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THE IMPACT OF TOP MANAGEMENT GENDER HETEROGENEITY ON ASSET QUALITY OF COMMERCIAL BANKING SECTOR IN NIGERIA

By

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Abstract

The study investigated the effect of top management gender heterogeneity on the asset quality of commercial banks in Nigeria, focusing on deposit mobilization ratio and performing loan ratio. Adopting an ex-post facto research design, secondary data spanning a defined period were extracted from financial reports of selected commercial banks in Nigeria. The data were analysed using descriptive statistics and Ordinary Least Squares (OLS) regression techniques to evaluate the relationship and significance of gender heterogeneity on the selected performance metrics. The findings reveal a weak positive relationship and no significant effect of gender heterogeneity on the deposit mobilization ratio. Conversely, a weak negative relationship and no significant effect were observed on the performing loan ratio. However, the findings deviate from global evidence suggesting stronger impacts of gender diversity on financial performance. The study concludes that while gender heterogeneity promotes diversity and inclusivity, it does not directly affect asset quality in commercial banks. Recommendations include enhancing the expertise of female directors and implementing targeted capacity-building initiatives to maximize their contributions to organizational outcome.

Keywords: *Top management, Gender Heterogeneity, Deposit Mobilization Ratio, Performing Loan Ratio, Asset Quality, Commercial Banks.*

INTRODUCTION

The evolving discourse on diversity and inclusion within organizational leadership has underscored the importance of gender heterogeneity, particularly in sectors critical to economic stability, such as banking. The history of banking leadership has been predominantly male-dominated, often reflecting societal norms and traditional governance structures. However, the gradual inclusion of women in top management positions within the banking sector marks a transformative shift in organizational dynamics (Nguyen, 2021). This shift not only reflects the growing pursuit of gender equality but also brings unique perspectives to decision-making and innovation within financial institutions. Women in top management often exhibit transformational leadership styles characterized by collaboration, empathy, and communication. These traits foster a positive work environment, leading to improved employee morale and better customer relations. Furthermore, women in leadership roles implement innovative deposit mobilization strategies that prioritize customer engagement, resulting in increased customer loyalty and higher deposit rates (Esan & Chukwudumebi, 2024).

Top management gender heterogeneity refers to the equitable representation of different genders within leadership teams. This diversity has been associated with several organizational benefits, including enhanced financial stability, improved risk management practices, and greater innovation (Adams & Ferreira, 2009). Studies indicate that diverse leadership teams are better equipped to address complex challenges, foster collaboration, and align strategies with evolving market demands. (Babatunde Lawrence et al., 2020; Bingilar & Igo,2024). For instance, Hossain et al. (2024) observed that gender diversity contributes to balanced decision-making, which enhances both financial and social outcomes. Similarly, Sharma et al. (2024) highlighted the risk-averse nature of gender-diverse boards, particularly in debt utilization, a factor critical for managing credit risks and sustaining asset quality.

Bingilar and Igo (2024) argued that separating the roles of CEO and chairman while incorporating gender-diverse leadership positively impacts deposit mobilization and loan performance, essential factors in maintaining asset quality. In

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the Nigerian banking sector, gender heterogeneity in top management has gained increasing attention due to its potential to influence key performance metrics such as asset quality. Asset quality, defined as a bank's ability to manage credit risks and financial shocks effectively, is a critical determinant of financial resilience and stability. Diverse leadership teams bring varied cognitive approaches to risk management, which can mitigate challenges like non-performing loans and enhance credit quality (CBN, 2014). Esan and Chukwudumebi (2024) found that inclusive leadership teams are more adept at adopting financial technologies such as internet banking and mobile money. These innovations improve customer satisfaction and fund mobilization, which are crucial for maintaining asset quality in a dynamic financial environment. Such strategic adaptability is vital for mitigating risks and ensuring organizational resilience.

Despite its recognized benefits, the relationship between top management gender heterogeneity and asset quality remains underexplored in the Nigerian banking sector. While studies by Fatai and Alenoghena (2024) shown positive results, studies such as those by Hossain et al. (2024) and Esan and Chukwudumebi (2024) have shown mixed results, particularly in emerging markets, emphasizing the need for context-specific investigations.

This study is particularly timely given the increasing pressure on Nigerian banks to enhance resilience and sustainability in the face of global and local economic uncertainties. The COVID-19 pandemic, for instance, exposed vulnerabilities in the financial sector, particularly in asset quality management (World Bank, 2021). By investigating the strategic role of gender heterogeneity in leadership, this research aims to provide actionable insights for policymakers and practitioners to strengthen governance. This research aimed to examine top management gender heterogeneity and asset quality of commercial banks in Nigeria. The following are the set of specific objectives designed for this study:

i. Ascertain the effect of gender heterogeneity on the deposit mobilization of commercial banks in Nigeria.
ii. Ascertain the effect of gender heterogeneity on performing loans of commercial banks in Nigeria.

Hypotheses Formulation

Gender diversity in financial institutions has been a growing area of research globally, with evidence suggesting its potential influence on various performance metrics, including deposit mobilization. Drazkowski et al. (2024) explored gender diversity across board compositions in 43 European countries over 35 years and highlighted the positive effects of gender-heterogeneous boards in private firms, aligning with gender diversity theory. The study emphasized that diverse boards often bring varying perspectives and decision-making styles that enhance institutional performance. However, the connection between gender heterogeneity and specific financial performance indicators like deposit mobilization remains underexplored in the Nigerian banking environment. While gender-diverse teams are known to promote inclusivity and improve customer engagement, empirical evidence specifically linking such heterogeneity to deposit mobilization in Nigeria is lacking, necessitating further investigation.

Adesanmi (2019) examined the financial impact of gender diversity and board independence in Nigerian commercial banks and found a significant positive relationship between board diversity and profitability (β=0.34, ρ=0.02). While this study focused on profitability, it provides insights into how gender-diverse boards influence bank outcomes, potentially including customer-focused metrics like deposit mobilization. By attracting and retaining a broader customer base, gender-heterogeneous leadership may foster higher levels of trust and satisfaction among clients. However, whether this translates into measurable changes in deposit mobilization ratio is yet to be established. This gap highlights the need for studies that explore the relationship between gender diversity and deposit mobilization in Nigerian commercial banks to clarify the extent of this influence. Hence, the first hypothesis is: Gender heterogeneity has no significant effect on the deposit mobilization ratio of commercial banks in Nigeria.

The impact of gender heterogeneity on credit risk management and loan performance is another area where global research provides insights. Bebeji et al. (2015) investigated board size and composition's influence on financial performance in Nigerian banks and emphasized the importance of diversity in fostering balanced decision-making. The findings suggested that diversity enhances risk assessment and governance structures, which are critical in improving the quality of performing loans. Similarly, Drazkowski et al. (2024) highlighted the role of gender-diverse boards in enhancing organizational outcomes through varied perspectives. However, these studies do not directly address how gender heterogeneity affects performing loans in Nigerian banks, presenting a research gap in linking these concepts.

In the Nigerian context, Adesanmi (2019) demonstrated that board diversity significantly impacts financial success through better governance and decision-making. While this study measured financial success in terms of profit margin, the mechanisms through which gender diversity influences critical indicators such as loan performance remain unclear. Performing loans are pivotal to a bank's stability and profitability, as poor loan performance directly affects asset quality and increases non-performing loans (NPLs). The limited empirical evidence on whether gender-heterogeneous leadership enhances loan recovery and reduces default rates underscores the importance of exploring this relationship further. Such research could provide actionable insights for improving loan performance through strategic gender-inclusive policies.

Hence, the second hypothesis is: Gender heterogeneity has no significant effect on the performing loans of commercial banks in Nigeria.

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Methodology

This research adopted ex-post facto research design. Ex-post facto involves a systematic empirical inquiry, in which an observer has no direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulated. The study basically employed secondary data sources. The data was extracted from audited financial statements of listed banks obtained from Nigerian Exchange Group websites, Central Bank of Nigeria Statistical Bulletin and Nigeria Deposit Insurance Corporation Bulletin from 2006 to 2023. The population of the study comprises all the twenty-nine Commercial banks listed in Nigeria Exchange Group official website as at December 2023. In other to ensure data accuracy and reliability, criterion sampling technique employed to select the sample of the study. The criteria are:

1) The bank must not be delisted during the period of study (2006-2022).
2) They must have all information required to measure the variables of the study within the period.

After using these criteria, 10 banks met the conditions and hence they formed the sample of the study.

The economic model used in the study which was in line with what is mostly found in the literature is given as:

Y (DMR, PLR) = f (GHE) ………… (1)

DMR = $\boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 GHE_{it} + \boldsymbol{\varepsilon}$**…** (2)

PLR = $\boldsymbol{\beta}_0 + \boldsymbol{\beta}_2 GHE_{it} + \boldsymbol{\varepsilon}$**…** (3)

Variables Definition and Measurement

GHE= Gender Heterogeneity (GHE): Gender Heterogeneity: measured as the ratio of female directors to total directors on the top management board (SEC Code 2011, Tshipa 2017). Gender heterogeneity captures the ratio of female directors to total directors, serving as an important diversity indicator. Diverse boards are often linked to enhanced decision-making, broader perspectives, and innovation. Unlike nominal counts, this ratio offers a proportional view of gender representation, accounting for overall board composition. By focusing on this measure, the study aims to determine whether gender diversity on boards relates to governance quality and performance outcomes, and it also allows for straightforward cross-firm analysis.

Performing Loans Ratio (PLR): It is measured as the total performing loans and advances divided by total asset within the year (Okpe 2016, John & Ibenta, 2016). PLR is an industry-standard indicator of a bank's asset quality, reflecting the effectiveness of credit management practices. By measuring the ratio of performing loans to total assets, this measure provides insights into the bank’s ability to maintain a healthy loan portfolio and minimize credit risks. PLR facilitates comparison across banks of different sizes and structures, as it standardizes loan performance relative to asset base. This focus on credit management effectiveness offers a critical view of operational performance and risk mitigation

Deposit Mobilization Ratio (DMR): It is measured as total deposit divided by total asset within the year. DMR measures the ratio of total deposits to total assets, indicating the bank’s capacity to attract and sustain deposit inflows. Deposit mobilization is central to a bank's liquidity and stability, providing a foundational view of its performance and customer trust levels. This measure allows for consistent comparisons across banks, as it adjusts for bank size, highlighting efficiency in deposit strategies. Focusing on DMR isolates the impact of deposit mobilization on asset quality, distinct from broader financial performance factors

$\beta 1 – \beta 2$ are the coefficient of the parameter estimate.

β 0 the intercept

ε = error term

Both descriptive and regression analysis was utilized in the study. Descriptive statistics was computed using SPSS version 26 which amongst other things help show the pattern, distribution, deviation and nature of the data. For the regression analysis, Panel Ordinary Least Square (OLS) Regression was used to test the hypotheses. The decision is that the null hypothesis will be rejected if the p-value < 0.05; otherwise, it will be accepted.

Results

Descriptive Statistics

Analysis of descriptive statistics is carried out in this section so as to unveil the nature of data being used for analysis.

Table 1: Descriptive Statistics of Focused Variable

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
DEPOSIT MOBILIZATION RATIO	170	9.56	97.43	29.8072	25.72894	1.435	.186	.540	.370
PERFORMING LOAN RATIO	170	14.00	93.10	71.8788	13.49352	-1.040	.186	1.072	.370
GENDER HETEROGENEITY	170	16.00	33.00	23.4412	4.40542	.324	.186	-1.389	.370

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Valid N (listwise)	170								

Source; SPSS OUTPUT (2024)

From table 1 above the mean value of DMR is 29.8072, while the minimum and maximum values are 9.56 and 97.43 respectively. PLR is 71.87, while the minimum and maximum values are 14 and 93.43 respectively. This indicates that the performing loans and deposit mobilization ratios for Commercial banks is relatively high within the period under review. The table shows that on average, during the period of the study, GHE is 23.44%. The results show that all the variables have mean values greater than their respective standard deviation.

Testing Hypotheses

Table 2: Model Summary for Hypotheses 1

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.337[a]	.114	.106	.32214	.114	.641	6	30	.697	1.147

a. Predictors: (Constant), LgCCS,

b. Dependent Variable: LgDMR

Source: SPSS OUPUT (2024)

The result shown in Table 2 revealed that the R^2 statistic is 0.114 while the adjusted R^2 statistic is 0.106, and R statistic is 0.337. This shows that 11.4% of systematic variation explained the effect of Gender heterogeneity (GHE), on Deposit Mobilization Ratio (DMR).

Table 3: ANOVA Summary for Hypotheses 1

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.399	6	1.1066	10.641	.0.001[b]
	Residual	3.113	163	.104		
	Total	3.512	169			

a. Dependent Variable: LgDMR

b. Predictors: (Constant), LgCCS,

The result in table 3 revealed that a regression significant P-value of 0.001 < F (10.641) which implies that the overall model is statistically significant at 0.05 alpha level Gender heterogeneity (GHE), on Deposit Mobilization Ratio (DMR) of Commercial Banks in Nigeria.

Table 4: Coefficients Summary for Hypotheses 1

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.529	17.425		2.088	.000
	LgGHE	.035	.740	.009	.047	. .963

Source: SPSS OUT PUT (2024)

$H0_1$: Gender heterogeneity has no significant effect on the deposit mobilization ratio of commercial banks in Nigeria.
The result in table 3 above shows that the coefficient β_1, is .035, which implies that a unit increase in LgGHE by 1% would cause .035 increase in DMR when all other factors are kept constant. Also, the table revealed that LgGHE had a p-value of .0963, which is greater than the critical value of 0.05 (p.>0.05). Hence, the null hypothesis ($H0_1$) is accepted. Therefore, Gender heterogeneity has no significant effect on the deposit mobilization ratio of commercial banks in Nigeria.

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Table 4: Model Summary for Hypotheses 2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.381[a]	.146	.145	.09244	.146	.851	6	30	.541	2.071

a. Predictors: (Constant), LgGHE

b. Dependent Variable: LgPLR

Source: SPSS OUPUT (2024)

The result shown in Table 4 revealed that the R^2 statistic is 0.146 while the adjusted R^2 statistic is 0.145, and R statistic is 0.381. This shows that 14.6% of systematic variation explained the effect of Gender heterogeneity (GHE), on performing loan ratio (PLR).

Table 5: ANOVA Summary for Hypotheses 2

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.044	6	5.3887	5.851	.001[b]
	Residual	.256	30	.937		
	Total	.300	36			

a. Dependent Variable: LgPLR

b. Predictors: (Constant), LgGHE

The result in table 5 revealed that a regression significant P-value of 0.001 < F (10.641) which implies that the overall model is statistically significant at 0.05 alpha level between Gender heterogeneity (GHE) and Performing Loan Ratio (PLR) of Commercial Banks in Nigeria.

Table 6: Coefficients Summary for Hypotheses 2

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.826	5.000		2.165	.003
	LgGHE	-.201	.212	-.187	-.947	.351

Source: SPSS OUT PUT (2024)

$H0_2$: Gender heterogeneity has no significant effect on the performing loans of commercial banks in Nigeria.

The result in table 6 above shows that the coefficient β_2, is -.201, which implies that a unit increase in LgGHE by 1% would cause .0201 decrease in PLR when all other factors are kept constant. Also, the table revealed that LgGHE had a p-value of .351, which is greater than the critical value of 0.05 (p.>0.05). Hence, the null hypothesis ($H0_1$) is accepted. Therefore, Gender heterogeneity has no significant effect on the performing loans of commercial banks in Nigeria.

Conclusion, Implications and Recommendation

This study investigated the relationship between top management gender heterogeneity and asset quality of commercial banks in Nigeria, specifically focusing on the deposit mobilization ratio and performing loan ratio. The findings revealed that gender heterogeneity has a weak positive relationship with the deposit mobilization ratio but no significant effect on it. This aligns with prior studies, such as those by Fiador and Saipong-Kumankoma (2020), Rose (2007), and Adams and Ferreira (2009), which also found no significant link between firm performance and female representation on boards. However, these findings stand in contrast to other studies, including those by Adesanmi (2019), Onyali (2018), Krishnan and Park (2005), and Carter, Simkins, and Simpson (2013), which emphasized the positive contributions of women directors to firm performance. This divergence highlights the contextual differences in how gender diversity influences organizational outcomes across regions and industries.

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Similarly, the study found a weak negative relationship between gender heterogeneity and the performing loan ratio of commercial banks, with no significant effect observed. This outcome does not substantiate arguments that women on boards enhance performance through clearer role definitions and improved mentoring, as suggested in studies by Campbell and Mingues-Vera (2018), Farrell and Hersch (2015), and Nielsen and Huse (2010). Instead, the results indicate that the presence of women on corporate boards in Nigerian commercial banks does not directly translate into better asset quality or loan performance. These findings call for further exploration of contextual factors that may mediate the relationship between gender heterogeneity and financial performance in the Nigerian banking sector, as well as broader discussions on strategies for optimizing board diversity to achieve desired outcomes.

In line with the findings of the study, the following recommendations are made:

1. Commercial banks should promote gender heterogeneity in board composition while focusing on enhancing the expertise of female directors, as the study revealed a weak positive relationship and no significant effect between gender heterogeneity and deposit mobilization ratio.
2. Stakeholders should prioritize capacity-building programs for women in leadership positions to maximize their potential contributions, given the study's findings of a weak negative relationship and no significant effect between gender heterogeneity and performing loan ratio.

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