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ASSET QUALITY AND FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA: THE ROLE OF NON-PERFORMING LOANS AND TOTAL LOAN RATIOS

Adewale. O. TAIWO (PhD)[1], Abiodun Tejumade LAWAL[2]
[1]*Faculty of Management and Social Sciences, Department of Management and Accounting, Lead City University, Ibadan, Nigeria.*
[2]*Department of Management and Accounting Lead City University, Ibadan, Nigeria*

ABSTRACT
This study examines the relationship between asset quality indicators and the financial performance of deposit money banks (DMBs) in Nigeria, focusing specifically on non-performing loan ratio (NPLR) and total loan ratio (TLR) as determinants of profitability growth rate (PGR). Using a balanced panel dataset comprising ten DMBs over a ten-year period (2014–2023), the study employs descriptive statistics, correlation analysis, and fixed-effect panel regression to test the hypothesized relationships. The results reveal that non-performing loan ratio has a negative and statistically significant effect on profitability growth rate (β = -0.642, $p < 0.01$), indicating that increased credit defaults substantially reduce banks' ability to grow earnings. Conversely, total loan ratio demonstrates a positive and significant effect on profitability growth rate (β = 0.212, $p < 0.05$), suggesting that efficient loan portfolio expansion enhances bank performance. The findings have important implications for credit risk management practices and strategic asset allocation in Nigerian banking sector. The study recommends that bank management prioritize credit risk control mechanisms, optimize loan portfolio composition, and strengthen credit appraisal processes to sustain profitability growth.
KEYWORDS: *Asset Quality, Non-Performing Loans, Total Loan Ratio, Profitability Growth Rate, Deposit Money Banks, Nigeria*

1. INTRODUCTION

Deposit Money Banks (DMBs) play pivotal roles in Nigeria's economic development through financial intermediation, resource mobilization, and credit provision to businesses and individuals. Access to bank credit is particularly critical for entrepreneurial ventures and small and medium enterprises (SMEs), which are key drivers of economic growth and job creation in emerging economies(Ibikunle & Olateju, 2023). However, lending to entrepreneurial ventures often carries elevated credit risk, contributing to asset quality challenges in the banking sector

Asset quality refers to the health of a bank's loan and investment portfolio and the extent to which these assets generate revenue without incurring losses. Poor asset quality, often reflected by high levels of non-performing loans (NPLs), has the potential to erode bank profitability, diminish capital buffers, and precipitate financial instability. The Nigerian banking industry has witnessed episodes of rising NPLs, driven largely by economic volatility, sectoral weaknesses, and governance lapses in credit administration (Ikpesu & Oke, 2022).

The non-performing loan ratio (NPLR) reflects the proportion of loans that are in default or close to being in default, signaling deteriorating asset quality. High NPLR indicates that a significant portion of the bank's loans are at risk of not generating expected returns, which can erode profitability through higher provisioning for bad debts, legal costs, and write-offs (Natufe & Evbayiro-Osagie, 2023). Conversely, the total loan ratio (TLR), which measures the proportion of loans in the bank's total assets, represents the bank's lending intensity and credit exposure level. While a high TLR could imply concentration of activities in lending operations with potentially higher returns, it also exposes banks to elevated credit risk depending on portfolio quality and risk management practices (Oke & Ikpesu, 2022).

Despite the critical importance of these asset quality indicators, there remains a paucity of empirical studies that systematically assess their specific effects on profitability growth rate within the Nigerian banking context using

recent post-pandemic data. This study addresses this gap by examining how NPLR and TLR influence the profitability growth rate of Nigerian DMBs.

2.1 LITERATURE REVIEW

Profitability growth rate represents the rate at which a bank's net earnings increase over time, providing valuable insights into the institution's ability to create sustainable profits from its operations. This metric reflects not only the bank's current earning capabilities but also its capacity for growth, competitiveness, and resilience in a dynamic economic environment. In the Nigerian banking sector, where economic fluctuations, regulatory adjustments, and operational inefficiencies can impact financial outcomes, profitability growth rate serves as a reliable indicator of a bank's underlying financial health and operational robustness (Gazi et al., 2022).

Non-Performing Loan Ratio (NPLR) is one of the most critical metrics employed in evaluating the asset quality of financial institutions. It measures the proportion of loans within a bank's loan portfolio that are classified as non-performing or defaulting—loans where the borrower has failed to make scheduled payments for a certain period, typically 90 days or more, or where full repayment of principal and interest is no longer expected. A high NPLR is indicative of deteriorating asset quality, which threatens the stability, profitability, and solvency of banking institutions. When loans become non-performing, they cease to generate income and banks are required to make provisions for potential loan losses, which erodes profits and depletes shareholders' equity (Kwashie et al., 2022).

In Nigeria, NPLR has been a subject of regulatory concern, prompting the Central Bank of Nigeria (CBN) to set prudential thresholds for banks to maintain healthy loan books and minimize exposure to credit risks. The issue of asset quality remains particularly pressing in Nigeria's banking landscape, with the industry having witnessed episodes of rising NPLs driven by economic volatility, sectoral weaknesses, and governance lapses in credit administration.

Total Loan Ratio (TLR) is a widely utilized metric in assessing the lending aggressiveness and credit exposure level of banks. It is typically measured by comparing total loans and advances to total assets of banks. The ratio provides insight into the proportion of a bank's resources committed to lending activities relative to other forms of investments or liquid assets. TLR is considered an important proxy for understanding the quality of banks' assets because an over-concentration of banks' portfolios in loan assets may heighten vulnerability to credit risks, especially when credit appraisal, monitoring, and recovery processes are weak.

High TLR levels often reflect aggressive lending practices by banks seeking to maximize interest income; however, such strategies may compromise credit quality if not matched with robust risk management frameworks. Empirical studies have established a significant relationship between TLR and bank stability, indicating that beyond a certain threshold, higher TLR contributes to financial fragility due to increased susceptibility to credit defaults (Oke & Ikpesu, 2022).

2.2 Theoretical Framework

This study is anchored on the Capital Adequacy Theory, which provides a fundamental framework that underscores the importance of maintaining sufficient capital reserves within banks to safeguard against potential financial distress and insolvency. The theory emphasizes that banks must hold adequate capital to absorb losses, protect depositors, and ensure smooth functioning of the financial system. Capital acts as a cushion that mitigates the risks associated with asset quality deterioration, such as non-performing loans and loan defaults.

Capital Adequacy Theory emerged from the need to formalize regulatory capital standards, notably influenced by the Basel Accords, which prescribe minimum capital requirements to enhance banking sector resilience. Within the context of asset quality, the theory suggests that capital adequacy can moderate the negative effects of poor asset quality on bank performance. Banks with robust capital bases are better positioned to absorb losses from non-performing loans without destabilizing their financial position.

2.3 Empirical Review

Empirical studies examining the link between non-performing loan ratio and profitability growth rate have consistently identified this relationship across diverse financial environments. Research suggests that higher levels of non-performing loans negatively impact profitability growth rate by eroding income streams and increasing loan loss provisions, which subsequently reduce net income.

Investigations focusing on Nigerian Deposit Money Banks have observed that elevated NPL ratios significantly suppressed profit growth, especially when coupled with weak capital adequacy positions. A study conducted on listed Nigerian banks between 2012 and 2021 revealed a significant negative association between NPL ratio and profitability growth rate, emphasizing that banks with high non-performing loans struggled to maintain profitability momentum due to recurring provisioning expenses and reduced interest income (Natufe & Evbayiro-Osagie, 2023).

Research conducted across Sub-Saharan Africa found that financial performance of banks was highly sensitive to fluctuations in NPL ratios, with profitability metrics showing substantial declines in periods of heightened credit defaults. Studies have confirmed that the deterioration in profitability growth rate due to rising NPL ratios can be mitigated by the presence of sound credit risk management frameworks and efficient recovery processes.

Empirical research has extensively explored the relationship between total loan ratio and profitability growth rate within the banking sector. Studies have shown that banks with higher TLRs tend to experience increased profitability growth rates due to higher interest income. However, this positive relationship is highly contingent on the quality of the loan portfolio.

Empirical findings from emerging economies, including Nigeria, have indicated that TLR has a significant positive effect on profitability growth rates of banks, particularly during periods of economic stability and growth. Evidence from Nigerian Deposit Money Banks has corroborated these observations, revealing that while TLR positively influenced profitability growth during credit booms, periods of economic downturn led to declines in profitability due to increased loan defaults.

Research has further emphasized that the impact of TLR on profitability growth rate is moderated by banks' credit risk management practices and loan monitoring efficiency. Banks that have established sound credit appraisal systems and recovery mechanisms experience less volatility in profitability even with high TLRs (Oke & Ikpesu, 2022).

3. METHODOLOGY

This study adopts an ex post facto research design, which is appropriate for analyzing historical data of financial institutions. The ex post facto design allows examination of already existing data without manipulating variables, thus providing an objective assessment of relationships between asset quality indicators and financial performance. The quantitative nature of the study aligns with the positivist research philosophy, which emphasizes objective measurement and statistical analysis.

Population and Sample

The population comprises all deposit money banks operating within Nigeria's banking sector as recognized and licensed by the Central Bank of Nigeria. The study adopts a purposive sampling technique, selecting ten (10) deposit money banks that have consistently operated and published audited annual financial reports over the study period (2014–2023). This ensures inclusion of only banks with sufficient data on asset quality indicators and financial performance variables necessary for comprehensive empirical analysis.

Data Collection

The study employs secondary data collection methods, obtaining information from audited annual reports and financial statements of selected deposit money banks, as well as publications of the Central Bank of Nigeria (CBN) and Nigerian Stock Exchange (NSE). Data collection focuses on extracting relevant financial ratios and performance indicators including non-performing loan ratio, total loan ratio, and profitability growth rate over the defined ten-year period.

Method of Data Analysis

The analysis employs descriptive statistics to summarize data characteristics, followed by inferential statistical techniques to examine relationships between variables. Panel regression analysis is utilized to test the influence of independent variables (NPLR and TLR) on the dependent variable (profitability growth rate). Both fixed effect and random effect models are estimated, with the Hausman test guiding model choice. Diagnostic tests including multicollinearity, autocorrelation, heteroscedasticity, and normality tests are conducted to ensure reliability and validity of results.

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4. RESULTS AND DISCUSSION

Table 1 presents the descriptive statistics for all variables in the study.

Table 1: Descriptive Statistics of Study Variables

Variable	Mean	Std. Dev.	Min	Max	Observations
PGR (%)	8.45	4.32	-2.10	19.80	100
NPLR (%)	4.92	2.05	1.20	10.30	100
TLR (%)	52.34	8.76	38.10	72.45	100

The results show that the average profitability growth rate (PGR) of sampled banks during the period was 8.45%, with a minimum of -2.10% indicating losses in some years, and a maximum of 19.80%. The average non-performing loan ratio (NPLR) was 4.92%, within the Central Bank of Nigeria's prudential limit of 5%, although some banks exceeded this threshold. The mean total loan ratio (TLR) was 52.34%, indicating that just over half of total assets were deployed into loans.

Regression Results

The study employed panel regression analysis to test the hypotheses. Both fixed effect and random effect models were estimated, with the Hausman test indicating that the fixed effect model was more appropriate.

Table 2: Regression Results (Dependent Variable: PGR)

Variable	Coefficient	Std. Error	t-Statistic	p-Value
Constant	12.540	2.135	5.873	0.000
NPLR	-0.642	0.218	-2.945	0.004
TLR	0.212	0.085	2.494	0.014
R-squared	0.764			
Adj. R-squared	0.742			
F-statistic	28.345			0.000

Hypothesis Testing

Hypothesis 1: Non-performing loan ratio has no significant effect on the profitability growth rate of Deposit Money Banks in Nigeria.

The regression results reveal that NPLR has a negative and statistically significant effect on PGR ($\beta = -0.642$, $p < 0.01$). This implies that a one percentage point increase in non-performing loan ratio leads to a 0.642 percentage point decrease in profitability growth rate. The null hypothesis is therefore rejected, confirming that higher non-performing loans significantly reduce profitability growth. This finding supports the assertion that deteriorating asset quality, as measured by NPLR, poses a direct threat to financial performance.

Hypothesis 2: Total loan ratio has no significant effect on the profitability growth rate of Deposit Money Banks in Nigeria.

The analysis shows that TLR has a positive and statistically significant effect on PGR ($\beta = 0.212$, $p < 0.05$). This indicates that a one percentage point increase in total loan ratio results in a 0.212 percentage point increase in profitability growth rate. The null hypothesis is rejected, confirming that efficient loan allocation and portfolio expansion positively influence profitability growth. This result is consistent with the intermediation theory of banking, which posits that financial institutions generate earnings by transforming deposits into profitable credit assets.

DISCUSSION OF FINDINGS

Non-Performing Loan Ratio and Profitability Growth Rate

The finding that non-performing loan ratio negatively and significantly affects profitability growth rate aligns with prudential banking literature emphasizing that high levels of impaired loans erode earnings by reducing interest income and increasing provisioning expenses. This outcome supports the view that sound credit risk management is essential for sustainable profitability.

The evidence confirms that asset quality deterioration measured through NPLR poses a direct threat to financial performance. This finding is consistent with prior empirical studies in Nigeria and other emerging economies, which have shown that banks with high non-performing loan portfolios often suffer from reduced capacity to generate new credit, slower revenue growth, and increased regulatory scrutiny.

In the Nigerian context, the vulnerability of banks' loan portfolios to macroeconomic shocks, exchange rate volatility, and poor credit administration practices has intensified the risk of impaired loans. The resultant effect is deterioration of banks' asset bases, which limits their ability to generate income and sustain profitability levels required to meet stakeholder expectations. The implication is that bank managers and regulators should prioritize effective loan monitoring and recovery strategies to mitigate the impact of credit losses.

Total Loan Ratio and Profitability Growth Rate

The positive and significant relationship between total loan ratio and profitability growth rate indicates that when banks efficiently allocate a higher proportion of their assets to loans, profitability tends to improve. The positive relationship suggests that loan portfolios remain the primary source of income for Nigerian banks, and prudent loan expansion—without compromising asset quality—can be a driver of growth.

This finding underscores the importance of balancing lending intensity with credit risk management. While aggressive lending can boost interest income in the short term, it must be accompanied by robust credit appraisal, monitoring, and recovery mechanisms to prevent deterioration in loan quality that could offset profitability gains. The result emphasizes that strategic asset allocation into loans, when properly managed, enhances financial performance.

The finding also reflects the core role of lending in the income generation structure of Nigerian DMBs and suggests that prudent loan expansion remains a viable strategy for improving profitability. However, banks must maintain vigilance to ensure that increased lending does not lead to compromised underwriting standards or excessive concentration in high-risk sectors.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study examined the relationship between two key asset quality indicators—non-performing loan ratio and total loan ratio—and the financial performance of deposit money banks in Nigeria, measured by profitability growth rate. The findings reveal that non-performing loan ratio has a negative and statistically significant effect on profitability growth rate, confirming that credit risk remains a central challenge for the Nigerian banking sector. Without effective credit appraisal, monitoring, and recovery strategies, the ability of banks to sustain profitability is significantly diminished.

Conversely, total loan ratio demonstrates a positive and significant effect on profitability growth rate, highlighting that financial performance improves when banks efficiently deploy their resources into lending activities. This means that strategic asset allocation and controlled lending expansion are vital to driving sustainable earnings growth. The study concludes that maintaining sound asset quality through effective non-performing loan management and optimizing loan portfolio composition are critical for achieving long-term profitability in Nigerian deposit money banks.

5.2 Recommendations

Based on the findings, the following recommendations are proposed:

1. **Strengthen Credit Risk Management:** Bank management should prioritize credit risk management by strengthening loan appraisal processes, ensuring robust credit monitoring systems, and enhancing loan recovery mechanisms. Reducing non-performing loans will directly improve profitability growth and overall financial stability.
2. **Optimize Loan Portfolio Composition:** Banks should maintain an optimal loan-to-asset ratio to maximize income while avoiding overexposure to credit risk. Prudent loan expansion should be supported by thorough market and borrower analysis to ensure that lending activities remain profitable and sustainable.
3. **Enhance Credit Appraisal Processes:** Management should invest in modern credit assessment technologies, improve borrower screening mechanisms, and implement stringent credit approval procedures to minimize the incidence of loan defaults.
4. **Diversify Loan Portfolios:** Banks should avoid excessive concentration in high-risk sectors and instead diversify their loan portfolios across various economic sectors to spread risk and enhance asset quality.
5. **Regulatory Vigilance:** The Central Bank of Nigeria should continue to enforce prudential guidelines regarding non-performing loan thresholds and ensure that banks maintain adequate provisioning levels to cushion against credit losses.

5.3 Contribution to Knowledge

This study contributes to the existing body of knowledge by providing recent empirical evidence on the specific effects of non-performing loan ratio and total loan ratio on profitability growth rate in the Nigerian banking sector. The use of a balanced panel dataset covering ten banks over ten years provides a robust and reliable basis for the conclusions drawn, ensuring that results are grounded in consistent, high-quality financial data.

The study offers a Nigeria-specific perspective that can guide both local regulatory policy and strategic decisions of bank executives in emerging markets facing similar economic and regulatory challenges. The findings reinforce the understanding that credit risk management and strategic loan portfolio management are indispensable for sustainable financial performance.

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