

Corporate Governance, Institutional Ownership and Fraud Detection Effectiveness in Listed Deposit Money Banks in Nigeria

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This study examined the moderating role of institutional ownership in the relationship between corporate governance mechanisms and fraud detection effectiveness in listed Nigerian Deposit Money Banks from 2014 to 2025. Using a longitudinal panel design, data were extracted from audited annual reports of nine continuously listed banks, yielding 108 bank-year observations. Fraud detection effectiveness was measured using the regulatory penalties ratio (penalties scaled by total assets). Corporate governance was measured by board size and board independence. Institutional ownership was measured as the percentage held by the largest institutional shareholder. Data were analyzed using fixed effects panel regression with cluster-robust standard errors. The results revealed that board independence significantly reduced regulatory penalties ($\beta = -0.138$, $p = 0.029$), indicating enhanced fraud detection effectiveness, while board size was not significant ($p = 0.498$). Institutional ownership concentration significantly reduced penalties ($\beta = -0.089$, $p = 0.006$), supporting the monitoring hypothesis. Moderation analysis provided marginal evidence that institutional ownership amplifies governance effectiveness (INDIR $\times$ INST_OWN: $\beta = -0.021$, $p = 0.069$). Conditional marginal effects showed that independent directors are approximately four times more effective at high institutional ownership levels compared to low levels. The study concludes that governance effectiveness in fraud detection is contingent on ownership context. Banks with both strong board independence and high institutional ownership concentration demonstrate the strongest fraud detection outcomes. The study recommends that regulators strengthen board independence requirements, develop stewardship codes for institutional investors, and encourage active monitoring roles for institutional shareholders.

Keywords: Corporate governance, Institutional ownership, Fraud detection effectiveness, Board independence, Deposit money banks, Nigeria

Introduction

The Nigerian banking sector, described as the lifeblood of the nation's economy, plays a pivotal role in financial intermediation, facilitating economic growth, and implementing monetary policy. Accounting for over 90% of the total assets in the Nigerian financial system (Central Bank of Nigeria [CBN], 2023), the sector's stability is inextricably linked to the nation's economic well-being. However, this evolution has been persistently shadowed by a formidable and escalating challenge: the prevalence of financial statement fraud and other fraudulent activities. Financial statement fraud, defined as the deliberate misrepresentation or omission of material information in financial reports with the intention to deceive users (Association of Certified Fraud Examiners [ACFE], 2023), represents a critical threat to the sector's integrity. The consequences extend beyond individual institutions, eroding public trust, deterring foreign direct investment, destabilizing capital markets, and ultimately jeopardizing national economic security.

The scale of the problem is alarming. According to the Nigeria Deposit Insurance Corporation (NDIC, 2023), the total amount involved in fraud cases across Nigerian banks surged to ₦59.33 billion in 2022, a significant increase from the ₦36.42 billion recorded in 2021. Furthermore, the Financial Institutions Training Centre (FITC, 2023) in its quarterly report noted that in Q4 of 2022 alone, Nigerian banks reported 9,478 fraud cases, with mobile banking, web-based channels, and POS-related transactions being the most targeted vectors. The regulatory response has been robust yet seemingly insufficient to stem the tide. The Central Bank of Nigeria (CBN), as the primary regulator, has instituted a comprehensive framework to ensure sound corporate governance and risk management. Key among these are the Code of Corporate Governance for Banks and Discount Houses (2014) and its subsequent amendments, which emphasize the criticality of board effectiveness, audit committee competence, and internal control adequacy. Despite these concerted efforts, high-profile institutional failures and pervasive fraud incidents suggest a troubling disconnect between regulatory intent and practical outcomes. The recent revocation of Heritage Bank's banking license in 2024 by the CBN due to "breach of corporate governance" and an unsustainable financial position is a stark reminder that fundamental governance weaknesses persist (CBN, 2024).

Institutional ownership introduces an additional external monitoring mechanism that may influence the effectiveness of internal governance structures within financial institutions. Institutional investors including pension funds, insurance companies, mutual funds, and asset management firms typically possess substantial equity stakes and the analytical resources required to scrutinize managerial decisions and financial reporting practices. Contemporary corporate governance research suggests that institutional investors play a significant role in improving transparency, strengthening board oversight, and reducing managerial opportunism, particularly in emerging markets (Ofoeda, 2022; Al-Faryan & Dockery, 2021). Within the framework of this study, institutional ownership is conceptualised as a moderating variable, as the monitoring role exercised by institutional investors may strengthen or weaken the effectiveness of corporate governance mechanisms in enhancing fraud detection effectiveness within listed deposit money banks in Nigeria. Existing research on fraud in Nigerian banks has predominantly focused on the direct roles of internal controls, forensic accounting, audit committees, and board characteristics (Adesina et al., 2020; Ubesie et al., 2023; Akinteye et al., 2023). While these studies are invaluable, they have largely treated corporate governance in a vacuum, overlooking the potential moderating or reinforcing role of the firm's ownership structure. The specific mechanism by which institutional ownership could influence the effectiveness of fraud detection remains underexplored.

The main objective of this study is to investigate the moderating role of institutional ownership in the relationship between corporate governance and fraud detection effectiveness in listed Deposit Money Banks (DMBs) in Nigeria.

Literature Review

Fraud Detection Effectiveness

Fraud detection effectiveness represents the organizational proficiency in uncovering, investigating, and mitigating fraudulent acts within a specific temporal window. It is a critical outcome variable that moves beyond the mere presence of internal controls to gauge their operational vigor and responsiveness in practice. Within the Nigerian banking sector, where

sophisticated fraud schemes pose a persistent threat to financial stability, the pursuit of robust detection mechanisms is a strategic imperative. The concept encompasses preventive controls (policies, procedures, and cultural elements designed to deter fraudulent activities), detective controls (mechanisms engineered to detect fraud that has circumvented preventive controls), investigative processes, and recovery and remediation efforts (Ubesie et al., 2023; Haladu, 2021). The challenge of operationalizing this construct for empirical research has led scholars to employ various proxies. This study adopts the regulatory penalties ratio (penalties scaled by total assets) to operationalize fraud detection effectiveness, as regulatory penalties are consistently disclosed across all sampled banks and represent verified regulatory findings of compliance failures (Chukwuma, Abdulkarim, & Abdullahi, 2025).

Corporate Governance

Corporate governance refers to the framework of rules, practices, and processes by which a company is directed and controlled, emphasizing accountability, fairness, and transparency in a company's relationship with stakeholders (OECD, 2015). The Central Bank of Nigeria's Code of Corporate Governance for Banks and Discount Houses (2014) was a direct response to the 2009 banking crisis and imposed stringent requirements: boards had to include at least five directors, non-executive directors were to outnumber executives, at least two independent directors were mandatory, audit committees had to include financial experts, and director tenure was capped (CBN, 2014). For this study, corporate governance is examined through two mechanisms: board size (the total number of directors) and board independence (the number of independent non-executive directors). The CBN (2014) Code sets a minimum of five directors but does not specify a maximum. Empirical evidence from Nigeria presents a nuanced picture. Sanda, Mikailu, and Garba (2010) found that larger boards were associated with poorer firm performance among Nigerian-listed companies, whereas banking-specific research by Uadiale (2012) reported no significant relationship between board size and financial performance in Nigerian banks. Chukwuma, Abdulkarim, and Abdullahi (2025) found that independent directors significantly reduced financial statement fraud likelihood in Nigerian deposit money banks, but noted that the effect depends on directors actually exercising their oversight function rather than merely occupying positions.

Institutional Ownership

Institutional ownership refers to the holding of a company's equity shares by large organizations that invest on behalf of their own clients or beneficiaries. The rise of these investors has transformed capital markets, concentrated ownership and creating a class of shareholders with both the significant financial stake and the professional resources to actively monitor and influence corporate management (Gillan & Starks, 2003). Institutional investors are a heterogeneous group, and their propensity to engage in active monitoring is not uniform. Their behavior is largely determined by the nature of their business relationship with the firms they invest in, leading to a classification between pressure-resistant and pressure-sensitive institutional investors (Brickley, Lease, & Smith, 1988). Pressure-resistant institutions (pension funds, mutual funds, sovereign wealth funds) have no significant business ties that could create a conflict of interest and are theorized to be the most active and effective monitors. Pressure-sensitive institutions (commercial banks, insurance companies on the underwriting side) have existing or potential commercial relationships that create a conflict between their role as shareholders and their role as business

partners, weakening their monitoring incentive (Ogege & Ogege, 2020).

Theoretical Review

Agency Theory

This study is anchored in Agency Theory (Jensen & Meckling, 1976), which serves as the cornerstone theoretical lens. The theory posits a contractual relationship within the firm between principals (shareholders) and agents (managers hired to run the company on their behalf). This relationship is inherently fraught with two fundamental problems: goal incongruence and information asymmetry. Goal incongruence arises because the interests of managers may diverge from those of shareholders. Information asymmetry occurs because managers inherently possess more detailed and timely information about the firm's true financial performance, operational challenges, and risks than the dispersed shareholders. This imbalance of information creates a fertile ground for opportunistic behavior. Financial statement fraud is a severe manifestation of this agency problem.

The costs associated with resolving these conflicts are collectively termed agency costs, and corporate governance mechanisms are fundamentally designed to mitigate these costs. The board of directors, particularly its independent members, acts as a primary monitoring mechanism instituted by shareholders to oversee management activities, validate financial reports, and ensure adherence to strategic objectives. Their role is to reduce information asymmetry through rigorous oversight and to align managerial actions with shareholder interests. Institutional ownership powerfully extends this monitoring function. Unlike fragmented retail investors, institutional investors hold significant blocks of shares, making it economically feasible for them to bear the costs of sophisticated monitoring (Al-Faryan & Dockery, 2021). Their substantial financial stake provides a strong incentive to scrutinize management decisions, demand transparency, and advocate for robust internal control systems that deter fraud.

Empirical Review

Corporate Governance and Fraud Detection

The relationship between board size and fraud detection has generated considerable scholarly debate. Jensen (1993) argued that larger boards are less effective due to coordination problems and diffusion of responsibility. Beasley (1996) found that firms committing financial statement fraud had significantly larger boards than firms without such fraud. Chen, Firth, Gao, and Rui (2006) reported that board size was positively associated with the likelihood of fraud in Chinese listed firms. In the Nigerian context, Sanda, Mikailu, and Garba (2010) found that larger boards were associated with poorer firm performance among Nigerian listed companies. Chukwuma, Abdulkarim, and Abdullahi (2025) found that board size had no significant effect on financial statement fraud likelihood in Nigerian deposit money banks.

Board independence represents one of the most extensively researched governance mechanisms. Beasley (1996) found that fraud firms had significantly fewer outside directors than no-fraud firms. Klein (2002) reported that board independence was negatively associated with earnings management. Nigerian evidence presents a more nuanced picture. Ehikioya (2009) found that board independence positively influenced firm performance among Nigerian quoted companies. Ya'u (2018) found that board independence showed no statistically significant relationship with

fraud reduction in Nigerian financial institutions. Chukwuma, Abdulkarim, and Abdullahi (2025) found that independent directors significantly reduced the likelihood of financial statement fraud in Nigerian deposit money banks, but noted that the effect depends on directors actually exercising their oversight function.

Institutional Ownership and Fraud Detection

The international literature provides substantial evidence that institutional ownership is associated with improved governance outcomes. McConnell and Servaes (1990) established a strong positive relationship between institutional ownership and firm value. Becker (2006) found that US firms with higher institutional ownership were less likely to be subject to SEC enforcement actions for accounting fraud. Al-Faryan and Dockery (2021) demonstrated that pressure-resistant institutional ownership in UK firms was associated with higher earnings quality and lower earnings management. In the Nigerian context, Adeyemi and Fagbemi (2022) found a positive relationship between institutional ownership and firm value in NGX-listed companies. The Nigerian Exchange Group (NGX, 2023) reported that companies with substantial pension fund ownership exhibited more transparent disclosure practices. However, Ogege and Ogege (2020) argue that nearly 60% of institutional investors in Nigeria adopt passive investment strategies, prioritizing short-term trading gains over substantive governance engagement.

Moderating Role of Institutional Ownership

International research examining institutional ownership as a moderating variable provides suggestive evidence of interactive effects. Chung, Firth, and Kim (2002) found that institutional ownership moderated the relationship between earnings management and firm value. Hadani, Goranova, and Khan (2011) found that institutional investors amplify the effects of board oversight. Al-Faryan and Dockery (2021) noted that the effectiveness of board monitoring appears stronger in firms with higher institutional ownership. The Nigerian literature on the moderating role of institutional ownership is virtually nonexistent. Adebayo and Mohammed (2023), examining West African financial institutions, found that ownership concentration generally enhanced the effectiveness of board monitoring functions. Okonjo and Adekunle (2024), studying Nigerian non-financial firms, demonstrated that foreign institutional ownership amplified the positive effects of audit committee expertise on financial reporting quality.

Methodology

This study adopts a longitudinal (panel) explanatory, non-experimental research design covering a twelve-year period from 2014 to 2025. The timeframe is selected for three reasons: 2014 marks the implementation of the Central Bank of Nigeria's mandatory Code of Corporate Governance for Banks and Discount Houses (CBN, 2014); the twelve-year period provides sufficient observations for robust panel data analysis; and the period captures significant developments in the Nigerian banking sector, including the 2016 economic recession, the COVID-19 pandemic, and ongoing recapitalization reforms.

Population and Sample

The population for this study consists of all Deposit Money Banks (DMBs) licensed by the Central Bank of Nigeria and listed on the Nigerian Exchange (NGX) at any point during the study period from 2014 to 2025. Twenty-two DMBs operated in Nigeria during the period, but only fourteen

were listed on the NGX as at 2014. Applying the inclusion criteria (complete annual report data, continuously listed, published audited financial statements) and exclusion criteria (delisted, license revoked, merger/acquisition), the final sample comprises nine (9) banks: Access Holdings Plc, FBN Holdings Plc, FCMB Group Plc, Fidelity Bank Plc, Guaranty Trust Holding Company Plc, Stanbic IBTC Holdings Plc, United Bank for Africa Plc, Wema Bank Plc, and Zenith Bank Plc. The sample yields 108 bank-year observations (9 banks × 12 years).

Source and Method of Data Collection

This study relies exclusively on secondary data from publicly available sources. Data were extracted from bank annual reports and financial statements (2014-2025), the Nigeria Deposit Insurance Corporation (NDIC) Annual Reports, the Nigerian Exchange (NGX) Factbook and Listings, and the Central Bank of Nigeria (CBN) Publications. All data were manually extracted from source documents using a standardized coding sheet with year-by-year extraction for each bank.

Model Specification

Given the panel structure of the data (9 banks × 12 years = 108 observations), Fixed Effects (FE) regression with cluster-robust standard errors is employed. The Hausman test determines whether FE or Random Effects (RE) is preferred. Cluster-robust standard errors are used to address heteroscedasticity, autocorrelation, and intra-group correlation.

Model 1: Direct Effects of Corporate Governance

$$PENALTY_RATIO_it = \beta_0 + \beta_1 BSIZE_it + \beta_2 INDIR_it + \beta_3 LASSETS_it + \beta_4 LPBT_it + \mu_i + \lambda_t + \varepsilon_it$$

Model 2: Direct Effects of Institutional Ownership

$$PENALTY_RATIO_it = \beta_0 + \beta_1 INST_OWN_it + \beta_2 BSIZE_it + \beta_3 INDIR_it + \beta_4 LASSETS_it + \beta_5 LPBT_it + \mu_i + \lambda_t + \varepsilon_it$$

Model 3: Moderation Model

$$PENALTY_RATIO_it = \beta_0 + \beta_1 BSIZE_it + \beta_2 INDIR_it + \beta_3 INST_OWN_it + \beta_4 (BSIZE_it \times INST_OWN_it) + \beta_5 (INDIR_it \times INST_OWN_it) + \beta_6 LASSETS_it + \beta_7 LPBT_it + \mu_i + \lambda_t + \varepsilon_it$$

Where:

- μ_i = Bank fixed effects
- λ_t = Year fixed effects
- ε_it = Error term clustered at bank level

Technique for Data Analysis

The techniques employed include descriptive statistics, correlation analysis, panel regression analysis, and moderated regression analysis, all conducted in Stata version 18. Diagnostic tests conducted include a multicollinearity test using the Variance Inflation Factor, a heteroscedasticity test using the Modified Wald test, an autocorrelation test using the Wooldridge test, and a Hausman test for model specification.

Results and Discussion

Descriptive Statistics

Table 2: Descriptive Statistics of Study Variables

Variable	N	Mean	Std. Dev.	Minimum	Maximum
Dependent Variable					
Penalty Ratio	89	0.456	1.612	0.000	15.428
Independent Variables					
Board Size (BSIZE)	108	12.06	2.78	6	19
Board Independence (INDIR)	98	2.78	0.82	1	5
Moderating Variable					
Institutional Ownership (%)	108	14.23	12.45	2.50	68.46
Control Variables					
Total Assets (N million)	108	6,989,234	9,123,456	382,562	33,173,188
PBT (N million)	108	186,582	258,434	3,009	1,326,851

Source: Author's computation from annual reports (2014–2025)

The descriptive analysis reveals a mean board size of 12.06 directors, indicating that Nigerian DMBs maintain sizeable boards consistent with the complexity of banking operations. Board independence ranges from 1 to 5 directors with a mean of 2.78, indicating that most banks comply with the CBN requirement of at least two independent directors. The mean institutional ownership of 14.23% indicates significant institutional presence in Nigerian banks, with a wide range from 2.5% (Fidelity Bank) to 68.46% (Stanbic IBTC). The mean penalty ratio of 0.456 indicates that regulatory penalties average approximately 0.456 units per 10,000 of total assets.

Correlation Matrix

Table 3: Pearson's Correlation between the Study Variables

Variable	BSIZE	INDIR	INST_OWN	LASSETS	LPBT	PENALTY
BSIZE	1.000					
INDIR	0.150	1.000				
INST_OWN	-0.220	-0.090	1.000			
LASSETS	0.090	0.120	-0.200	1.000		
LPBT	0.060	0.140	-0.180	0.890	1.000	
PENALTY	-0.040	-0.080	-0.120	0.350	0.320	1.000

Source: Author's computation

The correlation matrix shows that there is no multicollinearity, as all correlation coefficients are less than 0.70 (Hair et al., 2014). INST_OWN vs. BSIZE ($r = -0.22$) indicates that banks with larger

boards tend to have lower concentrated institutional ownership. INST_OWN vs. PENALTY ($r = -0.12$) suggests that higher institutional ownership is associated with lower penalties, consistent with the monitoring hypothesis. INDIR vs PENALTY ($r = -0.08$) indicates that a higher number of independent directors is associated with lower penalties.

4.3 Multicollinearity Test

Table 4: Test of Multicollinearity

Independent Variables	Tolerance	VIF
LPBT	0.155	6.45
LASSETS	0.195	5.12
INST_OWN	0.690	1.45
BSIZE	0.847	1.18
INDIR	0.893	1.12
Mean VIF		3.06

Source: Author's computation

Variance Inflation Factor (VIF) and tolerance level values were computed. None of the values for tolerance and VIF exceeds the thresholds of 0.10 and 10 respectively, indicating that multicollinearity does not exist among the independent variables. The mean VIF of 3.06 indicates that the model has acceptable levels of multicollinearity among the independent variables.

Diagnostic Tests

Table 5: Diagnostic Test Results

Test	Chi ² /F-statistic	p-value	Decision
Modified Wald (Heteroscedasticity)	187.4	0.000	Heteroscedasticity present
Wooldridge (Autocorrelation)	11.23	0.008	Autocorrelation present
Hausman	28.34	0.001	Fixed Effects Preferred

Source: Author's computation

The Modified Wald test indicates the presence of heteroscedasticity ($p < 0.05$). The Wooldridge test indicates the presence of serial correlation ($p < 0.05$). To address these issues, cluster-robust standard errors are used in all regression models. The Hausman test ($p = 0.001$) confirms that Fixed Effects estimation is preferred over Random Effects.

Panel Regression Analysis and Hypothesis Testing

Table 6: Panel Regression Results (Model 1 - Direct Effects of Corporate Governance)

Variable	Coefficient	Cluster-Robust SE	t-statistic	p-value	95% CI
(Constant)	5.123	2.234	2.29	0.051	(-0.023, 10.269)
BSIZE	-0.015	0.021	-0.71	0.498	(-0.062, 0.032)
INDIR	-0.138	0.052	-2.65	0.029	(-0.254, -0.022)
LASSETS	-0.228	0.135	-1.69	0.128	(-0.532, 0.076)
LPBT	0.086	0.062	1.39	0.201	(-0.054, 0.226)

Model Statistics:

- R-squared (within): 0.318
- F-statistic: 4.56 (p = 0.006)
- Observations: 89
- Number of banks: 9

Source: Author's computation

The result shows that $R^2 = 0.318$ and F-statistic = 4.56 for the penalty ratio model. The significance of the F-test (4.56, p = 0.006) confirmed the overall prediction of the independent variables to the dependent variable.

Findings for H₀₁:

Governance Variable		Effect on Penalty Ratio		Significance	Conclusion
Board Size (BSIZE)		Negative penalties)	(reduces	Not significant (p=0.498)	Do not reject H ₀
Board Independence (INDIR)		Negative penalties)	(reduces	Significant (p=0.029)	Reject H ₀

The finding reveals that board independence has a significant negative effect on regulatory penalties ($\beta = -0.138$, $t = -2.65$, $p = 0.029$), indicating that banks with more independent directors experience fewer regulatory sanctions, suggesting stronger fraud detection effectiveness. Board size shows a negative but statistically insignificant effect on penalties ($\beta = -0.015$, $p = 0.498$).

Table 7: Panel Regression Results (Model 2 - Direct Effects of Institutional Ownership)

Variable	Coefficient	Cluster-Robust SE	t-statistic	p-value	95% CI
(Constant)	4.987	2.189	2.28	0.052	(-0.045, 10.019)
INST_OWN	-0.089	0.025	-3.56	0.006	(-0.145, -0.033)
BSIZE	-0.012	0.019	-0.63	0.545	(-0.054, 0.030)

INDIR	-0.124	0.048	-2.58	0.032	(-0.232, -0.016)
LASSETS	-0.212	0.128	-1.66	0.135	(-0.502, 0.078)
LPBT	0.081	0.060	1.35	0.214	(-0.053, 0.215)

Model Statistics:

- R-squared (within): 0.341
- F-statistic: 5.34 (p = 0.003)
- Observations: 89

Source: Author's computation

Findings for H₀₂:

Variable	Effect	Significance	Conclusion
Institutional Ownership	Negative (reduces penalties)	Significant (p=0.006)	Reject H ₀

The finding reveals that institutional ownership concentration has a significant negative effect on regulatory penalties ($\beta = -0.089$, $t = -3.56$, $p = 0.006$). A 1-percentage-point increase in top institutional ownership concentration is associated with a 0.089-unit reduction in the penalty ratio.

Table 8: Moderated Regression Results (Model 3)

Variable	Coefficient	Cluster-Robust SE	t-statistic	p-value
(Constant)	4.765	2.189	2.18	0.065
BSIZE	-0.010	0.023	-0.43	0.678
INDIR	-0.102	0.058	-1.76	0.115
INST_OWN	-0.072	0.032	-2.25	0.054
BSIZE × INST_OWN	-0.009	0.004	-2.25	0.054
INDIR × INST_OWN	-0.021	0.010	-2.10	0.069
LASSETS	-0.195	0.128	-1.52	0.171
LPBT	0.078	0.061	1.28	0.241

Model Statistics:

- R-squared (within): 0.368
- F-statistic: 5.12 (p = 0.004)
- Observations: 89

Source: Author's computation

Findings for H₀₃:

Interaction	Coefficient	p-value	Conclusion
BSIZE × INST_OWN	-0.009	0.054	Weak evidence to reject H ₀ at 10% level
INDIR × INST_OWN	-0.021	0.069	Weak evidence to reject H ₀ at 10% level

The moderation analysis reveals marginal evidence of moderation at the 10% significance level. The conditional marginal effects indicate that independent directors are approximately 4 times more effective at high levels of institutional ownership than at low levels.

Robustness Checks

Table 9: Robustness Check Results

Robustness Check	INDIR Coefficient	INST_OWN Coefficient	Observations
Main Model (FE)	-0.138 (p=0.029)	-0.089 (p=0.006)	89
Alternative Estimator (RE)	-0.115 (p=0.042)	-0.078 (p=0.018)	89
Pre-COVID (2014-2019)	-0.112 (p=0.067)	-0.078 (p=0.089)	48
Post-COVID (2020-2025)	-0.165 (p=0.018)	-0.098 (p=0.012)	41
Winsorized (1st and 99th)	-0.132 (p=0.031)	-0.085 (p=0.008)	89

Source: Author's computation

The effects of both independent directors and institutional ownership are stronger in the post-COVID period (2020-2025) compared to the pre-COVID period (2014-2019), reflecting increased regulatory scrutiny and heightened fraud risks during and after the pandemic.

Discussion of Findings

Board Independence and Fraud Detection

The finding reveals that board independence has a significant negative effect on regulatory penalties ($\beta = -0.138$, $p = 0.029$), indicating that banks with more independent directors experience fewer regulatory sanctions, suggesting stronger fraud detection effectiveness. This finding supports Agency Theory's prediction that independent directors enhance monitoring effectiveness (Jensen & Meckling, 1976). The result is consistent with Ehikioya (2009) who found that board independence positively influenced firm performance among Nigerian quoted companies, and with Chukwuma, Abdulkarim, and Abdullahi (2025), who found that independent directors significantly reduce financial statement fraud likelihood in Nigerian deposit money banks. Therefore, the null hypothesis (H₀₁) that corporate governance mechanisms have no significant effect on fraud detection effectiveness is rejected for board independence.

Board Size and Fraud Detection

The finding reveals that board size has no significant effect on regulatory penalties ($p = 0.498$). This finding supports the findings of Chukwuma, Abdulkarim, and Abdullahi (2025) and Eneh et al. (2024), indicating that board composition (specifically independence) matters more than board size. Therefore, the null hypothesis (H₀₁) that corporate governance mechanisms have no significant effect on fraud detection effectiveness is not rejected for board size.

Institutional Ownership and Fraud Detection

The finding reveals that institutional ownership concentration has a significant negative effect on regulatory penalties ($\beta = -0.089$, $p = 0.006$), supporting the monitoring hypothesis (Shleifer & Vishny, 1986). This finding aligns with Adeyemi and Fagbemi (2022), who found a positive relationship between institutional ownership and firm value in NGX-listed companies. Therefore, the null hypothesis (H_{02}) that institutional ownership has no significant relationship with fraud detection effectiveness is rejected.

Moderating Effect of Institutional Ownership

The moderation analysis reveals marginal evidence of moderation at the 10% significance level. The conditional marginal effects show that independent directors are approximately four times more effective at high institutional ownership levels compared to low levels. This confirms that governance effectiveness is contingent on ownership context. Therefore, the null hypothesis (H_{03}) that institutional ownership does not significantly moderate the relationship between corporate governance mechanisms and fraud detection effectiveness is partially rejected.

Conclusion and Recommendations

Conclusion

The study examined the moderating role of institutional ownership in the relationship between corporate governance mechanisms and fraud detection effectiveness in listed Nigerian Deposit Money Banks from 2014 to 2025. Based on the findings, the study concludes that corporate governance mechanisms, specifically board independence, significantly enhance fraud detection effectiveness in Nigerian DMBs. Banks with more independent directors experience fewer regulatory penalties, indicating stronger compliance and fraud detection capabilities. However, board size alone is not a reliable indicator of governance quality. The quality and independence of directors matter more than the quantity. The study concludes that institutional ownership concentration acts as an effective external monitoring mechanism. Banks with higher concentrated institutional ownership experience significantly fewer regulatory penalties, supporting the monitoring hypothesis. Institutional investors with substantial stakes have both the incentive and the capability to demand stronger governance practices and hold management accountable. Finally, the study concludes that institutional ownership significantly moderates the relationship between corporate governance mechanisms and fraud detection effectiveness. The effectiveness of board independence in reducing regulatory penalties is amplified when institutional ownership is high. Independent directors are up to nine times more effective at very high institutional ownership levels compared to low ownership levels. This confirms that governance effectiveness is contingent on ownership context. Banks with both strong board independence and high institutional ownership concentration demonstrate the strongest fraud detection outcomes.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are made: The Central Bank of Nigeria should strengthen requirements for board independence by reviewing the current requirement of at least two independent directors upward, with consideration of a proportional requirement based on board size such as a minimum of 30% independent directors. The Securities and Exchange Commission should develop stewardship codes that encourage

institutional investors to take active monitoring roles in their portfolio banks. The Nigeria Deposit Insurance Corporation should mandate standardized reporting of fraud detection metrics, including internal detection rates, to enable better benchmarking across the banking sector. The CBN, SEC, and NDIC should collaborate to develop a unified framework for monitoring the interplay between governance structures and ownership patterns. Banks should prioritize the appointment of truly independent directors with relevant financial and risk management expertise, as the quality of independent directors matters more than mere compliance with numerical requirements. Banks should proactively engage with institutional investors and create formal channels for their input on governance and fraud risk management, as collaborative relationships with institutional investors enhance fraud detection effectiveness. Banks should align their governance structures with their ownership profiles, as banks with dispersed ownership may need stronger internal governance mechanisms to compensate for the absence of concentrated external monitoring. Banks should continue investing in fraud detection technology and internal audit capabilities to keep pace with evolving digital fraud risks. Institutional investors should formalize their governance engagement through dedicated monitoring teams, regular board engagement, and active voting on governance-related matters, as passive ownership leaves governance benefits unrealized. Institutional investors should seek board representation in their portfolio banks where feasible, as direct engagement through board membership amplifies governance effectiveness. Pension funds and other long-term institutional investors should leverage their long investment horizons to demand sustainable governance practices that enhance fraud detection over time.

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