the connection between audit committee characteristics and earnings management. The study categorized earnings management into accrual and real earnings management across three dimensions: sales, general and administrative costs, and production costs and cash flows from operations. Utilizing a multivariate regression model with panel data for hypothesis testing, the results indicated that financial expertise and size of audit committee members significantly influenced accrual earnings management. However, no significant relationship was found between the independence of committee members and accrual earnings management. Though, the study employed a robust multivariate panel regression to assess audit committee effects on accrual earnings management, yet their exclusion of broader governance variables like board size, gender diversity, and focus on earnings management rather than outright fraud limits applicability to Nigeria's banking sector fraud context.

Purwiyanti and Laksito (2022) evaluated the relationship between audit committee effectiveness and fraudulent financial statements in financial sector companies listed on the Indonesia Stock Exchange during 2019-2020. Audit committee effectiveness was measured by member expertise, meeting frequency, committee size, and tenure, while financial statement fraud was assessed using the Beneish M-Score. Based on a sample of 174 companies, the findings revealed that audit committee expertise, meeting frequency, and tenure had a negative and significant impact on the occurrence of financial statement fraud. The study used Beneish M-Score and key audit committee variables, yet their exclusion of broader board attributes like size, independence, and gender diversity, along with a narrow two-year financial sector scope, limits generalizability to Nigeria’s banking sector fraud context.

Egolum et al. (2021) examined the corporate governance determinants that influence the likelihood of financial statement fraud among eight quoted deposit money banks in Nigeria with international operating licenses, covering the period from 2010 to 2018. Board size, board independence, and audit committee independence were corporate governance factors used in the study, with financial statement fraud likelihood measured using the Beneish M-score. Using regression analysis on panel data collected from annual financial reports and accounts, the findings revealed that board independence significantly reduces the likelihood of fraudulent activities by managers. While board size and audit committee independence have no significant influence on likelihood of financial statement fraud. The study provided sector-specific insight using Beneish M-score and key governance variables, but the study's omission of audit committee financial expertise and gender diversity limits a comprehensive assessment of fraud likelihood drivers in Nigerian banks.

Almarayeh et al. (2021) explored the link between audit committees and earnings management in Jordan, a developing country. The study focused on audit committee attributes such as size, independence, financial expertise, and meeting frequency, using discretionary accruals as a proxy for earnings management. The study employed generalized least squares (GLS) regression on data from industrial firms listed on the Amman Stock Exchange (ASE) between 2012 and 2020, sourced from the firms' annual reports and accounts. The findings revealed that only the audit committee independence was associated with reduced earnings management. Thus, the study demonstrated methodological rigor using GLS regression and multiple audit committee attributes, but its industrial sector focus and exclusion of board-related variables like size and gender diversity limit its applicability to financial institutions like Nigerian deposit money banks.

The study by Eneh (2018) investigated the impact of board attributes on the likelihood of corporate fraud in quoted manufacturing firms in Nigeria. The study focused on board characteristics such as size, independence, and diversity, using the Beneish M-score to measure fraud likelihood. Employing a longitudinal research design, the sample included 15 manufacturing companies listed on the Nigerian Stock Exchange (NSE) as of 2017, with secondary data collected from their annual reports and accounts covering the financial years 2012-2017. The analysis was conducted using binary regression. The results indicated that the odds ratios for board size (BDSIZE) and board diversity (BDDIV) were slightly above

1 but not statistically significant. Also, the study found that the odds ratio for board independence (BDIND) was 0.66031, suggesting that increased managerial ownership could lower the likelihood of corporate fraud in quoted manufacturing firms in Nigeria. The study's strength lies in its longitudinal design and use of binary regression with relevant board variables, but it is limited by its narrow focus on manufacturing firms and omission of key governance attributes like audit committee expertise and independence, which are crucial in the banking sector context of the current study.

Ilaboya and Lodikero (2017) assessed the relationship between board independence and financial statement fraud, using female gender diversity as a moderating factor. Due to the binary nature of financial statement fraud as the dependent variable, the logit panel least squares regression technique was employed to estimate the regression coefficients. Data were gathered from a sample of 75 companies listed on the Nigerian Stock Exchange as of December 31, 2016, filtered from 184 firms listed that year. The analysis revealed a significant negative relationship between board independence, female gender diversity and financial statement fraud. However, the combined effect of board independence and financial statement fraud did not yield the expected results. The study's methodological strength lies in its use of logit panel regression and inclusion of board independence and gender diversity, but it is limited by its exclusion of board size and audit committee variables, and its general industry focus contrasts with the current study’s specific emphasis on the banking sector.

Izevbekhai and Ohiokha (2017) examined the relationship between board composition and financial statement fraud using a sample of 75 firms listed on the Nigerian Stock Exchange, covering the period from 2009 to 2016, with 600 firm-year observations. The study employed descriptive statistics, correlation analysis, and both pooled and panel binary logistic regression analyses. The findings revealed that board composition could potentially increase financial statement fraud. Additionally, while the relationship between female board composition and financial statement fraud was positive, it was statistically insignificant, indicating that the presence of female board members is unlikely to reduce fraud in the sampled firms. The study's strength lies in its large sample and robust use of binary logistic regression, but it is limited by the exclusion of audit committee expertise and independence, with its general firm focus differing from the current study’s sector-specific emphasis on deposit money banks.

Theoretical Framework

i. Agency Theory: Agency theory, originally developed by Jensen and Meckling (1976), explains the inherent conflict that arises in a principal-agent relationship, particularly within corporate settings where shareholders (principals) delegate decision-making authority to managers (agents). This separation of ownership and control creates opportunities for managers to pursue their own interests, which may not align with those of the shareholders. The issue is intensified by information asymmetry, where managers typically have more access to internal operations and financial details than shareholders, making it difficult for the latter to monitor and evaluate managerial actions effectively (Casterella et al., 2007). As a result, managers may engage in behaviour such as earnings manipulation, excessive risk-taking, or misallocation of resources to maximize personal benefits, potentially to the detriment of firm value. To address this agency problem, firms often implement corporate governance mechanisms such as board oversight, performance-linked compensation, and transparent disclosures to align managerial actions with shareholder interests and reduce the risk of opportunistic behaviour.
ii. Fraud Triangle Theory: Cressey's fraud triangle theory (1950) identifies pressure, opportunity, and rationalization as key conditions that lead to fraudulent behaviour (Dorminey et al., 2012).

Pressure arises from financial stress (Shelton, 2014; Casabona & Grego, 2003), and opportunity is created by weak controls or governance (Albrecht et al., 2008; Cressey, 1953). Corporate governance mechanisms, such as board size, independent directors, gender diversity, and audit committee expertise, help reduce fraud by strengthening oversight (Chen et al., 2006a). Rationalization is the justification of unethical actions (Albrecht & Albrecht, 2002; Beasley et al., 2000), influenced by corporate culture (Lister, 2007). ISA 240 and the Sarbanes-Oxley Act (2002) aim to address these risks (Low et al., 2008), but critics argue these mechanisms alone are insufficient without considering broader cultural factors (Albrecht et al., 1984; Wells, 1997; Wolfe & Hermanson, 2004).

3. Methodology

This study adopts ex-post facto research design to investigate the relationships as well as the effects of governance attributes on financial statement fraud likelihood of deposit money banks listed on the Nigerian Exchange Group (NGX). This design was chosen because of its effectiveness in assessing the relationships and the effects of two or more variables (that is, the dependent and independent variables). The population of this study consists of fifteen (15) listed deposit money banks on the NGX from year 2014 - 2023. Since the study population is not much, all the fifteen (15) deposit money banks were used as the sample. Furthermore, secondary data were elicited from the financial statements of the sampled deposit money banks under consideration. Logistic regression with the aid of STATA version 13 was used to test the relationship between the dependent variable and regressors. This method is considered appropriate for this analysis since the dependent variable is a dummy variable (Gujarati & Porter, 2009). Therefore, this study used Beneish M-Scores to determine the fraud likelihood.

Beneish M-Score = -4.84 + 0.92*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI – 0.172*SGAI + 4.679*TATA – 0.327*LVGI.
Where: DSRI= Days Sales in Receivables Index, GMI= Gross Margin Index (GMI), AQI= Asset Quality Index, SGI= Sales Growth Index, DEPI= Depreciation Index, SGAI= Sales General and Administrative Expenses Index, TATA = Total Accruals to Total Assets, LVGI = Leverage Index.

The fraud likelihood threshold states that if a company scored less than -2.22, there is an unlikelihood of fraud occurrence. However, when the computed Beneish M-Score is greater than -2.22 or tends toward a positive value (that is, 1.0 and above), the company is likely to be engaged in fraud (Folajimi et al., 2023; Eneh, 2018).

To estimate the relationship between corporate governance attributes and financial statement fraud likelihood. Financial statement fraud likelihood, which is the dependent variable, is modelled as a function of board size, independent directors, gender diversity, audit committee financial expertise and audit committee independence. The following model is used to guide the study analysis:

$$FSFL_{it} = \beta_0 + \beta_1 BSZE_{it} + \beta_2 INDR_{it} + \beta_3 BDGD_{it} + \beta_3 ACFE_{it} + \beta_3 ACIN_{it} + \varepsilon_{it}$$

Where;

FSFL	=	*Financial Statement Fraud Likelihood*
BSZE	=	*Board Size*
INDR	=	*Independent Directors*
BDGD	=	*Board Gender Diversity*
ACFE	=	*Audit Committee Financial Expertise*
ACIN	=	*Audit Committee Independence*
β_0	=	*Constant in the model*

$\beta_1, \beta_2, \beta_3 - \beta_5$	=	*Explanatory power of each variable*
i	=	*Each company represented in the model*
t	=	*Year covered by the study (time)*
$\mathcal{E}$	=	*error term*

Table 1: Variable, Definition, Measurement and Source

Variable	Definition	Measurement	Source
FSFL	Financial Statement Fraud Likelihood (Dependent Variable)	Beneish M-score. Dummy variable, 1 for companies with a Beneish M-Score value greater than -2.22 and 0 for companies with a Beneish M-Score value less than -2.22	Purwiyanti and Laksito (2022), Ibadin and Ehigie (2019).
BDSZ	Board size (Independent Variable)	Number of individuals on the board.	Akhidime (2015)
INDR	Independent Directors (Independent Variable)	Proportion of non-executive directors on the board to the total board size.	Krishnan and Visvanathan (2009)
BDGD	Board Gender Diversity (Independent Variable)	Proportion of female directors on the board to the total board size.	Maulidi (2023), Ibrahim, and Yahaya (2024)
ACFE	Audit Committee Financial Expertise (Independent Variable)	Number of audit committee members with accounting and finance knowledge.	Krishnan and Visvanathan (2009)
ACIN	Audit Committee Independence (Independent Variable)	Proportion of non-executives in the audit committee to the total number of committee members.	Abbas and Yahaya (2023); and Bala and Kumai (2015)

Source: Researcher's compilation (2024).

4. Results and Discussion

Table 2: Descriptive Statistics Result

Variable	Obs	Mean	Std. Dev.	Min	Max
FSFL	**150**	**.5615385**	**.4981181**	**0**	**1**
BDSZ	**150**	**10.67692**	**2.659531**	**5**	**17**
INDR	**150**	**.5029308**	**.0915437**	**.202624**	**.714773**
BDGD	**150**	**.0544821**	**.1014786**	**0**	**.844122**
ACIN	**150**	**.1814103**	**.1778744**	**0**	**1.66667**
ACFE	**150**	**2.607692**	**.4901535**	**2**	**3**

Source: Stata 13 Output (2024).

Table 1 shows the mean values of Financial Statement Fraud (FSFL), Board Size (BDSZ), Independent Directors (INDR), Board Gender Diversity (BDGD), Audit Committee Independence (ACIN) and Audit Committee Financial Expertise (ACIN) to be .5615385, 10.67692, .5029308, .0544821, .1814103 and 2.607692 respectively. The standard deviation values of FSFL, BDSZ, INDR, BDGD, ACIN and ACIN are .4981181, 2.659531, .0915437, .1014786, .1778744 and .4901535 respectively. The minimum values of the variables of

FSFL, BDSZ, INDR, BDGD, ACIN and ACIN are 0, 5, .202624, 0, 0, and 2 respectively. The maximum values of the variables of FSF, BDSZ, INDR, BDGD, ACIN and ACIN are 1, 17, .714773, .844122, 1.66667 and 3 in that order. However, the study observation is 150.

Table 3: Correlation Matrix

	FSF	BDSZ	INDR	BDGD	ACIN	ACFE
FSFL	1.0000					
BDSZ	-0.0258	1.0000				
INDR	-0.1970	0.3738	1.0000			
BDGD	-0.0989	-0.0733	0.0027	1.0000		
ACIN	0.1450	0.0645	0.0163	-0.1081	1.0000	
ACFE	-0.1385	-0.1218	0.0133	0.1431	0.0491	1.0000

Source: Stata 13 Output (2024).

The correlation matrix table 2 above showed the relationship values between each explanatory variables and the dependent variable. Therefore, the correlation matrix result indicated that Financial Statement Fraud (FSFL) has a positive association with Audit Committee Independence (ACIN) and a negative association with Board Size (BDSZ), Independent (INDR), Board Gender Diversity (BDGD) and Audit Committee Financial Expertise (ACFE). The study revealed both positive and negative associations between the variables. However, the predictor variables do not exhibit any problem of collinearity.

Table 4: Logistic Regression Fit Statistics

Chi-square/ Sig	12.32 (0.0307)
Log-likelihood	-82.963762
Hosmer-Lemeshow Chi-square (df, Sig)	9.45 (0.3058)
Psuedo R^2	0.0691

Source: Stata 13 Output (2024).

Table 4 presents the statistics of goodness of fit of the model and the explanatory power of the model. The model is based on selected board and audit committee attributes. The Chi-square statistics suggest that the sample data describe the purpose of the model. The Hosmer-Lemeshow statistics of 9.45 also reveal that the model fits well. The Psuedo R^2 with a value of 0.0691 is also within the acceptable limit.

Table 5: Logistic Regression Result

FSFL	Odds Ratio	Std. Err	z	P>|z|	[95% Conf. Interval]	
BDSZ	1.016706	.0775584	0.31	0.828	.8755129	1.18067
INDR	.0565051	.0229231	2.46	0.024	.0000624	.5120167
BDGD	.3402014	.6229043	0.54	0.556	.0094015	12.31048
ACIN	-.052505	.0251236	-2.09	0.037	-.1017464	-.0032636
ACFE	.5726551	.2212716	-2.58	0.004	.2685297	1.22122
_cons |	41.74268	65.62917	2.37	0.018	1.915553	909.6337

Source: Stata 13 Output (2024).

Discussion of Findings

The odds ratio for Board Size (BDSZ) is 1.016706, with a standard error of .0775584, Z-value of 0.31 and a p-value of 0.828, indicating an insignificant effect of board size on the financial statement fraud likelihood of listed deposit money banks in Nigeria. This implies that an increase or decrease in the size of the board cannot influence the occurrence of financial statements fraud within the organisation. Therefore, the study fails to reject the null hypothesis, which states that board size has no significant influence on financial statement fraud of deposit money banks in Nigeria. Furthermore, this could imply that simply expanding board membership without addressing other governance issues does not enhance oversight or accountability. The study findings are in line with the findings of Uche et al. (2021), and contrary to the findings of Ebaid (2023), and Eneh (2018).

In contrast, the logistic regression results on Independent Directors (INDR) show the odds ratio of .0565051, with a p-value of 0.024, signifying a positive and significant relationship with Financial Statement Fraud Likelihood (FSFL). This simply indicates that having an independent board also significantly reduces the likelihood of financial statement fraud. Therefore, this aligns with the understanding that independent directors provide more objective oversight, reducing management's ability to engage in fraudulent practices. Consequently, the study rejects the null hypothesis and confirm that independent directors have a positive and significant effect on financial statement fraud of listed deposit money banks in Nigeria. This finding is in tandem with the findings of Kaituko et al. (2023), Uche et al. (2021), Eneh (2018) and Ilaboya and Lodikero (2017), which emphasize the importance of independent director members in mitigating fraud practices, though it contrary to the study of Aifuwa and Embele (2019).

Furthermore, the odds ratio for Board Gender Diversity is 0.3402014, with P-value of 0.556, indicating an insignificant effect of board gender diversity on financial statement fraud likelihood of listed deposit money banks in Nigeria. This implies that the presence of female gender on the board does not in any ways influence likelihood of financial statement fraud. As a result, the study fails to reject the null hypothesis, which implies that gender diversity has no significant effect on financial statement fraud likelihood of listed deposit money banks in Nigeria. Although gender diversity is typically associated with enhanced governance and decision-making, this finding suggests that, in isolation, it may not play a decisive role in mitigating fraud practices within the context of this study. Therefore, the finding is consistent with the finding of Izevbekhai and Ohiokha (2017), but contrary to these studies finding Ohiokha and Eguasa (2024), Ebaid (2023), Kaituko et al. (2023), Izevbekhai and Ohiokha (2017).

From the logistic regression result revealed that the odds ratio of -.052505, with a p-value of 0.037, signifying a negative and significant effect on financial statement fraud likelihood. This indicates that having independent audit committee also significantly reduces the likelihood of financial statement fraud. Consequently, the study rejects the null hypothesis, which states that audit committee independence has no significant effect on financial statement fraud likelihood of listed deposit money banks in Nigeria. This finding is in line with the findings in prior studies such as Kiprotich and Kinuthia (2024), Kiprotich and Kinuthia (2024), and Almarayeh et al. (2021). Also, the findings are contrary to the study of Zadeh, et al. (2023).

The odds ratio for Audit Committee Financial Expertise is .5726551, with a p-value of 0.004, implying a positive and significant relationship with Financial Statement Fraud Likelihood (FSFL). This indicates that having members with accounting, auditing and finance knowledge on the committee will significantly reduce the likelihood of financial statement fraud. As a result, the study rejects the null hypothesis which states that audit committee financial expertise has no significant effect on the likelihood of financial statement fraud of listed deposit money banks in Nigeria. This finding is in tandem to the findings of Thus, this finding is in line with those of Nyamumbo (2024), Kiprotich and Kinuthia (2024), Zadeh et al. (2023), Purwiyanti and Laksito (2022), but contradict the finding of Yawuri et al. (2024).

5. Conclusion and Recommendations

Based on the logistic regression, this study concludes that independent directors, audit committee independence and audit committee financial expertise significantly reduce the likelihood of financial statement fraud in Nigeria's listed deposit money banks. This implies that enhancing the autonomy and influence of independent directors and the audit committee can serve as a vital tool for improving financial transparency and accountability within the banking sector in Nigeria. Furthermore, the study concludes that board size and gender diversity do not significantly influence the likelihood of financial statement fraud which suggests that structural attributes alone may not directly deter fraudulent activities in Nigerian banks. This indicates that simply increasing board size or having diverse representation and board gender diversity does not inherently strengthen fraud prevention without active oversight and specific anti-fraud measures. It implies that governance mechanisms must be strategically aligned with firm-specific risk contexts to effectively mitigate fraud likelihood.

From the conclusion, the study recommends that Nigerian deposit money banks should prioritize appointing independent directors and audit committee members with proven financial expertise. While board size and gender diversity alone may not impact the likelihood of financial statement fraud, ensuring that all directors actively contribute to anti-fraud initiatives can strengthen governance. However, tailoring governance practices to the unique risk profile of each bank is crucial for enhancing fraud mitigation efforts.

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