

EFFECT OF FINANCIAL RISK ON FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA: MODERATING ROLE OF BOARD GENDER DIVERSITY

BY

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ABSTRACT

This study examined the effect of financial risk and financial performance of listed Deposit Money Banks (DMBs) in Nigeria: moderating role of board gender diversity. The research adopted ex-post facto research design by using audited annual reports of Listed DMBs for the period 2015 to 2024. The study used descriptive statistics and panel regression analysis. The study used Return on Assets (ROA) as the financial performance measure and financial risk into three components: credit risk, liquidity risk and operational risk. The study measures board gender diversity by calculating the proportion of female board members to total board members. Credit risk has a positive but statistically insignificant effect on financial performance ($\beta = 0.003$, $p = 0.94$), operational risk has a negative and statistically significant effect on ROA ($\beta = -0.099$, $p = 0.03$), while liquidity risk shows a positive and statistically significant relationship with financial performance ($\beta = 0.167$, $p = 0.00$). Board gender diversity has a negative but insignificant effect on financial performance ($\beta = -0.034$, $p = 0.68$). The research concluded that gender diverse boards produce better risk management which protects banks from negative financial consequences.

Keywords: Financial Risk, Board Gender Diversity, Financial Performance, Listed Deposit Money Banks.

1. Introduction

Financial performance measures how well organizations manage their financial resources to achieve profit and sustain their business operations. The assessment of a company's profit generation ability serves as the method to evaluate its organizational performance. Companies' financial performance evaluates their profitability through assessment methods (Molyneux & Schaeck 2024). Organizations use resource management measurement to assess their financial health because its results show how effectively they generate profits (Bikker & Vervliet 2024). Modern economies need organizational strength and financial performance because banks serve as their primary financial institutions which manage resource allocation and credit distribution and payment processing. The Nigerian banking system needs ongoing evaluation of its financial

performance aspects which cover non-performing loans, governance challenges and economic shocks (Eleje et al., 2025 & Kalkan 2025).

Financial risk applies to any business which incurs operational losses because of its business activities. The financial performance of banks will depend on three financial risk factors which include credit risk and liquidity risk and operational risk. Banks face risk of major profit declines whenever their management fails to handle these risks effectively according to essential performance metrics such as Return on Assets (Omisore et al., 2021).

Board gender diversity defines the different sex, age and educational background and work history and ethnic diversity of board members who influence corporate strategic decisions and oversight functions (Kagzi & Guha 2018).

To achieve the objectives of the study, the following Null hypotheses were formulated to guide the study.

H₀₁: Financial risk does not have significant effect on financial performance of Listed DMBs in Nigeria.

H₀₂: Board Diversity does not have significant effect on financial performance of Listed DMBs in Nigeria.

H₀₃: Moderating effect of Board Diversity does not have significant effect on the relationship between financial risk and financial performance of Listed DMBs in Nigeria.

2.0 Literature Review

2.1. Conceptual Review

Concept of Financial Risk

Saunders and Cornett (2020) define financial risk as the possibility of cash flow uncertainty which occurs because interest rates or market conditions or borrower defaults change.

Concept of Operational Risk

The Basel Committee on Banking Supervision (2021) defines operational risk as the possibility of financial loss which occurs when organizations experience their internal operations or staff or technical systems or external circumstances fail to function properly. This demonstrates how operational risk arises from various sources which include internal operational failures, technological malfunctions and external threats that include geopolitical conflicts and pandemics.

Concept of Credit Risk

Credit risk describes the chance of losing money when a borrower or counterparty fails to fulfil their contractual duties. Financial institutions face this risk as their most important danger because

it directly affects their ability to generate profits and maintain financial security and operate their businesses.

Concept of Liquidity Risk

Liquidity risk describes the situation which occurs when a financial institution or entity loses its ability to pay its financial obligations because of major financial losses. The situation occurs when people need more liquid assets than the available assets can provide. Liquidity risk operates as a vital component of financial risk management because it determines a business's ability to maintain financial health, continue operations and achieve financial security.

Concept of Financial Performance

Financial performance serves as the primary measurement tool to evaluate how well organizations utilize their resources for generating profits and fulfilling their financial objectives. The measure assesses organizational economic stability through multiple financial metrics which include profitability and operational efficiency.

Concept of Board Gender Diversity

Board gender diversity refers to the representation of female individuals with varying characteristics, experiences, and perspectives within a company's board of directors. The concept includes multiple dimensions which include ethnic background, age, educational history, work experience and cognitive ability of females' individuals. According to Hillman and Dalziel (2023), diverse boards are more likely to consider multiple perspectives, leading to balanced strategies that address the interests of diverse stakeholders.

2.2 Theoretical review

Agency theory: The theory examines how a corporation functions when its ownership and operational control become separate from each other while studying how its managers operate. Smith and Stulz (1985) demonstrated that agency problems in corporate risk management lead to changes in how executives approach risk assessment and risk protection methods. The theory demonstrates that shareholders and management together with debt holders develop different interests because their earnings distribution systems create asymmetries between them (Mayers & Smith, 1987). Agency theory shows that organizations use hedging strategies to protect their business worth (Froot et al., 1993).

The shiftability theory established by Moulton (1915) showed that banks needed to use credit instruments which had active secondary markets as their liquidity reserve to defend against large scale deposit withdrawals. Banks maintain their liquidity through the assets they possess which can be converted into cash through sales to different financial institutions or investors. The Central Bank can acquire these assets for cash without causing any substantial financial damage which makes them a better option than using maturity dates to address their liquidity challenges (Ngwu, 2006). The theory states that banks achieve liquidity through their assets which they can either

transfer to other entities or sell for cash. The viewpoint maintains that institutions achieve better liquidity when they possess marketable assets which the Central Bank and discount market will acquire at any time. The theory demonstrates that a bank maintains liquidity through its asset base which can be converted into cash by selling or transferring its economic resources to other parties. The theory establishes that banks use their highly marketable securities as their primary mechanism to accomplish all their liquidity needs. Dodds (1982) argues that parties need to establish immediate exchange processes which maintain their worth without any significant reductions.

2.3 Empirical review

Financial Risk and Financial Performance

Ogundele & Nzama (2025) researched how risk management practices and their accompanying disclosures influenced the financial results of Nigerian commercial banks. The study included 12 Nigerian commercial banks which the researchers selected between 2012 and 2023. The researchers utilized panel regression analysis together with EViews 12 software to conduct their data analysis. The study found that liquidity risk disclosure and firm size both positively impacted financial performance, whereas credit risk disclosure together with credit risk and firm age and leverage had negative impacts on financial results. The study demonstrates that credit risks create major obstacles for commercial banks which leads to lower financial results when non-performing loans increase. The study determined that institutions which provide complete liquidity risk information through clear liquidity position reports achieve better financial results. The study recommends that banks should enhance their credit risk assessment framework while developing better risk reporting methods to achieve improved operational results and financial stability. Oladele and Akinwumi (2024) examine risk Management Practices and Financial Performance: Analyzing Credit and Liquidity Risk Management and Disclosures by Nigerian Banks. The population of the study comprised 13 Nigerian commercial banks, of which 12 were purposively chosen, subject to data

availability. The data explored in this study originate from World Development Indicators and the annual reports and accounts of the selected Nigerian commercial banks from 2012 to 2023. The data analysis technique used was panel regression analysis, which was further extended to the generalized method of moments in a bid to account for potential endogeneity. The study made use of EViews 12 software to analyze the data. The results reveal that liquidity risk disclosure and firm size had significant and positive effects on financial performance, while credit risk disclosure, credit risk, firm age, and leverage had significant and negative effects. This study concludes that credit risks significantly undermine commercial banks' financial performance, as an upsurge in non-performing loans results in reduced financial performance. Conversely, effective liquidity risk disclosure characterized by transparent reporting on liquidity position was found to enhance financial performance. This study, therefore, recommends, among others, that banks should strengthen their credit risk assessment framework and enhance transparent risk reporting to improve performance and financial stability.

Okeke (2024) investigate Liquidity management and financial performance of deposit money banks in Nigeria: A case study of Union Bank PLC. Utilizing secondary data and an ex post facto approach, the study investigates the relationship between liquidity indicators and key profitability metrics. Findings indicate that while liquidity management does not significantly influence profitability and return on assets, it does exhibit a notable impact on Union Bank Plc's return on equity. The study concludes that maintaining adequate liquidity is crucial for banking stability, but its effect on shareholder returns is a more nuanced consideration. To optimize return on equity while ensuring sufficient liquidity, the study recommends several strategies for commercial banks in Nigeria. These include: enhancing operational efficiency, driving innovation, adopting customer-centric approaches, implementing dynamic risk management frameworks, and tailoring lending practices to better serve customer needs.

Board Gender Diversity and Financial Performance

Ibrahim et. al. (2024) investigates how board gender diversity affects the financial performance of Nigerian listed deposit money banks. The researchers used an ex-post facto research design to conduct their study which involved collecting data through secondary means from published annual reports of selected Nigerian banks. The study population consisted of 14 listed deposit money banks in Nigeria which researchers used as sample through census sampling technique. The researchers used STATA version 14 to analyse the collected data through descriptive and inferential statistics which included correlation and multiple regression analysis.

Oladejo and Alagbe (2024) examines the influence of board gender diversity attributes on the profitability of listed food and beverage manufacturing firms in Nigeria, providing critical insights into the governance-performance nexus. Utilizing ex-post-facto and descriptive research designs, data were drawn from 10 purposively selected firms out of 22 listed on the Nigerian Exchange Group (NGX). Principal Component Analysis (PCA) was employed to identify significant board diversity attributes, while Pearson Product Moment Correlation Coefficient (PPMCC) was used to analyze their relationship with profitability. The findings reveal that Financial Expertise Diversity (60.78%) is the most dominant factor influencing profitability, while CEO Duality (-58.95%) exhibits a negative impact. Gender Diversity (60.02%) and Ethnicity Diversity (59.1%) emerged as key contributors to demographic diversity, while Educational Background Diversity (73.48%) uniquely enhanced board effectiveness. Correlation analysis demonstrated that increased diversity—particularly in gender (0.683771), ethnicity (0.739114), and educational background (0.833936)—is strongly associated with higher profitability, measured by Return on Assets (ROA). This study underscores the strategic importance of fostering diverse boards to strengthen corporate governance and enhance financial outcomes. By illuminating the significant attributes of board diversity, these findings provide actionable insights for policymakers and stakeholders aiming to drive sustainable growth in the Nigerian food and beverage sector.

Boloupremo and Umbe (2024) investigate Impact of board's gender diversity on the financial performance of quoted manufacturing companies in Nigeria. The study elicits relevant data from the firms' published financials collected from the firms' website with the focus on a 5-year time series data on age, sex, educational, nationality and financial performance from 2018 to 2022 respectively. Findings revealed that there is a significant relationship between age, sex, national,

educational, and firms' financial performance, with all the independent variables positively affecting the return on total assets of the surveyed listed manufacturing firms in Nigeria. The conclusion was made that findings not only affirm the value of diversity in enhancing corporate governance and performance but also offer practical insights for companies seeking to optimize their financial outcomes through strategic diversity management. However, it was recommended that the firms should implement and enforce policies that promote gender equality within their boards. This could include targeted recruitment, mentorship programs, and career development initiatives designed to increase the representation of women, youth, and well-educated members in leadership positions, thereby leveraging the unique insights and leadership styles that bring equity and fairness to the board committee.

3.0 Methodology

The study adopted an ex post facto research design. Researcher selected 11 deposit money banks from the Nigeria Exchange Group Limited through purposive sampling method. The sample was selected from all 13 listed deposit money banks in Nigeria. The researcher selected this group because they had published their annual reports and disclosed their board composition data which included the number of female board members and total board members for the years 2015 to 2024. The study used secondary data source. The researcher gathered information from annual reports of listed deposit money banks to conduct their analysis. The study used two techniques of data analysis and one diagnostic test. The study used Descriptive statistics and Regression analysis methods while Normality test functions as the diagnostic test.

Model Specification

This study employs two models. The first model examines the direct relationship between financial risks and financial performance, while the second model incorporates board gender diversity as a moderating variable to assess its influence on the relationship between financial risks and performance of listed Deposit Money Banks in Nigeria.

Model One: Model of Direct Relationship

Equation:

$$ROA_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 LR_{it} + \beta_3 OPR_{it} + u_i + \varepsilon_{it}$$

Where:

ROA_{it} = Return On Asset for Bank i in year t

CR_{it} = Credit Risk

LR_{it} = Liquidity Risk

OPR_{it} = Operational Risk

β_0 = Intercept (constant)

$\beta_1, \beta_2, \beta_3$ = Coefficients for Credit Risk, Liquidity, and Operational Risk, respectively

ε_{it} = Error term

i = Banks

t = Time

Model two: Model of Moderating Effect

Equation:

$$ROA_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 LR_{it} + \beta_3 OPR_{it} + \beta_4 BGD_{it} + \beta_5 (CR_{it} * BGD_{it}) + \beta_6 (LR_{it} * BGD_{it}) + \beta_7 (OPR_{it} * BGD_{it}) + u_i + \varepsilon_{it}$$

Where:

BGD_{it} = Board Gender Diversity

$CR_{it} * BGD_{it}$ = Interaction term for Credit Risk and Board Gender Diversity

$LR_{it} * BGD_{it}$ = Interaction term for Liquidity Risk and Board Gender Diversity

$OPR_{it} * BGD_{it}$ = Interaction term for Operational Risk and Board Gender Diversity

4.0 Discussion of Result

Table 1: Descriptive Statistics of the Variables

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROA	110	0.045	0.093	0.001	0.659
CR	110	0.120	0.196	0.104	0.872
OPR	110	0.223	0.169	0.001	1.565
LR	110	0.209	0.299	0.000	3.153
BG	110	0.286	0.099	0.000	0.500

Source: STATA 14.0 Output, (2025).

The study's 110 observations produced descriptive statistics which Table 1 displayed through its detailed presentation of all study variables. The study period showed that listed Deposit Money Banks (DMBs) achieved a 4.5% return on their total assets which indicates moderate sector profitability. The banks showed substantial differences in their financial results because the standard deviation measures showed high values which demonstrated their different abilities to handle operational challenges and financial dangers and their various strategies. The minimum value of 0.001 shows that some banks barely made profit, likely due to exposure higher financial risks, while the maximum value of 0.659 indicates that a few banks achieved exceptionally high returns, possibly resulting from effective risk control and superior management practices. The study results show that Nigerian listed DMBs maintain positive profitability rates which vary between different banks because financial risks and board gender composition impact their business results.

The descriptive statistics for Credit Risk (CR) shows that listed Deposit Money Banks (DMBs) maintained low credit risk levels because the banks maintained a small percentage of non-performing loans compared to their total loans during the research period. The value of 0.104

shows that certain banks successfully managed their credit risk through responsible lending and collection methods whereas the value of 0.872 demonstrates that some banks encountered extreme credit exposure which resulted from inadequate credit assessments and adverse market factors. Low credit risk levels entails that the banking sector needs to establish better credit risk management systems that all listed DMBs should follow to maintain their financial performance.

The Table 1 Operational Risk (OPR) Listed Deposit Money Banks (DMBs) during the research period operated with moderate operational risk because their internal processes and systems and human factors caused them minimal financial losses. Standard deviation of 0.169 demonstrates a moderate spread around the mean but operational efficiency and internal control effectiveness showed different levels among the banks. The minimum value of 0.001 shows that some banks maintained their operations without interruptions because they had strong risk management systems and effective internal controls and advanced technology. Maximum value of 1.565 shows that certain banks faced extreme operational risk because their systems failed and their processes had inefficiencies and their staff committed fraudulent acts. Operational risk level across Nigerian listed DMBs shows a moderate trend yet high-risk outliers make it essential to improve internal controls and staff training and technological systems for better operational results.

The statistics in Table 1 shows that Liquidity Risk (LR) of Nigerian Listed Deposit Money Banks (DMBs) maintained low liquidity risk because most banks could handle their short-term financial obligations without trouble. Standard deviation of 0.299 shows banks experience different levels of liquidity because they use different asset–liability management techniques and their cash flow patterns vary between organizations. The minimum value of 0.000 shows that certain banks maintained strong liquidity positions because they managed their reserves and liquidity resources through effective planning. Maximum value of 3.153 shows that some banks experienced very high liquidity risk because they had too much loan exposure and customers withdrew funds and their liquidity predictions failed. Overall liquidity status of Nigerian Listed DMBs appears stable yet some institutions still face liquidity risk because their liquidity management processes require stronger policies and better regulatory supervision to protect sector financial stability.

In Table 1 Board Gender Diversity (BGD) result shows that 28.6% of board members in Nigerian listed Deposit Money Banks (DMBs) are women, which indicates that female board representation stands at moderate levels. The standard deviation of 0.099 shows that banks exhibit only slight differences in their board gender diversity, which leads to common patterns of female board presence across DMBs. The minimum value of 0.000 shows that some banks had no female representation on their boards during the study period, reflecting persistent gender imbalance in corporate governance structures. The maximum value of 0.500 shows that some banks achieved gender parity because half of their board members were women, which indicates their progress toward inclusive leadership. The study results show that board gender diversity in Nigerian Listed DMBs has improved through time, but organizations need to adopt stronger policies and conduct specific actions to achieve better female board representation because research demonstrates that higher board gender diversity leads to better decision making and financial performance.

Table 2: Correlation Matrix

Variable	ROA	CR	OPR	LR	BGD
ROA	1.00				
CR	0.02	1.00			
OPR	-0.14*	0.08	1.00		
LR	0.55*	0.05	-0.12	1.00	
BGD	-0.16	-0.34*	-0.02	-0.24*	1.00

Source: STATA 14.0 Output, (2025).

key = * $\leq$ 0.05

The correlation matrix presented in Table 2 showed that ROA exhibits a positive relationship with CR which remains statistically insignificant at 0.02 because the firms ROA increases the CR will move in the same direction but this connection lacks sufficient strength to verify its impact on the company's financial results. The firms ROA establishes a positive relationship with LR which reaches statistical significance at 0.55* because the firms ROA increases their LR will also rise in the same direction while this relationship establishes sufficient strength to affect the financial results of the companies. ROA demonstrates a negative relationship with OPR that reaches statistical significance through its effect of -0.14* because ROA increases OPR decreases while OPR increases ROA decreases and this relationship has enough strength to shape the financial outcomes of Nigerian listed DMBs. ROA shows a negative relationship with BGD which lacks statistical significance at -0.16 because the result shows that BGD decreases when firms ROA increases while BGD increases when ROA decreases.

Moreso, Table 2 shows that credit risk (CR) presents an insignificant positive relation to operational risk (OPR) and liquidity risk (LR) which displays a relationship of 0.08 and 0.05. The results show that an increase in CR will lead to corresponding increases in OPR and LR for the firm. The relationship shows an insignificant effect which does not influence the financial results of the listed DMBs during the analysis period. The relationship between CR and board gender diversity (BGD) shows a negative link which reaches a level of statistical significance with a value of -0.34*. The result shows that a rise in company CR will decrease the female board member percentage which shows the board's gender balance. The significant level shows that this connection between variables has enough strength to affect the financial results of Nigerian listed DMBs throughout the analysis period.

The Operational risk (OPR) results shown in table 2 demonstrate that OPR establishes negative links to both liquidity risk (LR) and board gender diversity (BGD) with correlation coefficients of -0.12 and -0.02 respectively. The OPR level of a company will rise which leads to two outcomes for the company which includes decreased liquidity risk and reduced female board member presence. The relationship does not show any significant impact on financial performance which makes it unimportant for the period under study.

Table 3: Regression Analysis for the Three Models

Variable	Model One		Model Two		Model Three	
	Coef.	(P-Value)	Coef.	(P-Value)	Coef.	(P-Value)
CR	0.003	(0.94)	-0.002	(0.95)	-	
OPR	-0.099	(0.03)	-0.099	(0.03)	-	
LR	0.167	(0.00)	0.164	(0.00)	-	
BD			-0.034	(0.68)	-	
CR*BD					0.341	(0.39)
OPR*BD					1.707	(0.04)
LR*BD					0.314	(0.23)
Cons	0.032	(0.03)	0.043	(0.16)	0.165	(0.01)
R-squared	0.33		0.34		0.37	
F-statistic	18.13	(p = 0.000)	13.54	(p = 0.000)	8.72	(p = 0.000)

Source: STATA 14.0 Output (2025)

Model One: Effect of Financial risk on financial performance of Listed Deposit Money Bank's in Nigeria

The results from Model One demonstrate an R-squared value of 0.33 which explains 33 of the financial performance variation for listed DMBs during the studied period through three independent variables of credit risk and operational risk and liquidity risk which the model includes. The model accounts for 33% of variance, while 67% of variance originates from factors, which the model fails to capture. The model has an F-statistic value of 18.13 and a p-value of 0.000 which shows that the independent variables have a significant impact on the financial performance of the firms. The regression results show that CR produces a positive impact on financial performance through a ROA coefficient of 0.003, but the result lacks statistical significance because the P-value reaches (0.94). The research shows that better CR management at banks leads to better financial results for listed Nigerian deposit money banks which supports the idea that better CR management leads to better business results, although the relationship lacks statistical significance for conclusive evidence.

The operational risk (OPR) shows a negative impact on ROA which reaches statistical significance through its coefficient of about -0.099 and P-value of 0.03. The banks will experience operational risk management improvements which achieve statistical significance at $P < 0.05$ because this operational risk management system requires assessment beyond existing limits which exists between operational risk management and financial performance yet this change will benefit shareholder interests. The liquidity risk (LR) shows a positive relationship which reaches statistical significance through its coefficient of 0.167 and P-value of 0.00 because better liquidity risk management will enhance bank financial results while reduced liquidity risk management will lead to financial performance drops which this relationship proves through its significance level.

Model Two: Effect of Board Gender Diversity on Financial Performance (ROA)

Model Two incorporates board gender (BGD) as an additional explanatory variable. The R-squared value significantly increased to 0.34, indicating that the model explains 34% of the variation in ROA while the remaining 66% are explained by factors not captured in the model. The F-statistic of approximately 13.54 ($p = 0.00$) confirms that the independent variables, taken together, have a statistically significant effect on ROA. However, the regression result in table 3 shows that board gender diversity (BGD) is likewise negative and statistically insignificant with a coefficient of -0.034, and a P-value of 0.68, suggesting that more involvement of board gender members on the board may lead to decrease in financial performance of the banks which may be as a result of diversity in idea which may result to delay in strategic decision making.

Model Three: The Moderating Effect of Board Gender Diversity on the relationship between financial risk and Financial Performance of listed DMBs in Nigeria

The Table 3 presents BGD and financial risk variables through their interaction terms, which demonstrate that operational risk shows significant moderation effects. The model achieves better explanatory strength because it reaches an R-squared value of 0.37 which explains 37% of the ROA variation through independent variables and their interactions while 63% of ROA variation results from factors not included in the model. The model shows good fit because its F-statistic equals 8.72 and its P-value equals 0.000 which show that variable selection and variable combination were performed correctly. The CR*BGD interaction shows a positive relationship with ROA through its coefficient of 0.34, which results in CR management showing stronger ROA benefits when board gender diversity increases. The relationship between profitable banks with board gender diversity and their financial performance shows a positive trend.

The interaction between LR*BGD according to its coefficient of 0.314 and P value of 0.23 shows a positive relationship. A board which includes many female directors has a higher chance of achieving financial success. The OPR*BGD interaction effects show a coefficient of 1.707 with a P-value of 0.04 which indicates a positive relationship that researchers found to be statistically significant.

5.0 Conclusion and Recommendations

Conclusions

The research show that credit risk (CR) impacts ROA in a positive way but lacks statistical significance which indicates that better credit management practices will lead to increased profits in Nigerian listed banks although their effect on financial results remains limited. The statement means that banks acknowledge credit screening and loan recovery systems as vital tools yet their ability to boost profits gets restricted by external elements which include regulatory limitations and economic instability. Operational risk (OPR) demonstrated negative impacts together with statistically significant results which decreased financial performance because operational inefficiencies, internal control deficiencies and system malfunctions all worked together to decrease banks' profits. Banks who manage their liquidity risks effectively will experience higher

returns on assets because effective liquidity management enables them to maintain sufficient funds for lending and investment activities. The interaction between the explanatory variable CR and LR and the moderator board gender diversity (CR*BGD; LR*BGD) showed positive results which lacked statistical significance because gender board membership restricted credit risk and liquidity administration but did not affect profit results. The interaction between operational risk and board gender diversity (OPR*BGD) produced positive results which reached statistical significance because board gender diversity membership enhances operational risk management activities which lead to higher profit results. The research demonstrates that financial risk management functions as an essential requirement for maintaining performance sustainability. The presence of female directors on boards establishes a vital asset that enhances banks' financial risk management capabilities

Recommendations

The following recommendations are proposed:

- i. Although credit risk showed a positive effect on performance, banks should intensify efforts to improve credit assessment, loan monitoring, and recovery mechanisms. Adopting data driven credit scoring systems and advanced risk modelling tools can enhance lending efficiency and minimize non-performing loans.
- ii. Given the significant negative relationship between operational risk and performance, banks should strengthen their internal control systems, compliance frameworks, and risk culture. Investments in staff training, cybersecurity, and technological innovation should be prioritized to reduce fraud, process errors, and system breakdowns.
- iii. Since liquidity risk positively and significantly affects profitability, banks should maintain an optimal balance between liquidity and profitability. This involves efficient asset-liability management, diversified funding sources, and regular liquidity stress testing to ensure stability even during economic downturns.
- iv. Banks should leverage the unique risk-averse and collaborative qualities of female directors in designing risk management policies. Gender-balanced boards tend to foster inclusive decision-making, ethical conduct, and long-term strategic thinking, which are vital for sustained performance.
- v. The significant moderating effect of board gender diversity on operational risk highlights the strategic importance of female representation in governance. Regulators such as the Central Bank of Nigeria (CBN) and the Nigerian Exchange Group (NGX) should encourage listed banks to adopt gender diversity policies that ensure a fair representation of women on boards to enhance oversight and ethical standards.

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