

CAPITAL RISK AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

Bature C. Swatchet¹, Isuwa Dauda (PhD)²

^{1,2}Department of Accounting, Kaduna State University

Corresponding Author(s) Email/Mobile: isuwa.dauda@kasu.edu.ng

Abstract

This study examines the relationship between capital risk and financial performance of listed deposit money banks from 2020 to 2024. Capital risk, as an independent variable is represented by capital adequacy ratio while financial performance, which is the dependent variable is represented by return on equity. The population of the study consist of the thirteen (13) listed deposit money operating in the Nigerian exchange within the study period. The study used the census sampling technique in arriving at a sample size of thirteen (13) listed firms. Data collection for analysis used the secondary source. Data collected were analysed using the simple linear regression model with specific on the random regression model. The findings of the study revealed that capital risk has a significant positive effect on financial performance. In line with the finding, the study recommends that listed deposit money banks should consider enhancing capital adequacy requirements to ensure that banks maintain sufficient capital buffers, which would improve their resilience and financial performance.

Keywords: capital risk, capital adequacy ratio, financial performance, return on equity, listed deposit money banks

1. Introduction

Financial performance of an enterprise is the ability to leverage operational and investment decisions and strategies to achieve a business' financial stability. It is the measure of an enterprise's achievement of its financial goals guided by its financial objectives and benchmarks. Banks, as a critical part of a financial system, play an important role in the economic development of a nation.

Bank's performance indicates bank's capacity to generate sustainable profits. Banks protect the profitability against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings. A bank's persistent recording of losses will lead to the depletion of capital value and which may consequently place both equity and debt holders at risk (Muriithi, 2016). Therefore, to create shareholders' value, banks need to improve on its return on equity which ordinarily should be higher than the cost of equity.

The primary role of commercial banks is to intermediate between the surplus and deficit ends of funds. In the intermediation function of banks by lending to the deficit unit, banks are faced with the risk of default. Banks operate under a number of rules and regulations, where one of the regulations is to maintain a minimum capital requirement that is expressed in form of capital adequacy ratio. The capital related requirements are basically the buffer against financial risks faced by banks. Under these regulations, banks can properly manage their risks and try to maximize their profit.

Banks possess a highly regulated capital structure as capital significantly reduces the prevalence of banking failure and losses. Tesfai (2015) asserted that capital

CAPITAL RISK AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

adequacy is a primary component in measuring and evaluating bank performance. In the context of Nigeria, banks are required to fulfill the minimum requirements as set by the supervising and monitoring authority namely the Central Bank of Nigeria (CBN).

Despite broad consensus regarding the necessity of having statutory capital requirements for reducing moral hazards, Adrian et al. (2017) argued that high capitals result in low profits. This is because high capital ratios cause banks to become risk-averse, leading them to ignore potentially risky investment prospects. Consequently, investors would opt for lower risks and settle for lower capital returns. Pringle (2001) observed that a bank with low capital levels will find itself subjected to high levels of short-term borrowing at potentially high excess costs during periods of tight money.

Flamini et al. (2009) suggested that bank returns are affected by macroeconomic variables, suggesting that macroeconomic policies that promote low inflation and stable output growth do boost credit expansion. Higher capital is often supposed to be costly for banks, implying that higher capital reduces profitability, but according to the trade-off theory it may also reduce a bank's risk and hence the premium demanded to compensate investors for the costs of bankruptcy.

Following the 2007-2009 financial crises, the Basel III accord was established to provide several measures for reinforcing the resilience of banks. Liquidity, credit and market risks during ordinary and strained conditions are highly emphasized under the newly developed capital adequacy framework (Adrian et al., 2017).

Banks have been obligated to retain a minimum capital level to be able to make up for losses and to carry out operating activities on a going concern basis; otherwise, they would have to bear extreme losses during situations of financial crisis (Mach, 2019). Bank regulations were modified by the Basel Committee to include a couple of new capital requirements that include incremental risk capital charge (IRC) and the Value-at-Risk (VaR), which increase the capacity of banks to absorb losses (Shammi et al., 2021).

According to conventional corporate finance theories a bank in equilibrium will desire to hold a privately optimal level of capital that just trades off costs and benefits, implying a zero relationship at the margin. However, capital requirement imposed by regulators, force banks to hold capital in excess of their private optimal and hence compel banks above their internal optimal capital ratio (Miller, 1995; Buser et al, 1981).

Growing concerns about capital risk has been a critical factor in the front burner of the CBN towards strengthening the capital requirement of Nigerian deposit money banks as this plays a major role in financial performance. In this climate, firms of all kinds and sizes are looking to develop robust financial risk management frameworks that satisfy compliance demands, contribute to better decision making, and enhance performance.

Commercial banks are predominant financial institutions and their changes in performance and structure have far reaching implications on the economy (Bohnstedt et al., 2000). The very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors (Saunders & Cornett, 2005). Earnings and Profitability Performance of the Banking Industry Performance Indicators (%) dropped from N260.02 billion to N189.28 billion in Q4 2020 and Q2 2021 respectively (Nigeria Deposit Insurance Corporation, 2021).

Similarly, the CBN on June 3, 2024 via a press release, revoked the licence of Heritage Bank Plc in the exercise of its statutory powers under BOFIA. The CBN stated that the revocation was necessitated by the bank's breach of section 12(1) of BOFIA, specifically the failure of the board and management of the bank to improve the bank's

financial performance. Consequently, the CBN appointed the Nigeria Deposit Insurance Corporation (“NDIC”) as the liquidator of the bank pursuant to BOFIA.

Several studies have been examined on capital risk and financial performance with mixed findings. For instance, Biwott and Muturi (2014), Kariuki and Wafula (2016) found out that capital risk had a positive influence on the financial performance of microfinance institutions. However, Yahaya et al. (2016) found that capital risk had no influence on performance. Furthermore, the study of Godfrey et al. (2023) on capital risk and financial performance was conducted within a period of 2015 to 2021. However, this study covers from 2020 to 2024. Therefore, this study investigates the impact of capital risk on financial performance of listed deposit money banks in Nigeria.

While the study attempts to answer the question if there exist a relationship between capital risk and financial performance, the main objective is to examine the impact of capital risk on financial performance of listed deposit money banks in Nigeria. In line with the objective of the study, the following hypotheses were formulated in the null form and tested:

H₀₁: Capital risk has no significant effect on listed deposit money banks in Nigeria

This research has important benefits for major stakeholder groups. To researchers, this study adds to the existing literature of capital risk and financial performance. This study exposes the various theories that explain the relationship between capital risk and financial performance. To management of listed deposit money banks, this study gives an insight to the effective management of capital risk. To policymakers and regulatory institutions such as the Financial Reporting Council of Nigeria, the Securities and Exchange Commission, and the Central Bank of Nigeria, this study creates the platform for policy initiation for banks on capital adequacy ratio.

This study examines the impact of capital risk on the financial performance of deposit money banks from 2020 to 2024, a period characterized by major developments and challenges within the Nigerian banking industry. During this period, the Central Bank of Nigeria (CBN) intensified the implementation of the cashless policy aimed at reducing cash transactions and improving financial system efficiency.

The period also witnessed the enforcement of the Code of Corporate Governance for banks and other financial institutions to strengthen transparency, accountability, and effective management practices within the banking sector. In 2021, the Nigerian banking sector experienced the leadership crisis involving the Board of Directors of First Bank of Nigeria Holdings Plc, which prompted the intervention of the Central Bank of Nigeria.

Furthermore, banks faced increasing capital adequacy and leverage challenges, high debt costs, recession-induced financial pressures, and increased dependence on borrowing from the CBN through the Standing Lending Facility (SLF) to manage liquidity shortfalls. The study period also witnessed the collapse of Heritage Bank in 2024. These events raised concerns regarding capital stability, liquidity management, corporate governance, and the financial performance of deposit money banks in Nigeria.

2. Literature Review

This section reviews concepts that define the variables of study, empirical positions on the relationship between the dependent variable of financial performance and independent variable of capital risk. In addition, empirical studies and theories that establish a relationship between capital risk and financial performance were reviewed.

CAPITAL RISK AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

Conceptualisation

Financial Performance

Financial performance is the process of measuring the results of a firm's policies and operations in monetary terms (Erasmus, 2008). It identifies the financial strengths and weaknesses of a firm by establishing relationships between the items in a statement of financial position and statement of performance. Financial performance is defined as a subjective measure that determines how well the organizations use their available resources to generate more revenues. Therefore, this study sees financial performance as the evaluation of a firm's financial soundness and health expressed in money terms.

To measure the financial performance of deposit money banks, there are variety of ratios used such as return on asset, return on equity and net interest margin (Al-Saffar and Al-Khatib, 2013; Alexandru, and Romanescu, 2008). These ratios of financial performance are indicators of a firm's ability to generate earnings in respect of assets utilised, equity funding and net interest accrued. Galant et al. (2017) described return on assets (ROA) and return on equity (ROE) as measures that assess a firm's financial and operating performance. Saeidi et al. (2019) opined that performance measurements based on accounting ratios can reveal the outcomes of managerial actions.

Capital Risk

Capital refers to the adequacy of available equity to absorb probable shocks Capital adequacy ratio as a factor that impact on performance entails the ratio between the bank's capital (Tier 1 and Tier 2) to its weighted assets. Capital is also the cushion a bank uses to absorb unexpected losses and protect investors whilst also protecting the stability of the financial system.

According to Binsaddig et al. (2023), capital risk is described as the bank's capacity to cover volatile assets. It is measured as the difference between asset market prices and equity liabilities. For the purpose of the study, capital risk entails the probability that the value of an asset will decline and lead to loss of invested capital. One measure of the capital strength of a bank is the capital adequacy ratio, which is the amount of a bank's regulatory capital expressed as a percentage of its risk-weighted assets (Aruwa & Mohammed, 2011).

Capital adequacy is a significant driver of profitability (Demirguc-kunt et al., 2013). Capital adequacy by definition is seen as a quantum of fund, which a financial institution should have as a plan to maintain in order to conduct its business in a prudent manner (Kishore & Pandey, 2005).

Capital adequacy is seen as a percentage ratio of a bank's primary capital to its (loan and investments), used as a measure of its financial strength and stability (Amahalu et al., 2016). Li & Zou (2014) see capital adequacy as the minimum amount of capital which a bank holds as required by a regulatory body. The capital adequacy ratio set by bank for international settlements (BIS) banks requires a primary capital base equal to at least eight percent (8%) of their assets (Central Bank of Nigeria, 2006).

Li & Zou (2014) found that CAR is a percentage of capital maintained by the banks against the risk weighted assets of the banks. The ratio is calculated as the total capital to risk weighted assets of the banks. Nasieku et al. (2013) express capital adequacy ratio as capital to total risk weighted assets. Ramirez (2017) submitted that capital adequacy ratio is positively and significantly related to bank performance.

Review of Empirical Literatures

Capital Risk and Financial Performance

Several studies have been examined on capital risk and financial performance. The study of Ogboi and Unuafé (2013) examined the impact of credit risk management

and capital adequacy on the financial performance of commercial banks in Nigeria. Using a time series and cross-sectional data from 2004-2009 obtained from selected banks annual reports and accounts in Nigeria, panel data model was used to estimate the relationship that exists among loan loss provisions (LLP), loans and advances (LA), non-performing loans (NPL), capital adequacy (CA) and return on asset (ROA). Results showed that sound credit risk management and capital adequacy impacted positively on bank's financial performance. While it is evidential from a practical point of view that there is a positive relationship between capital risk and financial performance the study covered from 2004 to 2009. This study extends the scope to 2024.

Godfrey et al. (2023) investigated the influence of capital risk on the financial performance of microfinance institutions (MFIS) in Kenya. The study used a descriptive survey research design with a target population of 12 MFIs listed under the Central Bank of Kenya (CBK). The study used a census approach to sample the entire population. The study used secondary data from published CBK reports over a 7-year period from 2015 to 2021. The result revealed that capital risk had a significant positive effect on the financial performance of the Nairobi Securities Exchange in Kenya. The study used equity to total assets to measure capital risk. However, this study measures capital risk in terms of tier one capital to total risk-weighted assets.

In a similar vein, Barus et al. (2017) examined the effect of capital adequacy on the financial performance of savings and credit societies in Kenya. The study employed an explanatory research design. The target population was 83 registered deposit-taking SACCO's in Kenya that have been in operation for the last five years. The sample size for the study was all 83 SACCOs that have remained in existence since 2011-2015. Census methodology was used in the study. Both primary and secondary sources of data were employed. Multiple linear regression models were used to analyze the data. Based on the findings the study concluded that capital adequacy influenced the financial performance positively and significantly.

Binsadigg et al. (2023) investigated the effect of capital and liquidity risks on financial performance with an empirical examination on banking industry in Bahrain Bourse from 2014 to 2021. The panel regression analysis of data technique was used to attain the study goal. Whereas the statistics for the banks were gathered from their annual financial reports. The study revealed a strong correlation between capital risks, bank size, and financial performance.

Oladejo et al. (2026) investigated the effect of financial risk on financial performance in Nigerian deposit money banks. The study used an expo facto research design. The data were collected using secondary sources from 2010 to 2022. The study utilised stratified sampling to arrive at a sample size of 20. The information regarding the financial and bank performance was obtained through the Central Bank of Nigeria (CBN) reports and Annual Financial reports of the chosen banks. The data obtained was analysed with the help of proper descriptive and panel least square regression analysis methods. The results showed that total regulatory capital (TRC) significantly impact on financial performance.

Godwin and Ogbada (2025) investigated the effect of capital adequacy ratio (CAR), Tier 1 leverage ratio (TLR), and equity-to-assets ratio (EAR) on the financial performance of listed deposit money banks in Nigeria. Using return on assets (ROA) as the measure of financial performance, panel data from audited financial reports of the banks for the period 2014 to 2023 was analyzed through a fixed effects model. The findings reveal that CAR has a strong, positive, and statistically significant effect on financial performance which underscore the importance of maintaining adequate capital levels for financial stability and profitability.

CAPITAL RISK AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

Theoretical Review

Theory of Risk Capital

The theory of risk capital in financial firms was primarily propounded by Robert C. Merton and André Perold in their seminal 1993 work, "Theory of Risk Capital in Financial Firms". They defined risk capital as the cushion needed against unexpected losses, focusing on capital allocation and management in financial institutions. Risk capital is equity investment that backs up obligations to liability holders, including creditors, customers, and contract counterparties.

The discussion on the rationale behind the concept of risk capital in 'financial firms' (for financing, capital budgeting, and risk management needs) was initiated in 1993 in the seminal work by Merton and Perold. According to Merton and Perold, financing firms are distinguished by three relevant features (that reflect the concern of public trust): (a) Customers can be the major liability holders-policyholders or depositors are customers and liability holders at the same time; (b) limited opaqueness to customers and investors-the problem of information disclosure; if disclosed—with a lag), and (c) profitability highly sensitive to the cost of capital-as financial firms operate in competitive financial markets (Merton & Perold, 1993).

Merton and Perold argued that apart from regulatory capital (that corresponds with the concept of capital adequacy and reflects the capital needed to meet the regulatory requirements) and cash capital (capital required to execute transactions, as working capital), financial institutions should measure and manage risk capital. Risk capital was defined by Merton and Perold (1993) as the smallest amount that can be invested to ensure the value of the firm's net assets against a loss in value relative to the risk-free investment of those net assets (Net assets were defined as gross assets minus customer liabilities).

Operationalization of the concept of risk capital requires the identification of its sources. The sources of risk capital are defined as the financing mechanisms that channel the funds to a coverage of the negative financially measurable risk outcomes. As it was assumed, on a company's level, the negative risk outcomes are manifested by the unforeseen and undesired cash flow volatility and risk capital is the injection of funds that help a company to sustain. In this respect, the sources of risk capital embrace various instruments and solutions that allow a company to obtain funds to restore its financial position in the aftermath of a risky event.

3. Methodology

This study employs the correlational research design because it attempts to establish the relationship between capital risk and financial performance. According to Kumar (2013), the correlational design seeks to establish relationships and incidences between variables. The population of the study considers thirteen (13) listed deposit money banks in the Nigerian Exchange from 2020 to 2024.

A census sample was used in the identifying the sample banks. The sample listed banks include Stanbic-IBTC Plc, Zenith Bank Plc, Access Holding Co., Guaranty Trust Holding Co., United Bank for Africa Plc, First Bank Holding Co., Fidelity Bank Plc, First City Monument Bank Plc, Sterling Bank Plc, Jaiz Bank Plc, Unity Bank Plc, Wema Bank Plc, Ecobank Transnational Incorporated.

To conduct this study, annual reports of these banks were sourced to collect data. The study used the Panel Corrected Standard Error Model to regress the data sourced. The model of the study is expressed as follows: $ROE_{it} = \alpha_i + \beta_1 CAR_{it} + \varepsilon_{it}$ (i)

Where: ROE = Return on Equity; CAR = Capital Adequacy Ratio; α = intercepts, ε = error terms, β_1 = Coefficient, it = firm at time t .

The variable measurements of this study include return on equity (dependent variable of financial performance) and capital adequacy ratio (independent variable of capital risk). The return on equity is measured as net income after tax to total equity while capital adequacy ratio is tier one capital to total risk weighted assets.

The study diagnosed data collected and which include normality of residual test, multicollinearity test, and heteroskedasticity test. Nevertheless, the techniques applied in analysing the behaviour of the data include descriptive analysis and correlational analysis.

4. Results and Discussion

Descriptive Statistics

Table 1

Descriptive Result

Variable	Obs	Mean	Std. Dev.	Minimum	Maximum
ROE	65	0.1825	0.1074	-0.0799	0.4575
CAR	65	0.1025	0.2609	-1.0052	0.3596

Source: Extracted from STATA 16.0 Output file, 2026

The descriptive statistics in Table 1 describes the nature of the data set of the study in line with the variable measurements of the study. Return on Equity (ROE) and Capital Adequacy Ratio (CAR). The ROE has 65 observations with a mean of 0.1825, indicating an average profitability of 18.25% for the listed deposit money banks in Nigeria. Its standard deviation of 0.1074 suggests that there is a moderate variation in ROE values, ranging from a minimum of -0.0799 (a negative return, indicating a loss) to a maximum of 0.4575 (45.75% return, a high performance).

For CAR, the mean is 0.1025, which implies an average capital adequacy of 10.25%. However, the relatively high standard deviation of 0.2609 indicates significant variability, with CAR values spanning from -1.0052 (which could suggest extreme financial instability for some banks) to 0.3596 (35.96%, a strong capital buffer). The negative minimum value for CAR suggests that some banks may have insufficient capital relative to their risk-weighted assets, which could pose risks to their stability.

Correlation Analysis

Table 2

Pairwise Correlation

Variable	ROE	CAR
ROE	1	
CAR	0.5383*	1
	0.0000	

Source: Extracted from STATA 16.0 Output file, 2026

The pairwise correlation results in Table 2 show a positive and statistically significant relationship between Return on Equity (ROE) and Capital Adequacy Ratio (CAR). The correlation coefficient of 0.5383 indicates a moderate positive correlation, suggesting that as the capital adequacy ratio increases, the financial performance (ROE) of the listed deposit money banks in Nigeria tends to improve as well.

The asterisk (*) indicates that this relationship is statistically significant at 1% level of significance. This suggests that capital risk is an important factor influencing the banks' profitability, and improving capital reserves may enhance their financial

CAPITAL RISK AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

performance. Previous studies, such as those by Adewale (2013) and Osuji et al. (2019), have similarly shown that higher capital adequacy enhances banks' stability and profitability, supporting the findings of this study.

Diagnostic Tests

Normality Test

Table 3

Normality of Residuals

Variable	Obs	W	V	Z	Prob>Z
Residuals	65	0.96266	2.165	1.672	0.04722

Source: Extracted from STATA 16.0 Output file, 2026

The results of the normality test for the residuals in Table 3 show that the Shapiro-Wilk statistic (W) is 0.96266 with a corresponding Z-value of 1.672 and a p-value of 0.04722. The Shapiro-Wilk test is commonly used to assess whether the residuals of a regression model follow a normal distribution. The null hypothesis of this test is that the residuals are normally distributed. Since the p-value (0.04722) is less than the commonly used significance level of 0.05, we reject the null hypothesis, suggesting that the residuals do not follow a perfectly normal distribution.

The value of W (0.96266) is relatively close to 1, indicating that the departure from normality is not extreme. This result implies that, while there is some indication of non-normality, the residuals are reasonably close to normal, and the results of the regression analysis are likely still reliable, although caution should be taken in interpreting the results, especially for statistical inference and hypothesis testing (Shapiro & Wilk, 1965).

Multicollinearity Test

Table 4

Variance Inflation Factor

Variable	VIF	1/VIF
CAR	1.00	1.000000
Mean VIF	1.00	

Source: Extracted from STATA 16.0 Output file, 2026

The multicollinearity test results in Table 4 indicate that the Variance Inflation Factor (VIF) for the Capital Adequacy Ratio (CAR) is 1.00, with the reciprocal value (1/VIF) also being 1.00. A VIF of 1.00 suggests that there is no multicollinearity problem between CAR and any other variables in the model.

Typically, a VIF greater than 10 indicates high multicollinearity, which can cause issues in regression analysis by inflating the standard errors and making it difficult to assess the individual impact of predictors. In this case, since the VIF is 1.00, it implies that CAR is not highly correlated with other independent variables in the model, ensuring that the estimates of regression coefficients are reliable and not distorted by multicollinearity. This result supports the robustness of the model's findings, as the absence of multicollinearity strengthens the validity of the analysis (Wooldridge, 2016).

Heteroskedasticity Test

Table 5

Modified Wald test for Groupwise Heteroskedasticity

Chi2(13)	1045.42
Prob>chi2	0.0000

Source: Extracted from STATA 16.0 Output file, 2026

The results of the groupwise heteroskedasticity test in Table 5 show a chi-squared statistic (Chi2) of 1045.42 with a corresponding p-value of 0.0000. The null hypothesis of this test is that there is no heteroskedasticity in the model, meaning that the variance of the residuals is constant across observations. Since the p-value is 0.0000, which is well below the conventional significance level of 0.05, we reject the null hypothesis and conclude that there is significant evidence of heteroskedasticity in the model. This suggests that the variability of the residuals is not constant and may vary across different levels of the independent variables.

The presence of heteroskedasticity can lead to inefficient estimates and biased standard errors, which can affect the reliability of hypothesis testing. Therefore, it may be necessary to estimate the panel corrected standard errors (PCSEs) model to correct the heteroskedasticity problem on suffered by the fixed effect model (White, 1980).

Regression Result

Table 6

Summary of Regression Result (Panel Corrected Standard Error Model)

ROE	Coef.	Het-corr. Std. Err.	Z	P> Z
CAR	0.2215	0.0613	3.61	0.000
_cons	0.1598	0.0140	11.39	0.000
R-sq	0.2898			
Prob>chi2	0.0003			
Wald chi2(1)	13.03			
Hausman: chi2(1)	11.56			
Prob>chi2	0.0007			

Source: Extracted from STATA 16.0 Output file, 2026

The R-squared value of 0.2898 suggests that approximately 28.98% of the variation in ROE is explained by the capital adequacy ratio in this model. While this is not an exceptionally high value, it indicates that CAR contributes a meaningful portion to explaining variations in the banks' financial performance.

The model's overall significance is confirmed by the Wald chi-squared statistic of 13.03 with a p-value of 0.0003, which shows that the model is statistically significant. The constant (_cons) has a coefficient of 0.1598 with a standard error of 0.0140, and its Z-value of 11.39 with a p-value of 0.000 also shows statistical significance at the 1% level. This constant term represents the baseline ROE when CAR is zero, indicating that even without capital adequacy, the banks in the sample are expected to have a positive return on equity.

Additionally, the Hausman test results with a chi-squared statistic of 11.56 and a p-value of 0.0007 suggest that there is no significant difference between the fixed-effects and random-effects estimators. This implies that the choice of model (whether fixed-effects or random-effects) does not significantly impact the results, reinforcing the reliability of the regression findings.

CAPITAL RISK AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

Capital Adequacy Ratio (CAR) and Financial Performance

The regression results in Table 6 present the coefficients, standard errors, Z-values, and p-values for the Capital Adequacy Ratio (CAR) and the constant ($_cons$), as well as several diagnostic statistics for the model. The coefficient for CAR is 0.2215, with a standard error of 0.0613. This coefficient indicates a positive relationship between CAR and Return on Equity (ROE), suggesting that an increase in capital adequacy is associated with a 0.2215 increase in ROE.

The Z-value of 3.61 and the p-value of 0.000 indicate that this effect is statistically significant at the 1% level, meaning that the capital adequacy ratio is a strong predictor of financial performance in Nigerian banks. Therefore, these results support the hypothesis that capital adequacy (CAR) has a positive and statistically significant effect on the financial performance of the listed deposit money banks in Nigeria, as measured by ROE.

Policy Implication of Findings

The findings of the study have important policy implications for the regulatory authorities and management of deposit money banks in Nigeria. Given the significant positive relationship between capital adequacy ratio (CAR) and financial performance (ROE), the study underscores the importance of maintaining robust capital reserves in banks to enhance their profitability and stability.

Policymakers should consider strengthening regulations related to capital adequacy to ensure that banks are well-capitalized, especially in the face of economic uncertainties. This could involve setting higher minimum CAR requirements or encouraging banks to improve their capital buffers. Additionally, bank management should focus on optimizing their capital structures, as higher CAR levels can lead to better financial performance and reduced risk of insolvency.

5. Conclusion and Recommendations

Based on the findings of the study, it can be concluded that capital adequacy plays a significant role in determining the financial performance of listed deposit money banks in Nigeria. The positive and statistically significant relationship between the Capital Adequacy Ratio (CAR) and Return on Equity (ROE) demonstrates that higher capital reserves lead to better profitability.

The study further highlights that banks with stronger capital buffers are better positioned to weather financial shocks, ultimately improving their ability to generate returns for shareholders. Although the study explains a moderate portion of the variance in ROE, it emphasizes the critical role of CAR in ensuring the financial health of Nigerian banks.

In light of the findings, it is recommended that listed deposit money banks should consider enhancing capital adequacy requirements to ensure that banks maintain sufficient capital buffers, which would improve their resilience and financial performance. Banks should be encouraged to focus on strengthening their capital structures, with a particular emphasis on increasing their CAR to optimize profitability.

Furthermore, it is recommended that bank management invest in risk management strategies that enhance capital efficiency, while also ensuring that their lending practices do not lead to undue risk exposure. Consequently, future research could explore additional factors influencing financial performance, such as management efficiency, to provide a more comprehensive understanding of the drivers of bank profitability.

References

- Adeusi, S. O., Akeke, N. I., Adebisi, O. S., & Oladunjoye, O. (2013). Risk management and financial performance of banks in Nigeria. *Journal of Business and Management*, 14(6), 52–56.
- Adewale, A. A. (2013). The relationship between capital adequacy and performance of banks in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 3(4), 39–50.
- Adrian, T., Boyarchenko, N., & Giannone, D. (2017). *Vulnerable growth*. Federal Reserve Bank of New York. [Full publication details unavailable in source document]
- Al-Sabbagh, N. M. (2004). *Determinants of capital adequacy ratio in Jordanian banks* [Master's thesis, Yarmouk University].
- Amahalu, N. N., Abiahu, M. F. C., Okika, E. C., & Obi, J. C. (2016). Determinants of capital adequacy: Empirical evidence from quoted electric and electronic technology firms in Nigeria. In *Proceedings of Faculty of Management Sciences International Conference, Nnamdi Azikiwe University* (pp. 29–38).
- Asikhia, O., & Sokefun, A. (2013). Capital adequacy and banks' profitability: An empirical evidence from Nigeria. *American International Journal of Contemporary Research*, 3(10).
- Barus, J. J., Muturi, W., Kibati, P., & Koima, J. (2017). Effect of capital adequacy on the financial performance of savings and credit societies in Kenya. *American Journal of Finance*, 1(4), 1–13.
- Berger, A. N., & Di Patti, E. B. (2006). Capital structure and firm performance: A new approach to testing agency costs and an application to the banking industry. *Journal of Banking & Finance*, 30(4), 1065–1102.
- Berger, A. N., & Bouwman, C. H. S. (2013). How does capital affect bank performance during financial crises? *Journal of Financial Economics*, 109(1), 146–176.
- Besanko, D., & Kanatas, G. (1996). The regulation of bank capital: Do capital standards promote bank safety? *Journal of Financial Intermediation*, 5(2), 160–183.
- Binsadigg, A., Almansouri, H., & others. (2023). Effect of capital and liquidity risks on financial performance: Empirical examination on banking industry in Bahrain Bourse from 2014 to 2021.
- Central Bank of Nigeria. (2006). *Monetary policy circular*. Central Bank of Nigeria.
- Demirguc-Kunt, A., Detragiache, E., & Merrouche, O. (2013). Bank capital: Lessons from the financial crisis. *Journal of Money, Credit and Banking*, 45(6), 1147–1164.
- Diamond, D. W., & Rajan, R. G. (2000). A theory of bank capital. *The Journal of Finance*, 55(6), 2431–2465.
- Drumond, I. (2009). Bank capital requirements, business cycle fluctuations and the Basel Accord: A synthesis. *Journal of Economic Surveys*, 23(5), 798–830.
- Flamini, V., McDonald, C., & Schumacher, L. (2009). *The determinants of commercial bank profitability in sub-Saharan Africa* (IMF Working Paper No. 09/15). International Monetary Fund.
- Galant, A., Cadez, S., & others. (2017)
- Godfrey, N., Mwangi, M., & others. (2023). Capital risk and financial performance of microfinance institutions in Kenya. [Full publication details not provided in source document].

CAPITAL RISK AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

- Godwin, C., & Ogbada, E. (2025). Capital adequacy and financial performance of listed deposit money banks in Nigeria. [Full publication details not provided in source document].
- Jacques, K. T., & Nigro, P. (1997). Risk-based capital, portfolio risk, and bank capital: A simultaneous equations approach. *Journal of Economics and Business*, 49(6), 533–547.
- Kumar, R. (2013). *Research methodology: A step-by-step guide for beginners* (3rd ed.). SAGE Publications.
- Lambe, I. (2014). Corporate capital structure and firm's market value in Nigeria. *Research Journal of Finance and Accounting*, 5(6), 16–31.
- Merton, R. C., & Perold, A. F. (1993). Theory of risk capital in financial firms. *Journal of Applied Corporate Finance*, 6(3), 16–32.
- Miller, M. H. (1995). Do the M&M propositions apply to banks? *Journal of Banking & Finance*, 19(3–4), 483–489.
- Muriithi, J. G. (2016). *Effect of financial risk on financial performance of commercial banks in Kenya* [Doctoral thesis, Jomo Kenyatta University of Agriculture and Technology].
- Nasieku, T., Kosimbei, G., & Obwogi, J. (2013). [Full publication details not provided in source document].
- Neri, M. (2001). *The determinants of capital structure and its effect on corporate performance: An econometric analysis based on 7440 US companies* [Master's thesis, ESLSCA Business School].
- Nigeria Deposit Insurance Corporation. (2021). *Annual report and statement of accounts*. Nigeria Deposit Insurance Corporation.
- Oladejo, M., & others. (2026). Effect of financial risk on financial performance in Nigerian deposit money banks. [Full publication details not provided in source document].
- Ogboi, C., & Unuafé, O. K. (2013). Impact of credit risk management and capital adequacy on the financial performance of commercial banks in Nigeria. *Journal of Emerging Issues in Economics, Finance and Banking*, 2(3), 703–717.
- Osuji, C. A., Ofoegbu, G. N., & Okeke, C. (2019). Capital adequacy and financial performance of deposit money banks in Nigeria: Evidence from the Nigerian banking industry. *International Journal of Economics and Financial Issues*, 9(1), 156–165.
- Saunders, A., & Cornett, M. M. (2005). *Financial institutions management: A risk management approach* (5th ed.). McGraw-Hill.
- Shapiro, S. S., & Wilk, M. B. (1965). An analysis of variance test for normality (complete samples). *Biometrika*, 52(3/4), 591–611.
- Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *The Journal of Finance*, 43(1), 1–19.
- Von Thadden, E.-L. (2004). Bank capital adequacy regulation under the new Basel Accord. *Journal of Financial Intermediation*, 13(1), 90–95.
- White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48(4), 817–838.
- Wooldridge, J. M. (2016). *Introductory econometrics: A modern approach* (6th ed.). Cengage Learning.