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RESEARCH ARTICLE

CORPORATE GOVERNANCE RISK AND RETURN ON EQUITY OF DEPOSIT MONEY BANKS IN NIGERIA

ROSEMARY OFOEGBU, KELECHI EGBUJOR, PAULINE UCHENNA OGWO, MIKE CHINEDU NWOSU

[1,3&4] Department of Accountancy, Alvan Ikoku Federal University of Education, Owerri;
[2] Registry Units, Alvan Ikoku Federal University of Education, Owerri, Nigeria

ABSTRACT

This study examines corporate governance risk and return on equity of deposit money banks (DMBs) in Nigeria. After an exhaustive literature review, secondary data were sourced from First Bank, UBA, GTB, Access Bank, and Zenith Bank Plc for the period 2015–2024. Corporate governance risk, the independent variable, was proxied by board size risk, board gender diversity risk, and audit committee size risk, while return on equity, the dependent variable,. The study employed panel data analysis using fixed effects regression in views statistical package. Findings reveal that board size risk has a positive but insignificant effect on ROE, while board gender diversity risk also exhibits a positive but insignificant effect. Audit committee size risk, however, has a positive and statistically significant effect on ROE. The study concludes that corporate governance risk, has positive but insignificant effect on return on equity of DMB in Nigeria. It is recommended that banks should prioritize strengthening audit committees, enhancing board competence, independence, and expertise rather than merely increasing the number of board members or female representation on boards..

Keywords: Corporate governance, risk management, return on equity, audit committee, commercial banks

Corresponding Author

Rosemary Ofoegbu
Email Address: Rossie4thelord@gmail.com
Telephone Number: +2347030670073

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1.0. INTRODUCTION

Corporate governance has emerged as a critical determinant of firm performance and risk management across both developed and developing economies. It encompasses the system of rules, processes, and institutional arrangements through which companies are directed and controlled, with the objective of ensuring accountability, transparency, effective risk oversight, and protection of stakeholders' interests (OECD, 2015). In the banking sector, corporate governance assumes heightened importance because banks operate with high leverage, manage public funds, and are exposed to significant financial, operational, and regulatory risks. In Nigeria, Deposit Money Banks (DMBs) play a pivotal role in financial intermediation, credit allocation, and overall economic stability; thus, weaknesses in governance structures can amplify systemic risk and undermine financial performance.

Evidence from Nigeria's banking history underscores the consequences of poor corporate governance and inadequate risk oversight. The 2009 banking crisis revealed severe governance failures, including weak boards, ineffective audit committees, excessive risk-taking, and poor internal controls, which ultimately eroded shareholders' value and public confidence in the banking system (Sanusi, 2010). In response, regulatory authorities such as the Central Bank of Nigeria (CBN) introduced reforms aimed at strengthening corporate governance frameworks, enhancing board effectiveness, and improving risk management practices. Despite these reforms, governance-related risks remain a concern, as banks continue to operate in a volatile macroeconomic environment characterized by credit risk, market risk, regulatory pressure, and corporate misconduct.

Board gender diversity, commonly measured by the proportion of female directors on the board, has also gained prominence in corporate governance discourse. Gender-diverse boards are often associated with improved ethical standards, enhanced risk aversion, and stronger monitoring functions, which may reduce governance risk and improve firm performance (Adams & Ferreira, 2009). In the banking sector, where risk-taking behaviour has direct implications for profitability and stability, gender diversity may influence managerial decisions that affect Return on Equity (ROE).

Audit committees constitute critical governance mechanism for mitigating corporate governance risk in banks. They are responsible for overseeing financial reporting, internal control systems, compliance with regulations, and interaction with external auditors. The size of the audit committee may influence its effectiveness in discharging these responsibilities. While a larger audit committee may enhance expertise and monitoring capacity, an excessively large committee may face inefficiencies and diluted accountability. Empirical studies, such as Uwuigbe, Uwuigbe, and Bernard (2012), indicate that effective audit committees contribute to improved financial reporting quality and reduced governance risk, which can positively influence shareholders' returns, though evidence remains inconclusive.

Firm performance in banking studies is often measured using accounting-based indicators, with Return on Equity (ROE) being particularly relevant from the shareholders' perspective. ROE measures the efficiency with which banks utilize shareholders' funds to generate profit and reflects the combined effect of profitability, leverage, and risk management. In the Nigerian banking context, where governance risk can significantly affect earnings stability and capital adequacy, examining the relationship between corporate governance mechanisms and ROE is crucial. Empirical findings remain inconsistent. Given these mixed findings and the persistent governance challenges in Nigeria's banking sector, there remains a need for empirical investigation into how corporate governance risk, proxied by board size risk, board gender diversity risk, and audit committee size risk, affects the Return on Equity of Deposit Money Banks in Nigeria.

The Nigerian banking sector has experienced recurring challenges including governance lapses, insider-related abuses, weak risk management, and episodes of financial distress. The Central Bank of Nigeria (CBN) has consistently linked some of these failures to deficiencies in corporate governance structures (Sanusi, 2010). Although various reforms and codes of corporate governance have been introduced such as the CBN Code of Corporate Governance (2014) and the Nigerian Code of Corporate Governance (2018), questions still remain about the effectiveness of these governance mechanisms in driving financial performance of Deposit Money Banks (DMBs).

Specifically, the impact of board size on performance has produced inconsistent results. A 2025 study by Obalemo revealed that board size has **a** positive and significant effect on banks' financial performance (ROE), while board diversity is also significantly associated with improved performance (Obalemo, 2025). In contrast, Macaulay, Adekoya, and Onyeiwu (2025) found that while audit committee size has a positive and significant effect on ROE, board size exerts a negative and significant effect**,** and board composition (including gender diversity) showed no significant impact. Thus, it is critical to evaluate the effect of corporate governance risk on return on equity of DMB in Nigeria.

1.1. Objectives of the Study

The main objective of the study is to evaluate the effect of corporate governance risk on return on equity of DMB in Nigeria. The specific objectives are:

1. To examine the effect of board size risk on the return on equity.
2. To assess the effect of board gender diversity risk on return on equity.
3. To evaluate the effect of audit committee size risk on return on equity.

1.2. Research Question

In line with the objective of the study, the following research questions are formulated.

1. What is the effect of board size risk on return on equity?
2. To what extent has board gender diversity risk affect return on equity?
3. What is the effect of audit committee size risk on return on equity?

1.3. Research Hypotheses

The following null hypotheses were developed and tested:
$H0_1$: There is no significant effect of Board size risk on the return on equity.
$H0_2$: Board gender diversity risk has no significant effect on return on equity.
$H0_3$: Audit committee size risk has no significant effect on return on equity.

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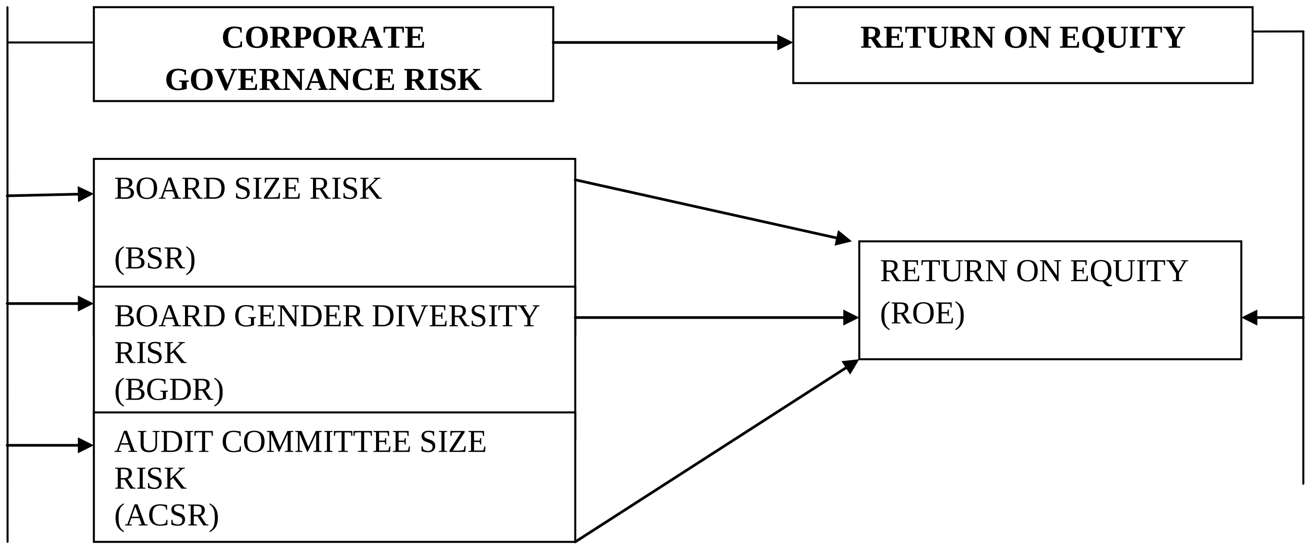
2.0. REVIEW OF RELATED LITERATURE

2.1. Conceptual Review

This section presents the conceptual foundation of the study by examining the key corporate governance risk mechanisms which are board size risk, board gender diversity risk, and audit committee size risk and how they relate to firm return on equity (ROE).



Source: Relationship between the dependent and independent variables as adopted by the researcher

Operational Conceptual Framework

Corporate Governance

Corporate governance refers to the framework of rules, relationships, systems, and processes through which authority within organizations is exercised and controlled. It provides the structure for setting company objectives, determining the means of attaining those objectives, and monitoring performance. The concept emerged as a response to corporate scandals and financial crises that exposed weaknesses in oversight, accountability, and ethical standards within corporations.

According to the Organization for Economic Cooperation and Development (OECD, 2023)**,** corporate governance involves "a set of relationships between a company's management, its board, shareholders, and other stakeholders, and provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined." This definition emphasizes accountability and transparency as essential principles that enhance investor confidence and corporate sustainability.

Okoye and Ofoegbu (2021**)** define corporate governance as the "set of internal and external mechanisms put in place to ensure that corporate managers act in the best interest of shareholders and other stakeholders." Similarly, Omodero (2022) notes that corporate governance encompasses the structures and processes that determine how corporate objectives are achieved, performance is monitored, and risk is managed.

Moreover, Adegbie and Adeniran (2023) view corporate governance as a strategic tool for ensuring accountability, transparency, and fairness in the management of a company's resources, thereby improving financial performance and stakeholder trust. Nwokolo and Olayinka (2024**)** further emphasize that effective corporate governance promotes ethical decision-making, reduces agency conflicts, and enhances firm value, particularly in developing economies like Nigeria where institutional frameworks are still evolving.

Board Size Risk

Board size is one of the most widely examined dimensions of corporate governance and refers to the total number of directors serving on a company's board. It represents a critical aspect of board structure that influences strategic oversight, managerial monitoring, and accountability to shareholders. Board size risk arises when the number of directors on the board either constrains effective supervision or creates coordination and decision-making inefficiencies, thereby increasing governance risk and potentially impairing firm performance (Fodio, Ibikunle, & Oba, 2022).

Uwuigbe, Uwuigbe, and Daramola (2020) argue that board size plays a significant role in shaping the financial performance of Deposit Money Banks (DMBs) in Nigeria. Their findings indicate that moderately sized boards enhance governance effectiveness by combining diverse expertise with efficient monitoring, thereby reducing governance risk. However, excessively large boards were found to suffer from communication lapses, delayed decision-making, and bureaucratic rigidity, which heighten governance risk and weaken performance outcomes.

These divergent findings suggest that board size risk is largely context-dependent. The optimal board size varies across firms and sectors, influenced by organizational complexity, ownership structure, and regulatory constraints. In developing economies such as Nigeria, where corporate governance frameworks are still evolving, identifying an appropriate board size is essential for minimizing governance risk while ensuring effective oversight and efficient decision-making within Deposit Money Banks (Nwokolo & Olayinka, 2024).

Board Gender Diversity Risk

Board gender diversity is a prominent aspect of corporate governance and refers to the representation of both male and female directors on a company's board. It reflects the gender composition of the board and is commonly measured by the proportion of female directors relative to total board membership. Board gender diversity risk arises when inadequate or ineffective gender representation limits diverse perspectives, weakens monitoring effectiveness, and heightens governance-related risks, particularly in strategic decision-making and risk oversight (Adams & Ferreira, 2009).

Empirical evidence from Nigeria presents mixed findings regarding board gender diversity risk and bank performance. Uwuigbe, Uwuigbe, and Bernard (2018) found that board gender diversity had a positive and significant effect on the financial performance of listed Deposit Money Banks (DMBs), suggesting that female board representation enhances monitoring quality and reduces governance-related risks. Conversely, Afolabi and Dare (2022) reported an insignificant relationship between board gender diversity and bank performance, arguing that tokenism and weak board influence of female directors may limit their effectiveness in risk reduction.

In developing economies like Nigeria, where gender inclusion at the board level is still evolving, strengthening the role of female directors is essential for minimizing governance risk and enhancing shareholders' returns. Consequently, board gender diversity remains a critical governance variable in assessing risk and performance dynamics within Deposit Money Banks.

Audit Committee Size Risk

Audit committee size is a key component of corporate governance and refers to the total number of directors serving on a firm's audit committee. The audit committee is primarily responsible for overseeing financial reporting quality, internal control systems, risk management processes, and compliance with regulatory requirements. Audit committee size risk arises when the number of committee members is either insufficient to provide effective oversight or excessively large, leading to coordination problems and reduced accountability, thereby increasing governance-related risks (Klein, 2002).

Empirical findings on audit committee size risk and bank performance in Nigeria remain mixed. Siyanbola, Adegboye, and Fagbemi (2019) found a positive and significant relationship between audit committee size and financial performance of listed Deposit Money Banks, suggesting that larger committees enhance monitoring capacity and reduce governance risk. In contrast, Lawal and Garba (2021) reported a negative association between audit committee size and bank profitability, implying that increasing committee membership beyond an optimal threshold may reduce efficiency and weaken financial outcomes.

These inconsistent results suggest that audit committee size risk is highly context-dependent and influenced by factors such as regulatory requirements, committee expertise, and organizational complexity. In developing economies like Nigeria, where the effectiveness of governance mechanisms is still evolving, maintaining an optimal audit committee size is critical for minimizing governance risk and enhancing shareholders' returns, particularly in Deposit Money Banks operating under stringent regulatory and risk-sensitive environments.

Return on Equity

Return on Equity (ROE) is a widely used accounting-based measure of financial performance that evaluates a firm's ability to generate profit from shareholders' invested funds. It is calculated as net profit after tax divided by shareholders' equity and reflects the efficiency with which management utilizes owners' capital to create value. In the banking sector, ROE is particularly important because it captures profitability relative to equity financing while incorporating the effects of leverage, risk-taking, and managerial efficiency (Ross, Westerfield, & Jordan, 2019).

ROE is considered a critical indicator of shareholder wealth maximization and managerial effectiveness. According to Brigham and Ehrhardt (2017), a higher ROE signals better utilization of equity capital and improved profitability, whereas a declining ROE may indicate inefficiencies, excessive risk exposure, or weak governance structures. In banks, ROE is influenced by credit risk management, capital adequacy, operational efficiency, and regulatory compliance, making it a comprehensive measure of financial performance.

Given its relevance to shareholders and regulators, ROE remains an appropriate and widely accepted measure for assessing the financial performance of Deposit Money Banks in Nigeria. Examining ROE in relation to corporate governance risks provides valuable insights into how governance structures influence profitability, risk management, and sustainable value creation in the banking sector.

2.2. Theoretical Framework

The following theories are reviewed in the study

Agency Theory

Agency Theory, developed by Michael C. Jensen and William H. Meckling (1976), explains the relationship between principals (shareholders) and agents (managers) in a firm. The theory posits that while shareholders delegate decision-making authority to managers, conflicts of interest often arise because managers may pursue personal goals rather than maximizing shareholder wealth. This conflict leads to agency costs, such as excessive executive compensation, misuse of resources, and poor investment decisions. In this context, corporate governance mechanisms are essential in aligning managerial actions with shareholders' interests (Fama & Jensen, 1983). An effective and well-structured board acts as a monitoring tool to reduce opportunistic behaviour by management, ensuring transparency, accountability, and improved financial performance (Egbunike & Okoro, 2022).

For instance, a balanced board size can enhance managerial supervision and decision-making efficiency, while gender diversity may bring broader perspectives and ethical sensitivity to board deliberations. Similarly, an effective audit committee ensures accurate financial reporting and risk management, thereby strengthening organizational performance (Olayinka & Nwokolo, 2024).

This study is anchored on Agency Theory (Jensen & Meckling, 1976)**.** The choice of Agency Theory is justified by its strong explanatory power in analysing governance risk and return on equity of Deposit Money Banks. The theory provides a robust framework for understanding how corporate governance mechanisms, such as board size, board gender diversity, and audit committee size, serve as monitoring tools to reduce agency conflicts, limit excessive managerial risk-taking, and enhance Return on Equity (ROE). Given the separation of ownership and control and the heightened risk profile of banks in Nigeria, Agency Theory offers the most appropriate theoretical foundation for this study.

2.2. Empirical Review

Macaulay, Adekoya, and Onyeiwu (2025)**,** in their paper "Effect of Corporate Governance on Financial Performance: A Study of Selected Banking Financial Institutions in Nigeria," utilized multiple regression analysis on annual data from 2013 to 2022. Their results showed that audit committee size and board gender diversity were significantly associated with higher profitability (ROA), whereas board size showed a weak but positive relationship.

Agada and Lazarus (2025)**,** in their work "Audit Committee Attributes and Financial Performance: Evidence from Selected Deposit Money Banks in Nigeria," used panel regression on data from 10 banks between 2011 and 2023. The study found that audit committee independence and expertise had significant positive impacts on ROA, indicating that well-structured audit committees strengthen performance monitoring.

Eze and Nnadi (2025)**,** in their research "Board Diversity and Performance of Nigerian Banks," examined 12 DMBs between 2013 and 2022 using generalized least squares (GLS) regression. Their results showed that gender diversity had a significant positive impact on ROA, implying that inclusion of women in leadership positions enhances innovation and financial outcomes. Okoro and Eze (2024)**,** in their research "Corporate Governance Attributes and Profitability of Nigerian Deposit Money Banks," utilized fixed effect regression on 14 DMBs between 2012 and 2022. The study found that audit committee size and meeting frequency significantly influenced ROA, while board gender diversity showed a marginal positive relationship with performance.

Adewuyi and Akinola (2023)**,** in their paper *"Board Composition and Financial Performance of Deposit Money Banks in Nigeria,"* used multiple regression on 12 banks from 2010 to 2020. Their findings revealed a positive relationship between board size and financial performance, while gender diversity was not statistically significant. Egbunike and Okoro (2022)**,** in their study titled *"*Corporate Governance and Financial Performance of Deposit Money Banks in Nigeria," employed panel data regression on 10 listed banks between 2010 and 2020. Their findings revealed that board size and audit committee size had a significant positive effect on return on assets (ROA), while board gender diversity had an insignificant effect, implying that board structure contributes differently to bank performance.

Uwuigbe, Uwuigbe, and Daramola (2020)**,** in their study "Corporate Governance and Financial Performance of Listed Banks in Nigeria," employed correlation and regression analysis using data from 2009 to 2018. The study established that corporate governance practices, including board independence and audit committee effectiveness, positively affect financial performance. A review of existing literature reveals that corporate governance mechanisms such as board size, board gender diversity, and audit committee size have received growing attention in explaining variations in firms' financial performance.

However, findings across prior studies remain largely inconclusive and context-dependent. While some studies (e.g., Abiola & Olaoye, 2022; Olayinka & Oba, 2023) reported a positive and significant influence of board size and gender diversity on financial performance, others (e.g., Okafor & Eze, 2021; Musa & Ibrahim, 2023) found insignificant or even negative relationships. Moreover, most of these studies either focused on non-financial firms **or** pooled all listed firms together**,** thereby overlooking the unique regulatory and operational dynamics of Deposit Money Banks (DMBs) in Nigeria, where corporate governance practices are critical for financial stability and investor confidence.

Additionally, few recent studies have simultaneously examined the combined effects of board size, gender diversity, and audit committee size on financial performance measured by Return on Assets (ROA) using recent secondary data and robust regression analysis such as OLS in SPSS**.** Hence, this study fills the gap by empirically evaluating the effect of corporate governance risk on return on equity (ROE) of Deposit Money Banks in Nigeria using secondary data (2015–2024) and providing fresh insights into governance risk–performance dynamics within the sector.

3.0. METHODOLOGY

3.1. Research Design

This study adopts an ex-post facto research design**,** which is suitable for studies that examine existing data to determine relationships between variables without manipulating them. The design is appropriate because the data on corporate governance risk indicators (board size risk, board gender diversity risk, and audit committee size risk) and (return on equity) have already been published in the annual reports of Deposit Money Banks (DMBs) in Nigeria.

3.2. Sources of Data Collection

The study utilized secondary data in its development and were sourced from the financial statement of the banks in question First bank, UBA ,GTB, Access and Zenith bank plc for the period of 10 years (2015-2024). The data was based on the following variables, board size risk, board gender diversity risk, and audit committee size risk, Return on equity by the bank in question.

3.3. Method of Data Analysis

The study employed panel data analytical techniques, combining both cross-sectional (banks) and time-series (years) dimensions. Data analysis was conducted using E-Views statistical software**.** The analytical procedure involved descriptive statistics to summarize the characteristics of the variables, correlation analysis to examine the degree of association among variables, and panel regression techniques to estimate the effect of corporate governance risk variables on Return on Equity.

Specifically, the study estimated Pooled Ordinary Least Squares (OLS)**,** Fixed Effects Model (FEM)**,** and Random Effects Model (REM)**.** The Hausman specification test was subsequently employed to determine the most appropriate estimator between the fixed and random effects models

Model Specification

The models are thus: ROE = F (BSR, BGDR, ACSR) -----------1

Where: ROE = Return on equity; BSR= Board size risk; BGDR = Board gender diversity risk; ACSR = Audit committee size risk; The model is specified econometrically as

$ROE = a_0 + \alpha_1 BSR + \alpha_2 BGDR + \alpha_3 ACSR$ ------------------1

Where: a_0 = The constant or intercept of the model, α_1 = Coefficient of the independent variable (BSR), α_2 = Coefficient of the independent variable (BGDR); α_3 = Coefficient of the independent variable (ACSR).

Test of significance

To test for the significance of the collective effect of the independent variables on each of the proxies of dependent variable in the model, F-statistics was employed; also the coefficient of determination (R^2) was used in ascertaining the extent of the effect or influence of the independent variables on the dependent variable.

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Decision Rule

The decision rule for hypothesis testing was based on the probability value (p-value) as follows:

- If p-value ≤ 0.05, the null hypothesis is rejected, indicating a statistically significant relationship between the explanatory variable and Return on Equity.
- If p-value > 0.05, the null hypothesis is not rejected, indicating that the variable does not have a statistically significant effect on Return on Equity.

For model selection, if the Hausman test p-value is less than 0.05, the Fixed Effects Model is adopted; otherwise, the Random Effects Model **is** considered more appropriate.

4.0. PRESENTATION PF RESULTS AND DISCUSSION

4.1. Presentation of Results

This section places emphasis on the need to estimate, analyze and interpret the model already formulated. In addition, the hypotheses are also tested .Data collected on the proxies of the dependent and the independent variable. The Board size risk (BSR), Board gender diversity risk (BGDR), Audit committee size risk (ACSR)are proxies for Corporate governance risk which are the independent variables while the Return on equity (ROE) are the dependent variables.

Data on Board size risk (BSR), Board gender diversity risk (BGDR), Audit committee size risk (ACSR), Return on equity (ROE) of First Bank Nigeria Plc for A Period Covering (2015-2024)

BANK	YEAR	BOARD SIZE %	BOARD GENDER DIVERSITY	AUDIT COMMITTEE SIZE	ROE %
FIRST	2015	15	13	6	4.2
FIRST	2016	15	20	6	2.1
FIRST	2017	16	20	6	5.8
FIRST	2018	16	25	7	7.4
FIRST	2019	17	25	7	9.6
FIRST	2020	17	27	7	8.2
FIRST	2021	18	28	7	12.5
FIRST	2022	18	30	8	15.7
FIRST	2023	19	32	8	21.9
FIRST	2024	19	33	8	24.1

Source: First bank Nigeria Plc (2015-2024)

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Data on Board size risk (BSR), Board gender diversity risk (BGDR), Audit committee size risk (ACSR), Return on equity (ROE) of UBA Plc for a Period Covering (2015-2024)

Bank	Year	Board Size	Board Gender Diversity	Audit Committee Size	ROE %
UBA	2015	16	0.25	6	0.35
UBA	2016	19	0.16	6	0.35
UBA	2017	19	0.16	6	0.36
UBA	2018	19	0.21	6	0.35
UBA	2019	19	0.21	6	0.54
UBA	2020	16	0.25	6	0.49
UBA	2021	16	0.31	5	0.51
UBA	2022	15	0.47	5	1.15
UBA	2023	14	0.50	5	5.07
UBA	2024	15	0.47	6	4.88

Source: UBA Nigeria Plc (2015-2024).

Data on Board size risk (BSR), Board gender diversity risk (BGDR), Audit committee size risk (ACSR), Return on equity (ROE) of GTB Plc for A Period Covering (2015-2024)

Bank	Year	Board Size	Board Gender Diversity	Audit Committee Size	ROE %
GTB	2015	14	0.18	6	28.5
GTB	2016	14	0.20	6	31.2
GTB	2017	15	0.20	6	33.8
GTB	2018	15	0.22	6	36.4
GTB	2019	15	0.23	6	38.9
GTB	2020	16	0.25	7	34.6
GTB	2021	16	0.25	7	41.2
GTB	2022	16	0.27	7	49.8
GTB	2023	17	0.28	7	55.6
GTB	2024	17	0.30	7	57.0

Source: GTB Nigeria Plc (2015-2024)

Data on Board size risk (BSR), Board gender diversity risk (BGDR), Audit committee size risk (ACSR), Return on equity (ROE) of Access bank Plc for a Period Covering (2015-2024)

BANK	YEAR	BOARD SIZE	BOARD GENDER DIVERSITY	AUDIT COMMITTEE SIZE	ROE %
Access	2015	15	0.22	6	14.8
Access	2016	15	0.25	6	17.3
Access	2017	16	0.27	6	19.1
Access	2018	17	0.30	7	21.4
Access	2019	18	0.32	7	23.8
Access	2020	18	0.35	7	18.9
Access	2021	19	0.38	7	25.6
Access	2022	19	0.40	8	29.4
Access	2023	20	0.42	8	37.8
Access	2024	20	0.45	8	39.6

Source: Access bank Nigeria Plc (2015-2024)

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Data on Board size (BS), Board gender diversity (BGD), Audit committee size (ACS), Return on asset (ROE) of Zenith bank Plc for a Period Covering (2015-2024)

BANK	YEAR	BOARD SIZE	BOARD GENDER DIVERSITY	AUDIT COMMITTEE SIZE	ROE %
ZENITH	2015	14	0.35	6	0.20
ZENITH	2016	16	0.31	6	0.19
ZENITH	2017	19	0.16	6	0.35
ZENITH	2018	16	0.25	6	0.33
ZENITH	2019	19	0.21	6	0.34
ZENITH	2020	16	0.25	6	0.31
ZENITH	2021	16	0.35	5	0.27
ZENITH	2022	15	0.31	5	0.21
ZENITH	2023	15	0.21	6	0.41
ZENITH	2024	15	0.47	6	0.41

Source: Zenith bank Nigeria Plc (2015-2024)

Data Analysis and interpretation

The table below shows the summarized result of linear regression analysis of our data for the study.

Descriptive statistics

Statistics	Board Size	Board Gender Diversity	Audit Committee Size	ROE
MEAN	16.62000	5.292000	6.400000	15.66540
MINIMUM	14.00000	0.160000	5.000000	0.190000
MAXIMUM	20.00000	33.00000	8.000000	57.00000
STANDARD DEVIATION	1.759986	10.44758	0.832993	16.76892

Presents the descriptive statistics of board size (BS), board gender diversity (BGD), audit committee size (ACS), and return on equity (ROE) for the sampled firms. The mean board size is 16.62 members**,** indicating that, on average, firms maintain relatively large boards. The minimum and maximum values of 14 and 20 members respectively suggest limited variation in board size across firms. This is further confirmed by a low standard deviation of 1.76**,** implying that board size is fairly stable among the sampled firms.

Board gender diversity has a mean value of 5.29, indicating that female representation on boards is generally low. The wide gap between the minimum value of 0.16 and the maximum of 33.00**,** coupled with a high standard deviation of 10.45, suggests significant disparities in gender inclusion across firms. This indicates that while some firms have made notable progress in gender diversity, many others still have minimal female representation at the board level. The audit committee size records a mean of 6.4 members**,** with values ranging between 5 and 8 members. The relatively low standard deviation of 0.83 shows little dispersion, implying that firms largely comply with regulatory or governance guidelines regarding audit committee composition.

Regarding firm performance, return on equity (ROE) has an average value of 15.67**%**, indicating moderate profitability among the firms. However, the wide range, from a minimum of 0.19% to a maximum of 57**%**—and a high standard deviation of 16.77 reveal substantial variation in profitability across firms. This suggests that while some firms generate strong returns for shareholders, others perform poorly. Overall, the descriptive statistics indicate stability in board size and audit committee size, considerable disparity in board gender diversity, and significant variation in firm performance among the sampled firms.

Regression Analyses

The regression model of this study as stated in section 3 were analysed using the Panel least square.

Panel regression results (Pooled OLS, Fixed effects and Random effects)

@ 5% level of significance	Pooled OLS	Fixed effects	Random effects
(Constant)b_0	-44.4(0.0089)	-33.23(0.0003)	-35.72(0.0004)
(BSR)b_1	-4.22(0.0007)	0.52(0.4190)	0.31(0.6250)
(BGDR)b_2	-0.76(0.0001)	0.19(0.5352)	-0.04(0.8688)
(ACSR)	20.96(0.0000)	6.11(0.0018)	7.25(0.0002)

Source: Extracts from Appendix

Presents the panel regression estimates examining the effect of board size (BSR), board gender diversity (BGDR), and audit committee size (ACSR) on return on equity (ROE) using Pooled Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE) models at the 5% level of significance.

Under the Pooled OLS model**,** board size (BSR) has a negative and statistically significant effect on ROE ($\beta = -4.22$, $p < 0.05$), indicating that an increase in board size reduces firm performance. Similarly, board gender diversity (BGDR) also shows **a** negative and significant relationship with ROE ($\beta = -0.76$, $p < 0.05$). In contrast, audit committee size (ACSR) exhibits a positive and highly significant effect on ROE ($\beta = 20.96$, $p < 0.05$), suggesting that larger audit committees enhance firm performance. However, the pooled OLS model ignores firm-specific heterogeneity, which may bias the estimates.

In the Fixed Effects model, board size (BSR) becomes positive but statistically insignificant ($\beta = 0.52$, $p > 0.05$), indicating that changes in board size within firms do not significantly influence ROE. Board gender diversity (BGDR) also remains positive but insignificant ($\beta = 0.19$, $p > 0.05$), implying that variations in female board representation within firms do not have a significant impact on performance. Notably, audit committee size (ACSR) retains a positive and statistically significant effect on ROE ($\beta = 6.11$, $p < 0.05$), demonstrating robustness across model specifications.

Similarly, under the Random Effects model, board size (BSR) and board gender diversity (BGDR) are statistically insignificant, with coefficients of 0.31 and –0.04 respectively ($p > 0.05$). Audit committee size (ACSR), however, continues to exert a positive and significant influence on ROE ($\beta = 7.25$, $p < 0.05$). This indicates that audit committee effectiveness plays a critical role in enhancing firm performance regardless of unobserved firm-specific effects. Overall, the results across the three models suggest that while board size and board gender diversity do not have a consistent or significant impact on ROE once firm heterogeneity is controlled for**,** audit committee size exerts a strong, positive, and robust effect on firm performance. This underscores the importance of audit committee strength in corporate governance

Hausman Specification test

Test	chi	df	Prob.	Decision
Hausman	8.83	3	0.0316	Fixed effects

This table presents the result of the Hausman specification test conducted to determine the appropriate panel regression model between the fixed effects and random effects estimators. The Hausman test evaluates whether the individual effects are correlated with the explanatory variables. The result shows a chi-square (χ^2) value of 8.83 with 3 degrees of freedom and an associated probability value of 0.0316**.** Since the probability value is less than the 5% level of significance, the null hypothesis of the Hausman test, which states that the random effects model is appropriate—is rejected.

Coefficient (Fixed effect model)

5% level of significant	**Model (ROE)**
Constant	-33.23
BSR	0.52
BGDR	0.19
ACSR	6.11
Durbin	1.8099

This table presents the coefficient estimates of the fixed effects regression model examining the effect of corporate governance risk variables on Return on Equity (ROE) of Deposit Money Banks in Nigeria at the 5% level of significance. The constant term (-33.23**)** indicates the expected level of ROE when all the explanatory variables, board size risk (BSR), board gender diversity risk (BGDR), and audit committee size risk (ACSR), are held constant. The negative constant suggests that in the absence of effective corporate governance structures, banks may experience poor profitability, highlighting the importance of governance mechanisms in enhancing financial performance.

The coefficient of board size risk (BSR) **is** 0.52, implying a positive relationship between board size risk and ROE. This indicates that an increase in board size risk is associated with a marginal increase in return on equity. However, when considered alongside its probability value from the fixed effects model (p = 0.4190), the effect is statistically insignificant, suggesting that variations in board size risk do not exert a meaningful influence on the profitability of DMBs in Nigeria.

Similarly, board gender diversity risk (BGDR) has a positive coefficient of 0.19, indicating that increased female representation on bank boards is associated with a slight improvement in ROE. Nonetheless, this relationship is not statistically significant at the 5% level (p = 0.5352), implying that board gender diversity risk does not significantly affect the return on equity of Nigerian banks during the study period. This may be attributed to institutional and cultural factors that limit the influence of gender diversity on strategic decision-making in the banking sector.

In contrast, **audit committee size risk (ACSR) exhibits a strong positive coefficient of Test for significance results (Test of hypotheses)**

@ 5% level of significance	**Model 1 (ROE)**		
	HYP 1 (BSR)	**HYP 2 (BGDR)**	**HYP 3 (ACSR)**
P-Value	0.4190	0.5352	0.0018
Remarks	INSIG	INSIG	SIG

Source: *Extracts from appendix*

Test of Hypotheses

H_{01}: There is no significant effect of Board size risk on the return on equity (ROE)
$H_{02:}$ Board gender diversity risk has no significant effect on return on equity (ROE).
H_{03}: Audit committee size risk has no significant effect on return on equity (ROE)

4.2. Discussion of Findings

This study examined the effect of corporate governance risk on the return on equity (ROE) of deposit money banks (DMBs) in Nigeria, using board size risk, board gender diversity risk, and audit committee size risk as proxies for corporate governance. The findings reveal that board size risk has a positive but statistically insignificant effect on the return on equity of Nigerian deposit money banks. This suggests that although an increase in board size may marginally enhance profitability through improved access to diverse skills and expertise, such improvements are not strong enough to significantly influence shareholders' returns. This result implies that merely increasing or adjusting board size does not necessarily translate into improved financial performance unless accompanied by effective coordination and governance efficiency.

The study also found that board gender diversity risk has a positive but insignificant effect on ROE. This indicates that while female representation on boards may promote ethical oversight, inclusiveness, and improved stakeholder confidence, it does not exert a statistically meaningful influence on shareholders' returns in Nigerian deposit money banks during the period under review.

This result is consistent with the findings of Ntim (2015) and Okoye and Ofoegbu (2021), who argued that the impact of gender diversity on firm performance in emerging economies may be constrained by cultural, institutional, and structural factors. Likewise, Adewale and Ajibola (2023**)** reported that gender diversity does not significantly affect profitability in regulated sectors such as banking. However, the finding contradicts Adams and Ferreira (2009)**,** who documented a significant positive relationship between gender-diverse boards and firm performance in developed economies. This disparity underscores the contextual nature of governance mechanisms across jurisdictions.

In contrast, audit committee size risk was found to have a positive and statistically significant effect on return on equity. This suggests that stronger and adequately structured audit committees enhance financial performance by improving oversight, strengthening internal control systems, and reducing agency conflicts. An effective audit committee increases the credibility of financial reporting, thereby boosting investor confidence and profitability. The result also aligns with Agency Theory, which posits that effective monitoring mechanisms mitigate managerial opportunism and enhance shareholder value.

5.0. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The overall results of the analysis in the preceding chapter of this study provide the following findings:

1. There is positive and insignificant effect of Board size risk on return on equity.
2. The Board gender diversity risk has positive but insignificant effect on return on equity.
3. There is a significant positive effect of Audit committee size risk on return on equity.

Based on the major findings, the following conclusions were mad.: Corporate governance risk has an insignificant positive effect on return on asset of Deposit money banks in Nigeria. The implication is that the combined effect of corporate governance risk in this research is statistically insignificant in explaining the return on equity of DMBs in Nigeria.

5.2. Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

1. Given the significant positive effect of audit committee size risk on ROE, banks should ensure that audit committees are composed of members with relevant financial expertise, independence, and regulatory compliance capacity. Regulatory authorities such as the Central Bank of Nigeria (CBN) should also enforce strict guidelines on audit committee composition and effectiveness.

2. Since board size risk was found to have a positive but insignificant effect on ROE, banks should avoid excessive expansion of board membership. Instead, emphasis should be placed on achieving an optimal board size that enhances effective monitoring and decision-making without creating coordination inefficiencies. Board appointments should be based on competence and strategic relevance rather than numerical increase.

3. Although board gender diversity risk did not significantly influence ROE, banks should not disregard gender inclusiveness. Rather than focusing solely on numerical representation, banks should create enabling environments that allow female directors to actively participate in strategic decision-making.

4. Regulators should shift attention from formal compliance with governance codes to the quality and effectiveness of governance mechanisms, particularly audit committees.

Conflict of Interest
The authors declare that no conflict of interest exist in this manuscript.

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