



International Journal of Research Publication and Reviews

Journal Homepage: www.ijrpr.com ISSN 2582-7421

Effect of Interest Rate on Financial Performance of Development Banks in Nigeria.

Salihu, Hamza Umar¹, Bashir Ahmad Daneji (Prof.)², Bamanga Umar³, Kabiru Musa Yakubu⁴, Yaya Manu⁵

¹ Department of Banking and Finance, Federal Polytechnic, Bauchi. Email. hsalihu@fptb.edu.ng

² Department of Banking and Finance, Modibbo Adama University, Yola.

³ Department of Banking and Finance, Modibbo Adama University, Yola.

⁴ Department of Banking and Finance, Modibbo Adama University, Yola.

⁵ Department of Banking and Finance, Federal Polytechnic, Damaturu.

ABSTRACT

The study examined the effect of interest rate indicators (lending rate, monetary policy rate, and treasury bill rate) on the financial performance of development banks in Nigeria, using Return on Assets (ROA) and Return on Equity (ROE) as measures of performance. The findings show that the overall regression models were statistically significant and explained a substantial proportion of variations in both ROA (71.1%) and ROE (88.8%). Lending rate had a positive and significant effect on both ROA and ROE, indicating that higher lending rates improve profitability through increased interest income. Monetary policy rate exhibited a positive but insignificant effect on ROA, while it significantly enhanced ROE. Similarly, treasury bill rate showed an insignificant positive influence on ROA but a significant positive effect on ROE. Firm size was found to positively influence both performance indicators, with a stronger and significant impact on ROE. However, census sampling techniques were used. The study concluded that interest rate dynamics are important determinants of the financial performance of development banks in Nigeria, particularly in enhancing shareholders' returns. The study recommends that development banks adopt effective interest rate management strategies, strengthen asset-liability management practices, and leverage favorable monetary policy conditions to improve profitability and sustainability. Furthermore, policymakers should ensure a stable interest rate environment that supports the developmental mandates and financial viability of these institutions.

Keywords: Interest Rate, Lending Rate, Monetary Policy Rate, Treasury Bill Rate, Return on Asset, Development Banks in Nigeria.

1. Introduction

Nigeria's economic growth is still largely driven by the banking industry, whose performance is mostly dictated by monetary policy decisions, especially those pertaining to benchmark interest rates Afolabi, & Wapji (2024). More specifically, achieving improved performance and promoting the expansion of the banking sector depend on choosing an appropriate interest rate Ha, et al (2025). An organization's performance can be defined as the assessment of its functional components that aims to determine how well a business can use efficiency and effectiveness to reach its desired goals Ramirez, (2024).

Organizational managers' methods of measuring and controlling performance translate into improved management evaluation, increased value creation for customers, improved measurement of the organization's knowledge, and the ability to monitor the effectiveness and efficiency of performance metrics Alsharari and Aljohani (2024). High interest rates make borrowing more expensive, which in turn hinders economic growth, lowers aggregate demand, increases unemployment, and slows down domestic investment. Regarding the available financing and investment options, it presents important questions for policymakers Agu, and Ayegbe, (2025).. Conversely, lowering interest rates boosts export competitiveness, corporate confidence, employment, production, investments, and aggregate demand Alazaki, and Okumuş,(2024). Interest rates play a crucial role in the financial operations and performance of development organizations Ka, et al (2026). The relationship between interest rates and financial performance is complex and multifaceted, with implications for funding availability, cost of capital, investment decisions, and overall stability of the organization. Understanding this relationship is of paramount importance for policymakers, investors, and managers of development organizations. Interest rates are a key driver of the overall cost of borrowing for development organizations. Fluctuations in interest rates can significantly impact the profitability and financial health of these organizations. High-interest rates can increase the cost of capital, making it more expensive for development organizations to fund their projects and investments. On the other hand, low-interest rates can stimulate economic growth and investment but may also lead to potential risks such as inflation Oyadeyi, et al (2025).

Development banks play a critical role in providing financial support and promoting economic growth in countries like Nigeria Iliyasu, et al (2024). The relationship between interest rates and the financial performance of development banks is a topic of significant interest due to its implications for

sustainable development and financial stability Huy, and Dinh, (2025). This study aims to investigate the effect of interest rates, specifically lending rate, monetary rate, and Treasury bill rate, on the return on assets (ROA) of development banks in Nigeria (Ogbaka & Eze, 2020).

Interest rates, including lending rates set by commercial banks, monetary policy rates determined by the central bank, and Treasury bill rates in the financial market, are key determinants of the cost of funds for development banks Amidu, (2006). Fluctuations in these interest rates can influence the profitability and financial performance of development banks, impacting their ability to support developmental projects and initiatives. In Nigeria, where the financial sector is dynamic and interest rates are subject to market forces and regulatory interventions, understanding the effects of interest rates on development bank performance is crucial. The financial performance of development organizations is largely dependent on their ability to manage interest rate risk effectively. Interest rate risk refers to the potential impact of interest rate changes on an organization's financial condition, including its profitability, cash flow, and solvency Chen,et al (2025). The return on assets metric is a widely used indicator of financial performance, reflecting the efficiency of an organization in generating profits from its assets. The relationship between interest rates and return on assets can be complex and multifaceted, with various studies in the literature reporting mixed findings on the direction and magnitude of this relationship. There are empirical evidences which suggest that higher interest rates can improve a bank's profitability by increasing the spread between borrowing and lending rates, while others Uppal, (2025) and Wang, (2025). use that high-interest rates may reduce investment and loan demand, affecting overall profitability.

Development banks are seen as an important tool to solve market imperfections that would leave either profitable projects or projects that generate positive externalities without financing Loizos, (2025) and Allen, (2025). In economies with significant capital constraints, these banks serve to alleviate capital scarcity and promote entrepreneurial action to boost new or existing industries Lv et al (2026). They also lend to companies that would not undertake projects if not for the availability of long-term, subsidized funding from a development banks Quoc, et al (2025). These positive effects notwithstanding, development banks are often criticized for supporting politically connected industrialists Newton, & Porter, (2026). Or crowding out private sources of capital that would otherwise help promote new investment (Matos,2026).

Statement of the problem

The financial performance of deposit money banks (DMBs) in Nigeria is intricately linked to the dynamics of interest rates, encompassing lending interest rates (LIR), Deposit Interest Rates (DIR), and the interest rate spread (IRS) Ibrahim, (2024). These components are pivotal in shaping the operational efficiency and profitability of banks, particularly when assessed through the lens of Return on Assets (ROA). In the Nigerian context, the interplay between these interest rate variables and bank performance has garnered significant attention, especially in light of recent economic fluctuations and monetary policy adjustments. Lending interest rates, representing the cost at which banks extend credit to borrowers, directly influence the revenue streams of DMBs. An elevated LIR can enhance interest income, thereby potentially boosting ROA. However, excessively high lending rates may deter borrowing, leading to a contraction in loan portfolios and, consequently, a decline in asset utilization efficiency. Conversely, deposit interest rates, which signify the returns offered to depositors, impact the cost of funds for banks. A higher DIR increases the expense associated with mobilizing deposits, which can compress net interest margins if not offset by proportionally higher lending rates. The differential between LIR and DIR, known as the interest rate spread, serves as a critical indicator of banking sector profitability. A widening spread often suggests improved profitability, yet it may also reflect inefficiencies or heightened risk premiums in the financial system (Dike et al., 2025).

Empirical studies have delved into the ramifications of interest rate fluctuations on the financial performance of Nigerian banks. For instance, Dike et al. (2025) examined the period from 1981 to 2022, revealing that while the monetary policy rate and interbank rate significantly affect bank performance, the lending rate does not exhibit a substantial impact. This finding underscores the complexity of interest rate mechanisms and their varied influence on Development banking operations. The evolving monetary and financial environment in Nigeria necessitates continuous academic inquiry into the impact of interest rates on financial performance of development banks. While previous studies have provided valuable insights, the rapidly changing economic conditions and policy responses in the post-pandemic era demand updated empirical evaluations. A critical investigation into the interrelations between lending rate, monetary policy rate, and Treasury bill rate and ROA among Nigerian Development Banks would not only fill an important gap in contemporary literature but also provide strategic guidance to regulators and stakeholders aiming to foster a resilient banking sector.

Objectives of the study

The main objective of this study is the effect of interest rate on financial performance of development banks in Nigeria, while the specific objectives are:

- To determine the effect of Lending Rate on Return on Asset (ROA) of Development Banks in Nigeria

2. Literature Review

Researchers have used a variety of proxies as indicators of the financial performance of banks in the published research that is now available. A mix of financial ratio analysis, benchmarking, and monitoring performance in comparison to the budget are all included in these proxies. Return on equity, return on assets, net interest margin, and a whole host of other metrics are also used (Alimi, 2014). However, Cai (2025) explained that a good performance measurement framework should include more aspects of performance than just profitability embedded in pure market-oriented indicators. Additionally, this framework should be less susceptible to manipulation by the markets. Cai (2025), Cheng (2025) and Yuan (2025) cited this explanation in their article. According to GARDEZI (2025), "performance" is defined as the capacity of an organization to recognize the value of the investments made into business activities, with the expectation that these activities will contribute to the organization's ongoing pursuit of self-improvement and the realization

of its objectives. Return on Assets (ROA) is a critical profitability ratio that gauges how effectively a company utilizes its assets to generate earnings. Mao (2023; Singh et al. 2024) defines ROA as the ratio of net income to total assets, measuring the company's ability to convert its assets into profits. This ratio indicates the efficiency with which management is deploying the firm's resources to generate income. A higher ROA signifies that the company is more efficient in using its assets to produce profits, which is a clear reflection of strong operational management (Arwan et al., 2024; Umoh, 2024). For instance, if a company has invested heavily in assets but is unable to generate proportionate income, it would reflect a lower ROA, signaling inefficiency in resource utilization. Conversely, a higher ROA (Krstić et al., 2023; Puhakka, 2025) means the company is effectively converting its investments into profits, thus reflecting better resource management. The efficiency of a company's asset utilization directly impacts its profitability and overall financial health, making ROA a crucial metric for investors and stakeholders when evaluating a firm's performance. As Cao et al (2026) suggests, businesses with higher ROA tend to be more efficient and competitive, as they can generate greater returns with the same level of resources compared to their counterparts with lower ROA.

The maximum bank lending rate is the interest rate that deposit money banks may legally charge their borrowers for loans they make to their clients. If the highest interest rate that banks are ready to lend at is too high, the banks run the danger of inducing adverse selection difficulties. This occurs when high-risk borrowers are willing to accept the high interest rates. It is possible that Nigeria's deposit money banks may discourage long-term investment by charging excessively high interest rates, which would limit the country's capacity for economic expansion (Ibrahim, 2024; Okegbemi, 2024). A rise in the base rate that the central bank uses to determine other interest rates would lead to an increase in the maximum interest rate that commercial banks charge their clients when they borrow money. A rise in the maximum lending rate will have an effect on individuals, particularly if the interest rate on any loans they hold is variable. This would result in a decrease in the amount of money that people have available for spending, saving, or investing. People have to pay their bills, and as those costs grow more costly, families are going to have less money available for other expenses (Wilson et al., 2024; Caplovitz, 2025). The Central Bank of Nigeria, like in several other nations, has long used monetary policy as a crucial framework for enacting the intended macroeconomic goals. The monetary policy rate (MR) is a crucial tool the monetary authority uses in this context. The minimal rediscount rate (MRR) was replaced by the MPR in 2006 by the Central Bank of Nigeria (CBN), since the MRR was deemed to be relatively unsuccessful. The CBN has used the MPR as one of its monetary policy tools since it was adopted to set goals and guidelines for other rates (Olawoye & Erediauwa, 2025). Interest rate pass-through (IRPT) is thus one method by which the efficacy of monetary policy can be assessed. The method by which bank interest rates react to changes in the MPR is known as the IRPT (García et al., 2025). It is anticipated that the MPR will announce the Monetary Policy Committee's decision and serve as a reference point for other interest rates. Still up for debate, though, is how well the MPR works to affect other interest rates. Treasury bill (T-bill) rates represent the discounted interest rate at which the government sells short-term debt securities (T-bills) to investors, with the difference between the purchase price and the face value representing the interest earned at maturity (Ioannidou et al., 2024). The government issues T-Bills at discounted rate and pays the interest upfront while the investment sum is repaid at maturity. Treasury bills or T-Bills as they are sometimes called are short-term debt securities issued by the government to make up for budget deficit and fund projects (Hanson et al., 2024). In Nigeria, T-Bills are issued by the central bank of Nigeria (CBN) on behalf of the federal government. The investment is backed by the full faith and credit of the federal government of Nigeria (FGN), hence, it is considered one of the safest forms of investment (Nwoke, 2024; Ninyio, 2025).

3. Methodology

The selection of an ex-post facto, or causal-comparative, design is appropriate for this study as it investigates potential relationships between variables that have already occurred and cannot be manipulated by the researcher. As defined by Kerlinger (as cited in Lord, 1973), this design is a systematic empirical inquiry where the independent variable is not controllable because its manifestations have already taken place or are inherently not manipulated. This approach is particularly suited for research questions concerning past events or pre-existing conditions.

Several practical advantages support the use of this methodology. First, ex-post facto research leverages pre-existing data, which streamlines the research process by eliminating the need for lengthy, prospective data collection efforts. For example, Murungi et al. (2025) effectively utilized this design to analyze the impact of pandemic-era learning strategies on educational outcomes by examining data from events that had already transpired. This retrospective approach is invaluable for examining historical phenomena.

4. Analysis

Missing Value

The respondents were spot-checked on each questionnaire filled before leaving the respondents to avoid a missing observation. This is the fact that all the questions asked in the questionnaire were understandable to the average respondents. To avoid possibility of missing value(s), any questionnaire received was subjected to skim-checking instantly and follow-up (if any), thereby closing any chance of having missing data. Missing data reduced the precision of the calculated statistics. All the assumptions behind any statistical techniques are based on complete cases, and missing values can complicate the theory required, hence the researcher and research assistants were trained and extra careful is examined.

Table 1: Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Lend Rate	9	100.0%	0	0.0%	9	100.0%
Monetary Rate	9	100.0%	0	0.0%	9	100.0%
Treasury Rate	9	100.0%	0	0.0%	9	100.0%
Firms Size	9	100.0%	0	0.0%	9	100.0%
ROA	9	100.0%	0	0.0%	9	100.0%

Normality Test

The data collected was subjected to normality test. This is because one of the assumptions of inferential statistics is that the data will be normally distributed or approximately normal otherwise the data needs to be transformed for normality. The rule of thumb for the calculated statistic is that, when the sample size is less than 50, Shapiro Wilk is to be used otherwise Kolmogorov Smirnov will be used.

Table 2: Tests of Normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Lend Rate	.143	9	.037	.952	9	.092
Monetary Rate	.176	9	.003	.820	9	.000
Treasury Rate	.159	9	.013	.967	9	.294
Firms Size	.116	9	.188	.976	9	.554
ROA	.113	9	.200*	.970	9	.371

For this variable, the sample size is 9, therefore Shapiro wilk test was used. And for all the data points, $p = 0.05$ in each case, suggesting strong evidence of normality, and as such the data is approximately normally distributed. Therefore, normality was assumed for this data set and provided that any other test assumptions are satisfied, an appropriate parametric test can be used. This result can be justified by the normal probability plots below.

5. Summary, Conclusion and Recommendations

Summary of Findings

This study examined the effect of lending rate, monetary rate, treasury rate, and firm size on the financial performance of development banks in Nigeria, using Return on Assets (ROA) as performance indicators. The descriptive statistics revealed that all variables were fairly distributed, with no severe non-normality issues, making the dataset suitable for regression analysis. The correlation and regression results provided evidence of both individual and joint effects of the explanatory variables on bank performance. This study investigated the effect of lending rate, monetary rate, treasury rate, and firm size on the financial performance of development banks in Nigeria, using Return on Assets (ROA) as performance indicators. The analysis was based on descriptive statistics, correlation, and multiple regression techniques. The descriptive statistics showed that the variables were fairly distributed with no serious abnormalities in their distribution, indicating that the data were suitable for regression analysis. This provided a reliable basis for examining the relationship between the explanatory variables and bank performance. The regression result revealed that the model has a strong explanatory power, with an R^2 value of 0.711. This implies that about 71.1% of the variation in ROA is explained by lending rate, monetary rate, treasury rate, and firm size. The ANOVA result further confirmed that the model is statistically significant, indicating that the independent variables jointly influence ROA. The coefficient results for ROA showed that lending rate has a positive and statistically significant effect on ROA, making it the most important determinant of asset-based profitability in the model. Monetary rate and treasury rate both showed positive but statistically insignificant relationships with ROA, indicating

that their effects on asset performance are weak or indirect. Firm size also exhibited a positive relationship with ROA, but the effect was relatively weak compared to lending rate. Findings suggest that while lending rate is the most consistent determinant of ROA is more sensitive to macroeconomic and structural variables. This highlights differences in how asset-based and equity-based performance respond to economic conditions and firm characteristics.

Conclusion

The study concludes that macroeconomic and firm-specific factors play a significant role in determining the financial performance of development banks in Nigeria where the lending rate is a key determinant of ROA indicating that interest rate conditions strongly influence bank profitability. This supports the financial intermediation theory, which emphasizes the importance of interest rate spreads in banking operations. Monetary rate and treasury rate show mixed effects, suggesting that macroeconomic policy variables influence bank performance more strongly through equity returns than asset efficiency. This implies that monetary policy transmission to bank profitability is indirect and more effective in the long run than in the short run. Firm size also plays an important role, therefore, the study concludes that development bank performance in Nigeria is significantly influenced by both macroeconomic conditions and institutional characteristics.

Recommendations

Based on the findings of the study, the researcher recommend that Monetary authorities should strengthen policy transmission mechanisms, so that changes in monetary policy rates effectively translate into improved financial sector performance, especially in terms of asset utilization (ROA).

6. References.

- Afolabi, B., & Wapji, H. N. (2024). Monetary policy and economic growth in Nigeria: Matters arising. *Fuoye Journal of Accounting and Management*, 7(1).
- Agu, O. C., & Ayegbe, A. A. (2025). Domestic Debt, Interest Rate and Economic Growth in Nigeria. *FUOYE Journal of Economics and Emerging Issues*, 1(1&2).
- Alazaki, Z., & Okumuş, N. (2024). Monetary Policy and Interest Rates. *A General Overview of the Syrian Economy*, 1.
- Alimi, R. S. (2014). Inflation and Financial Sector Performance: The Case of Nigeria. Timisoara. *Journal of Economics and Business*, 7 (1), 55-69.
- Amidu, M. (2006). The link between monetary policy and banks' lending behaviour: the Ghanaian case. *Banks & bank systems*, (1, № 4), 38-48.
- Arwani, A., Masrur, M., & Muhammad, R. (2024). Profit growth: Redefining success with an advanced ROA model. *Owner: Riset dan Jurnal Akuntansi*, 8(4), 4507-4523..
- Cai, X. (2025). The impact of EVA performance evaluation system on market value management of state-owned listed companies.
- Cao, Y., Zhang, W., Wan, G., & Tang, Y. (2026). Understanding peer effects in intelligent manufacturing transformation: The roles of competitive and informational motives. *Information Processing & Management*, 63(5), 104717.
- Chen, L., Zhang, K., & Yang, X. (2025). The long-term and short-term effects of interest rate volatility on corporate bankruptcy risk: An industry and supply chain perspective. *Plos one*, 20(2), e0317185.
- Dike, G. N., Okeke, C. O., Eboh, O. S., & Ezeibe, C. V. (2025). Effect of Interest Rate on the Performance of Deposit Money Bank in Nigeria. *British Journal of Marketing Studies*, 13(1), 88-101.
- García, P., Quineche, R., & Zapata, J. (2025). Asymmetry in monetary policy rate pass-through: Long-run and short-run dynamics. *Available at SSRN* 5160639.
- Gardezi, D. H. (2025). *Management Dynamics: Balancing People and Performance*. Vaagai international publishing house.
- Ha, D., Le, P., & Nguyen, D. K. (2025). Financial inclusion and fintech: a state-of-the-art systematic literature review. *Financial Innovation*, 11(1), 69.
- Hanson, S. G., Ivashina, V., Nicolae, L., Stein, J. C., Sunderam, A., & Tarullo, D. K. (2024). The evolution of banking in the 21st century: Evidence and regulatory implications. *Brookings Papers on Economic Activity*, 2024(1), 343-389.
- Huy, N. Q., & Dinh, L. Q. (2025). Balancing bank profits with sustainable development goals: examining the pivotal role of financial stability. *Sustainable Development*, 33, 1182-1199.
- Ibrahim Amoo, B. (2024). EXAMINES DEBT SERVICING ON ECONOMIC GROWTH IN NIGERIA. *Available at SSRN* 5057198.
- Ibrahim, O. A. (2024). MONETARY POLICY AND BANK PERFORMANCE: A STUDY OF NIGERIA'S DEPOSIT MONEY BANKS. *Accounting and Finance Journal*, 12(4), 9-21.
- Iliyasu, A. D., Saliu, H. T., & Zekeri, S. (2024). Financial sector development and economic growth in Nigeria. *Fuoye Journal of Management Science*, 1(1).

- Ioannidou, V., Gao, D., & Gallo, A. (2024). China's Savings Glut and Investors Hunt for Safe Assets. *Available at SSRN 5072411*.
- Jhingan, M. L. (2020). *Money, banking, international trade and public finance* (9th ed.). Vrinda Publications.
- KA, M. R., Bakash, A., & Kavitha, M. (2026). *Indian financial system*. Chyren Publication.
- Krstić, B., Bonić, L., Rađenović, T., Jovanović Vujatović, M., & Ognjanović, J. (2023). Improving profitability measurement: impact of intellectual capital efficiency on return on total employed resources in smart and knowledge-intensive companies. *Sustainability*, 15(15), 12076.
- Loizos, K. (2025). An institutional model of development banking. In *Between Markets and Governments: An Institutional Analysis of Development Banking and Economics in Greece* (pp. 135-167). Cham: Springer Nature Switzerland.
- Lv, L., Miao, M., Guo, L., & Chen, Y. (2026). Opening public data and entrepreneurial activity: Evidence from China. *Applied Economics*, 58(11), 2076-2091.
- Mao, R. (2023). Verify the relationship between a companies' earning per share, return on equity, return on asset, sales growth, price to earnings ratio, current ratio, gross profit margin, quick ratio, asset turnover and its stock price. In *SHS Web of Conferences* (Vol. 163, p. 03003). EDP Sciences.
- Matos, P. (2026). Crowding in or crowding out? A time-frequency analysis of the investment. *Computational Economics*, 1-47.
- Murungi, L., Kanga, B., Kamoyo, J., & Karauri, J. (2025). The effect of COVID-19 new learning strategies on schooling participation: A pre and post-COVID study among students in public secondary schools in Tharaka Nithi County. *International Journal of Advanced Research*, 8(2), 177-187.
- Newton, S., & Porter, D. (2026). *Modernization frustrated: The politics of industrial decline in Britain since 1900*. Taylor & Francis.
- Nwoke, C. (2024). Federal government securities and risk-free investments in Nigeria. *Nigerian Financial Review*, 9(1), 15-28.
- Ogbaka, C., & Eze, M. (2020). Interest rates and return on assets of development banks in Nigeria. *Journal of Development Finance*, 5(1), 50-65.
- Olawoye, S., & Erediauwa, A. (2025). Central Bank of Nigeria and monetary policy implementation. In *Central Banking and Monetary Policy Implementation* (pp. 171-181). Edward Elgar Publishing.
- Oyadeyi, O. O., Osinubi, T. T., Simatele, M., & Oyadeyi, O. A. (2025). The threshold effects of inflation rate, interest rate, and exchange rate on economic growth in Nigeria. *Cogent Economics & Finance*, 13(1), 2460066.
- Quoc, H. N., Van, H. N., & Le Quoc, D. (2025). Unraveling the nexus between sustainable development, bank profitability, and loan loss provisions in Vietnam: A Bayesian vector autoregression perspective. *Research on World Agricultural Economy*, 123-139.
- Ramirez, J. G. C. (2024). The power of planning: how business plans drive effective management strategies. *Integrated Journal of Science and Technology*, 1(1).
- Uppal, A. (2025). Do higher interest rates make the banking system safer? Evidence from bank leverage. *Imperial College. Unpublished paper*.
- Wilson, E. J., Munankarmi, P., Less, B. D., Reyna, J. L., & Rothgeb, S. (2024). Heat pumps for all? Distributions of the costs and benefits of residential air-source heat pumps in the United States. *Joule*, 8(4), 1000-1035.