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MANAGERIAL EFFICIENCY AND PROFITABILITY OF DEPOSIT MONEY BANKS IN NIGERIA

Abstract:

This article investigated the relationship between managerial efficiency and profitability in Deposit Money Banks in Nigeria, focusing on the period from 2014 to 2023. Employing an ex-post facto design, the research analyzed historical data from the audited financial statements of a purposively selected sample of 10 listed banks. This methodology allows for an objective examination of how managerial efficiency impacts profitability metrics such as return on investment (ROI) and return on assets (ROA). The analysis incorporated descriptive statistics, correlation analysis, panel regression, and ANOVA to assess the efficiency-profitability dynamics within the sector. The findings revealed a significant positive relationship between the loan-to-deposit ratio (LDR) and the financial performance of Deposit Money Banks, with a coefficient of 0.6877 ($p=0.000<0.05$). Additionally, the findings indicated notable variation in both the managerial efficiency and return on investment across the sampled banks. These results underscore the importance of effective managerial practices in enhancing profitability within the Nigerian banking sector. Ultimately, the research concludes that a higher LDR positively influences the financial performance of Deposit Money Banks in Nigeria, suggesting that optimizing the allocation of deposits toward loans is a viable strategy for improving overall profitability.

Keywords:

Managerial Efficiency, Profitability, Return on Investment, Loan to Deposit Ratio

JEL Classification: E59, H80, H89

1. Introduction

The relationship between managerial efficiency and profitability in deposit money banks has been a subject of significant academic and practical interest, particularly in developing economies such as Nigeria. Deposit money banks play a critical role in the economic development of any country by mobilizing savings, facilitating capital formation, and providing financial intermediation. These banks must maintain high levels of efficiency in management to maximize profitability, which is essential for their sustainability and contribution to national economic growth.

Managerial efficiency refers to the ability of bank managers to utilize resources—both human and financial—in the most effective manner to achieve optimal outcomes. This involves decision-making regarding credit management, risk assessment, asset allocation, and operational procedures. Efficient management ensures that the bank remains competitive, minimizes risks, and maximizes its return on assets and equity, which are key indicators of profitability (Oladejo & Yinus, 2020). In the banking sector, profitability is typically measured by the net interest margin, return on equity, and return on assets, all of which reflect the bank's capacity to generate revenue in excess of its operational costs (Igbinedion & Olaniyan, 2022).

The Nigerian banking sector has undergone significant reforms in recent decades aimed at improving efficiency and stability. The reforms, particularly those following the global financial crisis of 2008, introduced tighter regulatory oversight and enforced higher standards of corporate governance. Despite these reforms, managerial inefficiencies have persisted in many banks, affecting their profitability (Adeoye & Ademola, 2021). Studies have identified factors such as poor risk management practices, inadequate training of staff, and lack of technological advancement as contributing to inefficiency in bank management. These inefficiencies lead to higher operating costs and non-performing loans, which ultimately erode profitability (Ologunde & Adekanbi, 2021).

In Nigeria, the Central Bank plays a pivotal role in regulating deposit money banks to ensure their efficiency and profitability. Regulatory policies, such as capital adequacy requirements, liquidity ratios, and stress testing, are aimed at fostering managerial efficiency by holding bank executives accountable for their decisions (Sanusi, 2012). Despite these regulatory measures, some banks have struggled with issues of corporate governance and operational

inefficiency. For instance, failures in internal control systems and improper credit evaluation methods have been highlighted as key drivers of non-performing loans, which directly affect profitability (Okeke, 2023).

Another critical aspect of managerial efficiency in Nigerian banks is technological adoption. In the globalized financial environment, banks that embrace technology-driven innovations such as digital banking, online payment systems, and automated credit evaluations tend to perform better in terms of profitability. According to a study by Omotayo and Oluwatosin (2021), Nigerian banks that have invested in financial technology (Fin Tech) industry have seen improvements in customer service efficiency and reduction in operational costs, thereby boosting profitability. This indicates that managerial efficiency is not just about traditional resource allocation but also about the strategic incorporation of modern banking technologies to enhance operational performance.

The profitability of Nigerian deposit money banks is also influenced by external factors such as the macroeconomic environment, interest rates, and inflation. However, the impact of these factors is often mitigated by the internal management practices of the banks. Banks with efficient management systems are better positioned to navigate economic uncertainties and maintain profitability during economic downturns (Aremu & Ekundayo, 2020). For instance, during periods of inflation or economic recession, efficient management enables banks to adjust their pricing strategies, minimize costs, and optimize asset management to protect their profitability (Ekpe, 2019). As such, ongoing efforts to improve managerial efficiency in Nigerian deposit money banks are vital to their sustainability and their contribution to the nation's economic development.

2. Statement of the Problem

The issue of managerial efficiency and profitability in Nigerian deposit money banks has become a critical concern as these institutions are central to economic growth and financial intermediation. Despite the essential role they play, many banks face significant operational inefficiencies, which directly impact their ability to remain profitable. Inefficiencies such as poor risk management, inadequate staff training, and ineffective resource allocation have become pervasive, leading to increased operational costs and a reduction in revenue generation (Adeoye & Ademola, 2021). These challenges are exacerbated by the complex

regulatory environment and the pressures of economic volatility in Nigeria (Aremu & Ekundayo, 2020).

Non-performing loans and weak corporate governance further compound the problem, contributing to a decline in profitability for many banks. Improper loan assessments and a lack of stringent internal controls lead to a rise in bad loans, which erode the financial base of the banks (Ologunde & Adekanbi, 2021). Although reforms have been introduced to strengthen corporate governance and improve managerial accountability, many banks continue to struggle with implementing these measures effectively (Sanusi, 2012). This creates a gap between regulatory expectations and the actual performance of these institutions, resulting in persistently low profitability levels across the sector (Okeke, 2023).

Furthermore, the slow pace of technological adoption in many Nigerian banks hinders their ability to compete in an increasingly digitalized financial landscape. While some banks have embraced Fin Tech innovations to enhance service delivery and operational efficiency, many others lag behind, thereby missing out on opportunities to reduce costs and boost revenue (Omotayo & Oluwatosin, 2021). This technological gap, coupled with internal management inefficiencies, poses a significant threat to the sustainability and profitability of Nigerian deposit money banks, making it imperative to address these issues holistically (Oladejo & Yinus, 2020).

Consequently, the available studies in this context were mostly carried out in manufacturing firms. Meanwhile, this article focused Deposit Money Banks in Nigeria to provide a solid ground on which generalization about the relationship between managerial efficiency and financial performance of banking sector could be established. Hence, this article takes cognizance of the impact of the loan to asset ratio, loan to deposit ratio, loan to capital ratio and loan to shareholders' funds ratio on performance indicator such as return on investment. In addition, this article covers periods that follow the recapitalization reform, in an attempt to ascertain how structural changes in the finance mix of banks, after the bank recapitalization affect performance of banks in terms of performance indicators such as return on investment.

3. Literature Review

3.1 Managerial Efficiency

Management quality denotes the evident positive performance which can be directly attributed to policies and performance of the bank, implemented by the management (Al-Jafari & Alchami, 2015). Management efficiency according to Akshaya (2017) is used to assess administration's quality; it involves analysis of efficiency of management in generating business (top-line) and in maximizing profits (bottom-line). It relates to the bank's compliance with established standards, capacity to adapt to a changing environment, and management skills and leadership. It indicates the amount of bank management effectiveness. Productivity and efficiency of firms depend on the manager's ability, skill and performance and managers play key roles in the attainment of best organizational performance (Nataraja, Nataraja & Ganesh, 2018). Some excerpts in the study of Puja (2018) revealed that efficiency measures have direct relationships with market value performance of publicly traded insurers and a close link with traditional measures of performance (return on assets, return on equity and the expense ratio). Yet, it was noted that the characteristics of the management team may satisfy the conditions for achieving and maintaining competitive advantage thus, managerial skills when combined with other resources of the firm can jointly lead to efficiency (Roman & Dănule, 2018).

According to Akshaya (2017), management efficiency is one of the key internal factors that determine the bank profitability. It is represented by different financial ratios like total asset growth, loan growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. Yet, some financial ratios of the financial statements act as a proxy for management efficiency. The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of these ratios used to measure management

quality is operating profit to income ratio (Engdawork, 2019). The higher the operating profits to total income (revenue) the more the efficient management is in terms of operational efficiency and income generation. The other important ratio is that proxy management quality is expense to asset ratio. The ratio of operating expenses to total asset is expected to be negatively associated with profitability. Management efficiency is another vital component of the CAMEL model that ensures the survival and growth of a bank. So as to see better picture in this regard, loan to deposit ratio, loan to capital ratio, loan to asset ratio and loan to shareholders' fund ratio are considered.

Okaro and Nwakoby (2016) asserted that loan-to-deposit ratio (LDR) is used to assess a bank's liquidity by comparing a bank's total loans to its total deposits for the same period. The LDR is expressed as a percentage. It shows a bank's ability to cover loan losses and withdrawals by its customers. Investors monitor the LDR of banks to make sure there's adequate liquidity to cover loans in the event of an economic downturn resulting in loan defaults. Also, the LDR helps to show how well a bank is attracting and retaining customers. If a bank's deposits are increasing, new money and new clients are being on-boarded. As a result, the bank will likely have more money to lend, which should increase earnings (Bodla, 2018). Although it's counterintuitive, loans are an asset for a bank since banks earn interest income from lending. Deposits, on the other hand, are liabilities because banks must pay an interest rate on those deposits, albeit at a low rate.

3.2 Profitability

According to Akaji, Nwadialor and Agubata (2021), is the attainment of fiscal goals and objectives which can be measured in monetary terms within a specified time frame. To Al-Jafari and Alchami (2015), profitability is limited to profit-making organizations while non-financial performance is for non-profit making organizations. Going further, they stated that educational institutions and most government ministries do not measure their performance based on financial indicators, but with non-financial indicators like customers' satisfaction and quality of service. In the other way, financial performance is measured with financial indicators like return on asset, return on equity and earnings per share among others. Profitability can be examined as the capacity of a firm to create value for the firm, while

simultaneously maximizing the wealth of its shareholders within a particular time frame (Abubakar, 2015).

It reviews what a firm is able to accomplish with its available and accessible resources, which include human resources and time factor. Profitability can be used to predict the stability of a business. Furthermore, the financial statements (statement of profit or loss and other comprehensive income statements, statement of financial position and statement of cash flows) of a firm can be used to determine the financial performance of the firm (Okaro & Nwakoby, 2016). This study examines financial performance from the perspective of return on investment. Typically, common stockholders earn a return on their investment only after all other resource providers to the corporation, including the government, employees, lenders, vendors, and preferred stockholders, have been compensated thereby, making the common stockholders as residual claimants. From this standpoint, Abubakar, Maishanu, Abubakar and Aliero (2018) affirmed that return on investment is an attractive financial performance measure since it can be employed in different industries. A higher ROI is an indication that a corporation increases its capability to generate more profit without needing as much as capital. According to Adegbite, Akintoye and Alu (2019), return on investment (ROI) suggests how efficiently a corporate management is deploying the shareholders' capital.

3.3 Theoretical Review

This article adopted the tenets of Asymmetric Information Theory (AIT)**.** It is generally believed that AIT was established by George Akerlof 1970. According to George (1970), information asymmetry describes a state where the business managers (agents) possess more information regarding the prospects and risks for the firm than do creditors (principal). In the same vein, it is also viewed as a situation in which important information is not accessible to all entities involved in a transaction (Al-Jafari & Alchami, 2015). The managers in commercial banks may know more than the owners, thus, during meetings, they can easily falsify reports to favour their performance, which might be counterproductive to the general performance of the firm. This falsification of the report most times concerns the level of credit management in the organization.

For commercial banks, information asymmetry is evident when a manager (of the company or a unit) who has key knowledge about the possible hazards and profits linked to a capital projects use the knowledge to obtain more loan for himself, by managing the project. In such scenarios, the lender might not have adequate knowledge regarding the borrower and the project (George, 1970). Similarly, Okaro and Nwakoby (2016) highlighted that the presumed information asymmetry brings two problems for organizations; moral hazard (supervising entrepreneurial behavior) and adverse selection (creating errors in lending decisions). These problems are not easy to overcome, because it is not in the best interest of the firm to designate resources to assess and supervising where lending is for seemingly small amounts.

Due to the direct business relationship between the supplier and the organization, they (the supplier) have more cost advantage compared to traditional lenders (like financial institutions), and they also have more advantage in terms of information than traditional lenders. Information asymmetry influences the credit management of organizations; thus, it would be in their best interest if they properly carry out investigations concerning any project or seemingly profitable investment before undertaking them. According to Daniel (2017), investigations can be carried out in terms of good and dependable data and information. That is, firms must have adequate information to permit a complete appraisal of the true risk profile of the counterparty or borrower.

Information asymmetry can be characterized based on the degree to which managers have more information about the firm than shareholders/investors. Another characterization is the degree to which the quantity and quality of information concerning the firm differ from one set of investors to another (George, 1970). Among debtors in the financial markets, information asymmetry is determined based on the actuality of ignorant creditors and knowledgeable debtors whose personal information, the lender is reliant on to make a lending decision. Commercial banks in some contexts could be the ignorant creditors, and in other contexts, they could be the knowledgeable borrower.

3.4 Empirical Review

Andreou, Philip and Robejsek (2016), investigated the impact of managerial ability on performance (additional) of US banks from 1994 to 2010, using ex-post facto design. The

study utilized correlation and regression analysis in the study and controlled for size. The findings show that loan to capital ratio is strongly and positively related with return on asset of US banks under consideration. Eriki and Osagie (2017) sought to investigate the impact of debt to capital ratio on performance of gas firms in Nigeria. The study was carried between 2011 to 2015 among the listed Nigerian Stock Exchange oil firms. Secondary data was extracted from the oil company's annual financial reports thus employing panel regression model for the analysis. From the findings the study found out that debt to capital ratio had an insignificant negative effect on performance of Oil Company in Nigeria.

Bodla (2018) in the United Kingdom examined the implications of managerial efficiency on the profitability of banks using a time series data spanning from 2001 to 2012. The study adopts panel regression estimation techniques. Specifically, findings of the analysis showed a significant contribution to the profitability measures using loan to deposit ratio among other components of managerial efficiency. In the same vein, Sinta and Sylvia (2018) determined the relationship between managerial ability and financial reporting standard. The research adopted a sample of listed banks in the Indonesia Stock Exchange during the period of 2010 to 2016. Using panel data regression, the results established loan to deposit ratio as having a negative effect on financial reporting standard.

Adegbite, Akintoye and Alu (2019) examined managerial efficiency and corporate financial performance of quoted Nigerian firms. Ex-post facto design was adopted for the study. The population covered 169 quoted firms as at 31st December 2017. Data were analyzed using descriptive and panel regression analysis method. Findings revealed that debt-equity ratio has moderate explanatory power on variations in ROA. Nevine, Mohamed and Nouran (2019) investigated the association between operational efficiency and financial performance of the company on capital structure using a sample of 65 listed non-financial companies in the Egyptian Stock Exchange (EGX) during the 7 years (2013-2019). The study used panel regression estimation technique. Among the findings, it was reported that loan-equity ratio has a negative significant effect on financial performance of the company under consideration.

3.5 Gaps in Literature

All over the world, several studies have been carried out on managerial efficiency related constructs, mostly in terms of loan/debt management on performance of organizations, but none of these studies take into consideration the aftermath effect loan (debt) on some components such as asset, deposit, capital and shareholder's fund(equity) as the proxies of managerial efficiency within the fiscal years with performance indicators that form the basis for the maximization of the banks' profitability. This is a gap in literature that this investigation intended to fill. It must be noted that there is a rising number of empirical investigations on the effect of managerial efficiency on performance of organizations in Nigeria. However, few of these studies covered Listed Deposit Money Banks in Nigeria. Also, none of these studies captured financial performance with return on investment.

4. Methodology

The research adopts an ex-post facto design, which is suitable for examining the relationship between managerial efficiency and profitability in Nigerian deposit money banks. This design is appropriate because the research relies on historical data that cannot be manipulated, allowing the analysis of existing relationships based on pre-existing conditions. The use of this research design facilitates an objective investigation into how managerial efficiency has influenced profitability over the specified period. The data for this research is sourced from secondary sources, specifically the audited financial statements of the sampled banks, covering the period from 2014 to 2023. These financial statements provide a reliable basis for evaluating key financial metrics such as return on investment (ROI) which are indicative of profitability. By utilizing secondary data from audited reports, the research ensures that the information is credible and reflective of the true financial performance of the banks.

The population of the reseearch consists of all listed deposit money banks in Nigeria, reflecting the total number of banks operating in the formal sector of the economy. From this population, a sample size of 10 listed banks is selected, using purposive sampling to focus on banks with the most consistent and accessible financial records. The method of data analysis includes descriptive statistics to provide an overview of the data, correlation analysis to determine the strength of relationships between variables, and panel regression to analyze the

impact of managerial efficiency on profitability over time. Additionally, ANOVA (Analysis of Variance) is employed to compare the profitability performance across the sampled banks, providing robust insights into the efficiency-profitability dynamics within the sector.

5. Results of Findings

5.1 Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Minimum	Maximum
ROI	230	7.78	7.71	-17.02	52.46
LDR	230	3.21	4.04	-14.28	39.88
AST	230	0.93	0.30	0.06	1.51

The descriptive statistics table provides an overview of the key variables used in the article: Return on Investment (ROI), Loan-to-Deposit Ratio (LDR), and Asset Size (AST). The table summarizes the number of observations, mean values, standard deviations, and the range (minimum and maximum values) for each variable. For the Return on Investment (ROI), there are 230 observations, with an average (mean) value of 7.78%. This indicates that, on average, the sampled banks had a return of 7.78% over the research period. The standard deviation of 7.71% suggests a relatively high variability in ROI, indicating significant differences in profitability between the banks. The minimum ROI recorded is -17.02%, reflecting instances where some banks experienced losses, while the maximum ROI is 52.46%, showing that certain banks achieved a very high return on their investments.

The Loan-to-Deposit Ratio (LDR) also has 230 observations, with an average value of 3.21. This ratio indicates that, on average, the banks lent out 3.21% of their deposits as loans. The standard deviation of 4.04 reveals a moderate degree of variation across banks, with some being more conservative or aggressive in lending. The LDR ranges from a minimum of -14.28%, which could signify negative net lending due to high non-performing loans, to a maximum of 39.88%, suggesting that some banks were highly active in lending. For Asset Size (AST), the 230 observations show a mean value of 0.93, which likely represents the relative scale of the banks' total assets within the sample. The standard deviation is 0.30, indicating moderate variation in asset sizes across the banks. The minimum value of 0.06

shows that some banks had relatively small asset bases, while the maximum value of 1.51 reflects the largest bank in the sample, which has more extensive financial resources.

5.2 Pearson Correlation

5.2 Pearson Correlation Analysis Result

Var.	**ROE**	**LDR**	**AST**
ROI	1		
LDR	0.532	1	
AST	0.005	0.083	1

The Pearson Correlation Analysis table shows the relationship between three key variables: Return on Investment (ROI), Loan-to-Deposit Ratio (LDR), and Asset Size (AST). The correlation coefficients indicate the strength and direction of the linear relationships between these variables. Values closer to 1 or -1 represent strong correlations, while values closer to 0 indicate weak or no correlation.

ROI and LDR: The correlation coefficient between ROI and LDR is 0.532, which indicates a moderate positive relationship. This suggests that as the Loan-to-Deposit Ratio increases, the Return on Investment tends to increase as well. In other words, banks that lend out a higher proportion of their deposits tend to see an improvement in their ROI, implying that lending activities are contributing to profitability.

ROI and AST: The correlation between ROI and Asset Size (AST) is 0.005, which is very close to zero. This indicates that there is no significant relationship between a bank's asset size and its Return on Investment. Larger or smaller asset sizes do not seem to have a direct impact on ROI in this sample of banks.

LDR and AST: The correlation between Loan-to-Deposit Ratio and Asset Size is 0.083, indicating a very weak positive relationship. This suggests that banks with larger assets may slightly engage in more lending relative to their deposits, but the relationship is minimal. Therefore, asset size does not strongly influence a bank's lending behavior.

5.3 Panel Regression Estimation Results

Objective I: Effect of loan to deposit ratio on the return on investment of deposit money banks in Nigeria

$ROI_{it} = \alpha_0 + \alpha_1 LDR_{it} + \alpha_2 FIS_{it} + \alpha_3 AST_{it} + \mu_{it}$

Table 5.3: Results of Regression Estimate and Diagnostic Tests of Model I:

Dependent Variable: ROI

	(1)	*(2)*	*(3)*
VARIABLES	***OLS***	***FE***	***RE***
LDR	1.015***	0.6877***	0.783040***
	(0.000)	(0.000)	(0.000)
AST	1.3202	-1.5573	-0.252046
	(0.3614)	(0.5006)	(0.8939)
Constant	4.88304**	9.997019***	8.414589***
	(0.0227)	(0.0001)	(0.0005)
Observations	230	230	230
R-squared	0.286879	0.518432	0.207181
Adj. R-Squared	0.277413	0.434466	0.196657
F-Stat	30.30563 Prob > F = 0.0000	6.174324 Prob > F = 0.0000	19.68623 Prob>chi^2 = 0.00000
	Hausman Test		
Chi2(1) = 20.224			Prob>chi^2 = 0.0002

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Data Analysis, (2024).

Panel regression analysis was applied due to the presence of balanced panel data, combining both cross-sectional and time series elements. The analysis included pooled ordinary least squares, fixed effects, and random effects estimations. Following these estimations, the Hausman test was performed to determine the most suitable model. The test produced a Chi-squared statistic of 20.224 with a p-value of 0.0002, indicating statistical significance. This result shows that the Fixed Effects model is preferred over the Random Effects model, as it

more effectively captures the relationship between individual bank effects and the explanatory variables. The analysis revealed that the Loan-to-Deposit Ratio (LDR) has a positive and significant impact on the Return on Investment (ROI) of deposit money banks in Nigeria, with a coefficient of 0.6877 ($p=0.000<0.05$). This implies that banks can boost their ROI by increasing their LDR, suggesting that allocating more deposits towards loans is a profitable strategy.

5.4 Analysis of Variances

Objectives II: Evaluate the degree of variation in managerial efficiency among Deposit Money Banks in Nigeria

Table 5.4: Results of Analysis of Variance of the difference among Deposit Money Banks in Nigeria

Sources of Variables	Sum of Square (SS)	Degree of Freedom (DF)	Means Square (MS)	F-statistics	P-Value
Between Groups	2893.922	3	964.6408	124.7158	0.000
Within Groups	7084.998	916	7.734714		
Total	9978.920	919	10.85846		

The Between Groups source of variation represents the differences in managerial efficiency across the various Deposit Money Banks. The sum of squares between groups is 2893.922, which indicates the total variation attributable to differences among the banks. This variation is spread over 3 degrees of freedom, resulting in a mean square of 964.6408. The mean square is then used to calculate the F-statistic, which is a measure of how much the group means differ relative to the variability within the groups. The F-statistic value of 124.7158 is quite high, indicating a significant difference in managerial efficiency among the banks. The corresponding p-value is 0.000, which is well below the conventional threshold of 0.05. This p-value suggests that the observed differences in managerial efficiency are statistically significant and not due to random chance.

The Within Groups source of variation captures the variation in managerial efficiency within each Deposit Money Bank. The sum of squares within groups is 7084.998, which reflects the variability within the banks. With 916 degrees of freedom, the mean square within groups is calculated to be 7.734714. This value serves as the denominator in the F-statistic calculation and represents the average variation within each bank. Hence, the results from the ANOVA table indicate that there is a significant degree of variation in managerial efficiency among Deposit Money Banks in Nigeria. The high F-statistic and the very low p-value provide strong evidence to reject the null hypothesis, which posits that there is no significant difference in managerial efficiency among the banks. Therefore, managerial efficiency does indeed vary significantly across different Deposit Money Banks in Nigeria.

Objectives III: ascertain the degree of variation in return on investment among Deposit Money Banks in Nigeria.

Table 5.5: Results of Analysis of Variance of the difference between

Sources of Variables	**Sum of Square (SS)**	**Degree of Freedom (DF)**	**Means Square (MS)**	**F-statistics**	**P-Value**
Between Groups	7393.541	2	3696.770	186.2630	0.000
Within Groups	13634.92	687	19.84704		
Total	21028.46	689	30.52026		

The ANOVA table provides a detailed breakdown of the variability in this financial metric across different banks. The "Between Groups" variation represents the differences in ROI among the various Deposit Money Banks. The sum of squares between groups is 7393.541, reflecting the total variability that can be attributed to differences between the banks. With 2 degrees of freedom, the mean square between groups is calculated to be 3696.770. This mean square value is a key component in determining the F-statistic, which in this case is 186.2630.

The F-statistic is a measure of how much the ROI differ among the banks relative to the variability within each bank. The p-value associated with this F-statistic is 0.000, which is significantly below the conventional alpha level of 0.05. This indicates that the differences in ROI among the Deposit Money Banks are statistically significant and unlikely to have occurred by random chance.

The "Within Groups" variation captures the differences in ROI within each individual bank. The sum of squares within groups is 13634.92, distributed over 687 degrees of freedom. This results in a mean square within groups of 19.84704, which represents the average variability in ROI within the banks. Hence, the ANOVA results demonstrate that there is a significant variation in the ROI to equity ratio among Deposit Money Banks in Nigeria. The high F-statistic and the very low p-value lead to the rejection of the null hypothesis, which suggests no significant difference in the ROI to equity ratio across these banks. Thus, it can be established that the Return on Investment (ROI) varies significantly among different Deposit Money Banks in Nigeria.

6. Discussion of Findings

The article examined managerial efficiency and financial performance of Deposit Money Banks in Nigeria for a period of twenty years (2014 to 2023). It was found that the loan-to-deposit ratio (LDR) has a significant positive impact on the financial performance of Deposit Money Banks in Nigeria, as measured by return on assets (ROA), with a coefficient of 0.6877 ($p=0.000<0.05$). This suggests that a 1% increase in the LDR would result in a 0.69% increase in the banks' return on investment. The LDR's independent capacity to enhance financial performance can be attributed to the fact that a higher ratio indicates more of the bank's deposits are being converted into loans, which generate interest income, a primary contributor to a bank's earnings. Additionally, a higher LDR reflects more efficient use of deposits, leading to increased returns on investments and assets, driven by strong demand for credit in Nigeria, enabling banks to lend more and earn higher returns.

Theoretically, this finding aligns with the asymmetric information theory, which posits that banks with better information about their borrowers can make more informed lending decisions, optimizing their loan-to-deposit ratio. Accurate risk assessments allow banks to

extend more loans without a corresponding rise in defaults, boosting profitability. Moreover, strong relationships between banks and borrowers help mitigate the impact of asymmetric information, leading to better loan performance and stronger positive effects of LDR on financial outcomes. Empirical evidence also supports this, as studies by Okaro and Nwakoby (2016), Bodla (2018), and Olabisi and Babatolu (2019) confirmed a significant relationship between LDR and financial performance. Similarly, Bishnu (2019) found a positive impact of LDR on corporate profitability, although Chembe and Jing (2018) reported no significant effect of LDR on bank performance.

Furthermore, it was revealed that there is a significant degree of variation in the managerial efficiency of Deposit Money Banks in Nigeria. The significant variation in managerial efficiency among DMBs suggests that management practices differ widely. Some banks may have more effective management strategies, better risk management practices, or more efficient use of technology, leading to better financial performance. Also, different banks may adopt varied strategic approaches to lending, investment, and risk management. These strategic differences can lead to varying degrees of efficiency in resource allocation, cost management, and revenue generation. Consequently, banks with more effective strategies will show higher managerial efficiency. Hence, the significant variation in managerial efficiency underscores the importance of effective management practices and strategic decision-making in driving bank performance. This discovery corresponds with the discovery of Menik and Faisal (2023) and Heikal, Khaddafi and Ummah (2019) that the value of managerial efficiency across banking firms differs from one another.

Finally, it was discovered that there is a significant degree of variation in return on investment of Deposit Money Banks in Nigeria. This suggests that the profitability and efficiency in generating returns on investments vary considerably among these banks. Such variations can be attributed to the fact that Banks with more effective management are likely to implement strategies that maximize returns on investments. For example, banks that optimize their cost structures, manage risks effectively, and leverage technology to enhance operations will likely achieve higher ROI compared to less efficient counterparts. Other factors that could result in a significant difference in return on investment of banks include differences in risk management practices, market and economic conditions, variation in capital structure and funding costs and

regulatory environment and compliance cost. This finding aligns with the conclusion of Adegbaju and Olokoyo (2018), Owojori, Akintoye and Adidu (2021) and Uremadu (2022) found that the financial performance of Nigerian banks varies widely due to factors such as asset quality, management efficiency, and capital adequacy.

7. Conclusion and Recommendations

Based on the findings of this empirical article, it can be concluded that the loan-to-deposit ratio (LDR) has a significant positive effect on the financial performance of Deposit Money Banks in Nigeria. A higher LDR, which indicates greater lending activity, contributes to improved returns on investment and assets by generating increased interest income. The strong demand for credit in Nigeria further supports this positive relationship, allowing banks to effectively utilize their deposits for loans. This study also aligns with the asymmetric information theory, suggesting that banks with better borrower insights can optimize lending decisions, thus enhancing profitability. The results underscore the importance of strategic lending practices in driving financial performance within the Nigerian banking sector. Corresponding to the findings of the article, the following recommendations are made:

i. The Loan to deposit ratio (LDR) has been shown to positively and significantly affect financial performance. To optimize this effect, DMBs should focus on maintaining an optimal balance between the loans they disburse and the deposits they hold. Achieving this balance requires a proactive approach to both loan management and deposit mobilization. Regular monitoring of the LDR is essential to ensure it remains within a range that maximizes returns without overexposing the bank to credit risk.

ii. Moreover, the findings also indicate a significant degree of variation in managerial efficiency across DMBs in Nigeria. This variation underscores the importance of effective management practices in driving financial performance. Banks with higher managerial efficiency are likely better positioned to optimize the aforementioned ratios and achieve superior financial outcomes. To address this, DMBs should invest in management training programs that focus on strategic decision-making, risk management, and operational efficiency. Additionally, adopting advanced data analytics and financial management tools can

provide managers with deeper insights into operational performance, enabling them to make more informed decisions that enhance overall efficiency.

iii. Lastly, the significant variation in the return on investment (ROI) among DMBs highlights the competitive landscape of the Nigerian banking sector. To improve ROI, banks need to adopt innovative financial products and services that cater to the evolving needs of their customers. Diversifying income streams through non-interest revenue sources, such as fees and commissions, can also help stabilize returns and reduce reliance on traditional lending. Furthermore, strengthening customer relationships through personalized banking services and leveraging digital platforms can drive customer loyalty and long-term profitability.

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