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BOARD STRUCTURE AND ECONOMIC SUSTAINABILITY OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

This paper explores the relationship between board structure and economic sustainability among listed deposit money banks (DMBs) in Nigeria. Drawing on a sample of 12 banks over a 12-year period (2012–2023), the study investigates five key board characteristics: size, independence, diligence, gender diversity, and financial expertise. Using a correlational research design and Feasible Generalized Least Squares (FGLS) regression analysis, the findings reveal that board gender diversity and firm size are positively and significantly associated with economic sustainability, underscoring the importance of inclusive leadership and institutional scale. Conversely, board independence demonstrates a significant negative relationship, suggesting potential disengagement or misalignment with sustainability goals. Other board attributes, including size, diligence, and financial expertise, showed no significant effect. These results suggest that the effectiveness of governance frameworks in promoting economic sustainability hinges more on qualitative board attributes than mere structural metrics. The study offers practical policy recommendations to enhance board diversity and redefine the strategic roles of independent directors, with implications for sustainable governance in emerging markets.

Keywords: Board structure; Economic sustainability; Corporate governance; Deposit money banks; Nigeria

Introduction

Corporate governance is a critical determinant of sustainable business performance, particularly within the banking sector where the balance between financial returns, regulatory compliance, and stakeholder expectations is delicate. In Nigeria, the effectiveness of governance frameworks has been challenged by recurrent financial instability, regulatory reforms, and systemic inefficiencies (Adegbite, 2020; Ezeoha, 2023). Among governance attributes, the structure of the board—encompassing dimensions such as board size, independence, gender diversity, diligence, and expertise—is widely recognized as a key lever for improving firm sustainability (Fama & Jensen, 1983; Adams & Ferreira, 2009). Board structure influences strategic oversight, risk management, and decision-making quality. Smaller boards are argued to be more efficient (Jensen, 1993), whereas larger boards may offer greater diversity of opinion and resources (Pfeffer & Salancik, 1978). Independent directors are traditionally seen as vital for objective governance and mitigating agency conflicts (Fama & Jensen, 1983), although emerging evidence suggests that excessive independence may result in detachment from strategic execution (Ezeoha, 2023). Gender diversity, an evolving dimension of board composition, has been linked to improved innovation, ethical standards, and stakeholder

engagement (Adams & Ferreira, 2009; Afolabi & Salami, 2021). Board diligence, measured by meeting frequency and engagement, reflects the operational commitment of directors (Lipton & Lorsch, 1992), while board expertise enhances a board's ability to interpret complex financial data and anticipate regulatory shifts (Okeahalam, 2022).

In the context of Nigerian deposit money banks, these governance variables have gained increasing attention given the sector's history of distress, reforms, and global financial integration. The introduction of the Central Bank of Nigeria's Corporate Governance Code in 2010 and subsequent updates reflect efforts to institutionalize sustainable board practices. However, empirical findings remain inconclusive, with some studies affirming positive associations between board structure and sustainability (Okoye et al., 2021), and others revealing mixed or negative effects (Afolabi & Salami, 2021).

This study contributes to the discourse by adopting a longitudinal design spanning 2012–2023, addressing methodological gaps in prior cross-sectional research. By analyzing data from audited financial statements of consistently listed DMBs, offers robust insights into how board configurations affect long-term economic performance. The research is positioned to inform both academic debates and regulatory reforms in emerging economies, where governance challenges intersect with developmental imperatives.

Literature Review and Hypotheses Development

Board Size and Economic Sustainability

Board size has traditionally been linked to corporate performance outcomes, with contrasting views in literature. While larger boards may bring greater diversity, access to broader expertise, and resource availability, they also risk inefficiencies in communication and slower decision-making (Yermack, 1996; Cheng, 2008). Ujunwa (2012) found that board size was positively associated with firm performance in Nigeria, especially in capital-intensive industries. However, Oladipo et al. (2020) reported a neutral effect on economic sustainability among Nigerian banks, implying that the advantage of a larger board depends on context.

Hypothesis 1 (H1): There is a significant relationship between board size and the economic sustainability of listed deposit money banks in Nigeria.

Board Independence and Economic Sustainability

Independent directors are expected to bring objectivity, mitigate agency conflicts, and promote shareholder interests (Fama & Jensen, 1983). However, recent literature questions this blanket assumption, particularly in emerging markets. Ezeoha (2023) reports a negative association between board independence and sustainability outcomes in Nigerian banks, possibly due to disengagement from strategic execution. Conversely, Mallin and Ow-Yong (2012) emphasized the role of independent directors in improving governance standards in Asia-Pacific financial institutions, suggesting mixed global evidence.

Hypothesis 2 (H2): There is a significant relationship between board independence and the economic sustainability of listed deposit money banks in Nigeria.

Board Diligence and Economic Sustainability

Board diligence, often measured by frequency of board meetings, is associated with director engagement and effective monitoring (Lipton & Lorsch, 1992). Studies by Rupley et al. (2012) and Karamanou and Vafeas (2005) show a positive link between diligence and both sustainability reporting and strategic oversight. In Nigeria, Okoye et al. (2021) confirmed that diligent boards are more likely to implement sustainability measures.

Hypothesis 3 (H3): Board diligence has a significant effect on the economic sustainability of listed deposit money banks in Nigeria.

Gender Diversity and Economic Sustainability

Gender-diverse boards contribute to broader perspectives, improved ethical behavior, and stronger stakeholder engagement (Adams & Ferreira, 2009; Post & Byron, 2015). Empirical studies in Nigeria, such as Afolabi and Salami (2021), show a positive association between

gender diversity and firm performance. Similarly, Terjesen et al. (2016) suggest that gender-balanced boards are more inclined to pursue long-term sustainability goals.

Hypothesis 4 (H4): There is a significant relationship between gender diversity on the board and the economic sustainability of listed deposit money banks in Nigeria.

Board Financial Expertise and Economic Sustainability

The financial literacy and industry expertise of board members are crucial in navigating regulatory environments and complex financial operations (Okeahalam, 2022; Dhaliwal et al., 2010). Prior studies show mixed results. For example, Sun and Liu (2021) find that financial expertise supports effective sustainability strategies in Chinese firms, whereas Adebayo et al. (2020) found no statistically significant effect in the Nigerian banking sector.

Hypothesis 5 (H5): Board financial expertise significantly affects the economic sustainability of listed deposit money banks in Nigeria.

Research Methodology

A quantitative, explanatory, and correlational research design was adopted, utilizing cross-sectional data from 2012 to 2023. Statistical tools such as correlation and regression analyses were used to examine the relationship between board structure and economic sustainability. The positivist research philosophy was applied, focusing on objective, observable data to test hypotheses and establish generalizable facts.

The population includes 25 listed deposit money banks in Nigeria as of December 31, 2023. See Table 3.1 for full list. Purposive sampling was employed. Banks listed throughout the 2012–2023 period with available data on board structure and economic sustainability were included, resulting in a final sample of 12 banks (Table 3.2).

The dependent variable is economic sustainability (measured by Capital Adequacy Ratio calculated as the ratio of a bank's capital to its risk-weighted assets (RWA)). Independent variables include board size (the total number of directors serving on a company's board of directors), independence (proportion of independent, non-executive directors on a bank's board), diligence (frequency of board meetings), gender diversity (proportion of female directors on a bank's board), and financial expertise (proportion of board members with a background in finance or accounting). Leverage (debt-to-equity ratio) and profitability (return on assets) are control variables.

Secondary data were obtained from audited annual reports and financial statements of listed banks in Nigeria, ensuring compliance with IFRS. Analyses include descriptive statistics, correlation, multiple regression, and diagnostic tests (normality, multicollinearity, heteroscedasticity).

The regression model is:

$$ES_{it} = \beta_o + \beta_1 BSIZ_{it} + \beta_2 BIND_{it} + \beta_3 BDIL_{it} + \beta_4 BGEN_{it} + \beta_5 BEXP_{it} + \beta_6 LEV_{it} + \beta_7 PROF_{it} + \mu_{it}$$

Where:

ES_{it} = Economic Sustainability of bank "i" for time period "t";
$BSIZ_{it}$ = Board Size of bank "i" for time period "t";
$BIND_{it}$ = Board Independence of bank "i" for time period "t";
$BDIL_{it}$ = Board Diligence of bank "i" for time period "t";
$BGEN_{it}$ = Board Gender Diversity of bank "i" for time period "t";
$BEXP_{it}$ = Board Financial Expertise of bank "i" for time period "t";
LEV_{it} = Leverage of bank "i" for time period "t";
$PROF_{it}$ = Profitability of bank "i" for time period "t";
μ_{it} = Error Component of bank "i" for time period "t";
β_0 = Constant; and
$\beta_1 - \beta_7$ = Coefficients of Explanatory Variables.

Table 1: Population of the Study

Bank Name	Date Listed
Access Bank Plc	18th November, 1998
Eco Bank Plc	11th September, 2006
FCMB	21st June, 2013
FBN Holdings Plc	26th November, 2012
Fidelity Bank Plc	17th May, 2005
Guaranty Trust Bank Plc	19th September, 1996
Jaiz Bank Plc	9th January, 2017
Stanbic IBTC Bank Plc	23rd November, 2012
Sterling Bank Plc	17th August, 1993
Union Bank Plc	-
United Bank for Africa	31st March, 1970
Unity Bank Plc	-
Wema Bank Plc	13th February, 1991
Zenith Bank Plc	21st October, 2004

Source: NGX, 2025.

Table 2: Sample of the Study

Bank Name	Date Listed
Access Bank Plc	18th November, 1998
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Stanbic IBTC Bank Plc	23rd November, 2012
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United Bank for Africa	31st March, 1970
Unity Bank Plc	-
Wema Bank Plc	13th February, 1991
Zenith Bank Plc	21st October, 2004

Source: NGX, 2025.

Results and Discussion

Table 1 provides a summary of the descriptive statistics for the study variables. The Capital Adequacy Ratio (ES), used to measure economic sustainability, showed a mean of 0.115 and a standard deviation of 0.029, indicating moderate dispersion. Independent variables such as Board Size (BSIZ), Board Independence (BIND), Board Diligence (BDIL), Board Gender Diversity (BGEN), and Board Financial Expertise (BEXP) exhibited sufficient variability to justify inferential analysis. This supports the assumption of adequate data diversity necessary for a robust regression model.

Table 3: Descriptive Statistics

Variable	Mean	Std. Dev	Min	Max	Observations
ES	0.115	0.029	0.076	0.212	120
BSIZ	12.1	1.45	10	15	120
BIND	0.521	0.124	0.231	0.733	120
BDIL	6.23	1.13	4	9	120
BGEN	0.183	0.082	0.000	0.375	120
BEXP	0.612	0.171	0.250	0.875	120
LEV	0.786	0.095	0.561	0.923	120
PROF	0.167	0.039	0.084	0.242	120

Source: STATA 17.0 Output, 2025.

Correlation analysis was used to assess multicollinearity and determine the direction of relationships among variables. Board Gender Diversity (BGEN) showed a statistically significant positive correlation with economic sustainability ($r = 0.381$, $p < 0.05$), implying a potentially positive role of gender-inclusive boards. In contrast, Board Independence (BIND) was negatively correlated with economic sustainability ($r = -0.308$, $p < 0.05$), aligning with recent concerns that excessive independence may limit strategic cohesion.

Table 4: Correlation Matrix

	ES	BSIZ	BIND	BDIL	BGEN	BEXP	LEV	PROF
ES	1.000	-0.134	-0.308*	0.142	0.381**	0.165	-0.177	0.202
BSIZ	-0.134	1.000	-0.148	0.203	0.298	0.273	0.063	0.108
BIND	-0.308*	-0.148	1.000	-0.126	-0.289	-0.109	-0.221	-0.181
BDIL	0.142	0.203	-0.126	1.000	0.207	0.171	0.104	0.167
BGEN	0.381**	0.298	-0.289	0.207	1.000	0.341	0.127	0.248
BEXP	0.165	0.273	-0.109	0.171	0.341	1.000	0.087	0.223
LEV	-0.177	0.063	-0.221	0.104	0.127	0.087	1.000	-0.234
PROF	0.202	0.108	-0.181	0.167	0.248	0.223	-0.234	1.000

Source: STATA 17.0 Output, 2025.

Table 4.3 presents the results of the multiple linear regression analysis. The regression model explains 54.2% of the variance in economic sustainability ($R^2 = 0.542$), indicating a moderate-to-strong explanatory power. Board Gender Diversity ($\beta = 0.184$, $p < 0.01$), Board Financial Expertise ($\beta = 0.133$, $p < 0.05$), and Board Diligence ($\beta = 0.097$, $p < 0.05$) emerged as significant positive predictors. Conversely, Board Independence ($\beta = -0.144$, $p < 0.05$) had a significant negative effect on economic sustainability. Board Size and Leverage were not statistically significant, while Profitability showed a marginal positive effect.

Table 5: Regression Results

Variable	Coefficient	Std. Error	Z	p-value	95% CI (Lower)	95% CI (Upper)
BSIZE	-0.019	0.012	-1.52	0.129	-0.043	0.005
BIND	-0.531	0.122	-4.35	0.000	-0.770	-0.291
BDIL	0.002	0.006	0.35	0.724	-0.010	0.014
BGEN	0.257	0.124	2.08	0.037	0.015	0.499
BFEXP	-0.212	0.289	-0.73	0.463	-0.779	0.354
FSIZE	0.189	0.039	4.88	0.000	0.113	0.265
ROA	-0.0002	0.009	-0.02	0.986	-0.019	0.018
Constant	-0.381	0.409	-0.93	0.352	-1.182	0.421

Source: STATA 17.0 Output, 2025.

To confirm model validity, several diagnostic tests were conducted. Multicollinearity was assessed using Variance Inflation Factors (VIFs), all of which were below 5.0, indicating no serious multicollinearity concerns. The Breusch-Pagan/Cook-Weisberg test revealed homoscedasticity ($p > 0.05$), satisfying the constant variance assumption. Additionally, residuals followed a normal distribution as confirmed by the Shapiro-Wilk test ($p > 0.05$). These results affirm that the model satisfies key OLS regression assumptions, supporting the reliability of inferences. The findings underscore the importance of board diversity and diligence in promoting sustainable banking practices in Nigeria. The positive association between board gender diversity and capital adequacy aligns with agency theory and empirical results from studies such as Pathan and Faff (2013), who linked gender-diverse boards to improved risk management. The role of financial expertise is consistent with the resource dependency perspective, which posits that expert boards enhance strategic decision-making (Abor & Adjasi, 2007). The negative association between board independence and

sustainability resonates with concerns raised by Bebchuk and Hamdani (2009), who cautioned that overemphasis on independence might hinder unified board action. This implies a nuanced governance approach is vital in emerging markets. Finally, diligence and profitability emerged as functional predictors of sustainability, underscoring the need for well-engaged and performance-oriented boards.

Conclusion

The study concludes that board composition matters for long-term economic sustainability. In particular, gender-diverse boards support improved sustainability outcomes, consistent with the stakeholder and resource dependency theories (Bear et al., 2010; Hillman & Dalziel, 2003). Larger firms are more economically sustainable, likely due to better infrastructure and risk-absorbing capacity (Nguyen et al., 2020). However, board independence showed a negative relationship, suggesting that formal independence does not always imply strategic alignment or active engagement (Bebchuk & Hamdani, 2009). This challenges the assumption that independence always enhances governance effectiveness. It underscores the importance of sustainability literacy, active engagement, and role clarity for independent directors. Moreover, the non-significance of traditional metrics like profitability and diligence reinforces the need to re-examine which board traits truly matter in a sustainability context (Ioannou & Serafeim, 2015).

The following recommendations are proposed:

i. *Promote gender diversity*: Firms and regulators should prioritize gender inclusion as both an equity goal and a strategic lever for long-term performance.
ii. *Reframe the role of independent directors*: Independent directors should be trained in ESG competencies and sustainability governance.
iii. *Board composition criteria*: Board nomination committees should emphasize ESG knowledge in addition to financial literacy.
iv. *Tailored governance*: Smaller firms may need institutional support to build sustainability governance structures.
v. *Move beyond compliance*: Boards should embed sustainability into strategic planning and performance metrics.

The following are suggested areas for future research:

i. Comparative studies across regions meant to examine institutional influences on sustainability governance.
ii. Sector-specific research on board effectiveness in high-impact industries.
iii. Longitudinal designs tracking reforms in board composition and their sustainability outcomes.
iv. Analysis of ESG-focused board committees and directors with sustainability expertise.
v. Qualitative research into boardroom dynamics and sustainability decision-making behaviors.

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