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Impact of Non-Performing Loans on Financial Performance of Deposit Money Banks in Nigeria

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Abstract

The research examined Nigerian deposit money institutions' non-performing loan performance. The study utilised secondary data from five Nigerian non-bank financial firms. From 2020 to 2025, the research will last six years. This research uses panel regression analysis using ordinary least squares, pooled regression, fixed effects, random effects, and the Hausman test to find the best effects. In this research, ROA was the dependent variable while nonperforming loans, lending, and inflation were the independent factors. According to the study, non-performing loans slightly boost return on assets, while lending rates and inflation somewhat lower it for firms. The research found that non-performing loans little impair Nigerian banks' profits.

Keyword: *Non-performing loans, Financial performance, Lending rate, Inflation, Banks.*

1 Introduction

Concerningly, the rising number of loan principal or interest unpaid for at least 90 days is the basis of most of Nigeria's financial industry's troubles (Saliu et al., 2020). Banking and economic firms provide a number of services that support Nigeria's economic stability and social prosperity. Many Nigerian banks are losing money due to non-performing loans. Naturally, this hurts banks' economic intermediary position. These institutions often lend money to companies and people, boosting economic growth. The Central Bank of Nigeria oversees the banking industry under the Banking Act approved by Parliament. Acts govern all banks and several other financial entities in the nation.

Ezu et al. (2023) define nonperforming loans as risk assets without revenue. A loan is nonperforming if the interest or principal is unpaid for 90 days. Loan provisioning and categorisation go beyond past due amounts. Borrowers' cash flow and capacity to repay obligations are more crucial than loan overdue status. For financial reporting, a nonperforming loan portfolio is characterised by outstanding principal, not past due payments. The nonperforming loan portfolio indicates a bank's lending choices and portfolio quality. Loan portfolio quality may have declined for several reasons. Bank judgement errors are inevitable. Most failed banks have systemic credit culture and management issues. Moving from depositors to fund intermediaries put banks at credit risk, according to McNaughton and Dietz (2018). A bank's profitability and quality depend mainly on credit, which is also its most fundamental component. Banks usually have policies describing their credit risk management strategy and criteria to reduce risks. Credit risk management approaches generally include three policies. Multiple policies lessen or eliminate credit risk. These include concentration and big

exposure requirements, diversification, lending to connected enterprises, and overexposure controls.

Most people and government entities have credit with banks (Ughulu & Odion, 2023). Short-term loans help many economic participants fulfil their urgent working capital and consumption needs. Others employ medium- to long-term loans for capital expenditures, acquisitions, and expansions. All loan applications should include a detailed assessment of the borrower's ability and intent to repay on time. Khan et al. (2020) recommend evaluating current and future lending hazards to control credit risk. Jolevski (2017) says nonperforming loans are hazardous investments that don't pay in a competitive market. A debt is nonperforming after 90 days without principal or interest. Loan provisioning and categorisation go beyond past due amounts. Borrowers' cash flow and capacity to repay obligations are more crucial than loan overdue status. According to Laryea et al. (2016), financial reporting defines nonperforming loan portfolios by outstanding principal rather than missed payments. Banks' nonperforming loan portfolios show how successfully they make lending judgements. Loan portfolio quality may be declining for many reasons. Bank judgement errors are inevitable. Most failed banks have systemic credit culture and management issues. After Ughulu and Odion (2023) declared credit risk is the leading cause of nonperforming loans and bank failures, almost every regulatory agency has established minimum credit risk management criteria. The rules that regulate the bank's credit risk management and operating constraints generally define the strategies used to reduce credit risk. Some credit risk management methods include three sorts of constraints. Numerous rules have been implemented to mitigate credit risk. Limits on overexposure, concentration, diversification, and lending to connected enterprises are among them. Third, loss provisioning strategies put aside cash to cover losses on all assets, not only loans (Ughulu & Odion, 2023). Commercial banks take deposits and turn them into cash, help companies move their deposits, trade deposits for bills of exchange, act as trustees and executors, secure money and valuables, and handle foreign currency remittances. Retained profits are often used to generate finances.

Every financial system relies on profitable, well-capitalized institutions. Profitability is a key sign of a bank's competitiveness and management. It shields a bank from short-term issues and maintains its risk profile. Interest on completed loans is an important source of bank profits. Bank loans, advances, and working capital overdrafts are the major sources of interest revenue. Ughulu and Odion (2023) remark that this amount includes the bank's deposit interest from other financial organisations. Having several non-performing loans may lower a bank's interest revenue. Nonperforming loans (NPLs) hurt bank profitability and frequently cause bank collapses, according to growing empirical data. Profitability indicates a bank's risk-taking and capital-raising capacity. A bank's capital sufficiency is often measured by how well owners' equity protects depositors against nonperforming loans and advances. A bank's lending policy should clearly state the maximum amount, length, and purpose of loans to specified individuals (Adebisi & Matthew, 2015). Lending rules must be well recorded so lending authorities know what is permissible and what is not. These restrictions must be evaluated often to ensure that banks can keep up with the economy's innovation and compete with other industries. In 1996, the industry average was 33.90 percent, while failing banks had 79.77 percent and 68.87 percent nonperforming loans and leases. The NDIC indicated in 1996 that they indicate diminishing profitability and likely bank collapses. Regulators continuously analyse financial organisations' lending cultures since a bank's loan portfolio is often its biggest risk asset. Ughulu and Odion (2023) indicate that this assessment will evaluate credit portfolio quality, calculate the possibility of nonperforming loans or future losses, and provide strategies to keep banks profitable. Profit, the ultimate consequence of a bank's policies and operations over a fiscal year, is considered, not its nonperforming loan portfolio, which does not indicate profitability.

Many banks collapsed due to debt collection issues. Banks make most of their money from loans. Bank lending aims include profitability, growth, safety, appropriateness, and liquidity (Adebisi & Matthew, 2015). Financial institutions confront credit risk, which may lead to nonperforming loans. Credit develops when a borrower's capacity to repay a loan or advance deteriorates. High nonperforming loans caused many banks to collapse in the 1980s, 1990s, and beyond, suggesting that this indicator is better for predicting bank failure than profitability. In 1993, bankrupt banks had roughly 20% of banking assets and 22% of deposits. Nearly twenty-five banks failed in 1995 due to nonperforming loan portfolios, and more than half faced financial problems. Technically troubled Nigerian banks had more nonperforming loans than shareholders' equity in the 2000s. The Central Bank of Nigeria invested N700 billion and created AMCON to acquire these debts to assist these banks recover (Kamarudin et al., 2019). Credit risk, which causes nonperforming loans, is a bank risk. When credit solidifies, loans and advances become uncollectable. High nonperforming loans caused many banks to fail in the late 1980s, 1990s, and beyond, suggesting that this indicator is better for predicting bank failure than quantifying profitability. In 1993, bankrupt banks had roughly 20% of banking assets and 22% of deposits. Half of banks reported financial problems in 1995, and twenty-

five went bankrupt due to nonperforming loans (Kamarudin et al., 2019). In the 2000s, the Central Bank of Nigeria invested N700 billion and established AMCON to acquire NPLs (nonperforming loans) to rescue failing Nigerian banks. A nonperforming loans portfolio and lower bank profitability may be caused by insider wrongdoing, deteriorating credit risk processes, excessive trading, incompetence, indifference, poor monitoring, and other corporate governance issues. Unpaid loans may hurt banks. Giving it is simpler than getting it. Competence and expertise are needed for rehabilitation. Recovering may be challenging. Banks that fail to recover frequently suffer dire consequences. Unchecked, it might lead to bankruptcy, problems, or liquidation. This emphasises the necessity for debt management and repayment solutions. This research seeks to address the main issue. This study aims to determine how nonperforming loans influence Nigerian deposit money institutions' profits. To determine how these institutions handle nonperforming loans financially. Discover how interest rates and inflation effect their profits.

2 Literature Review

2.1 Conceptual Literature

2.1.1 Non-performing loans

Non-performing loans are defined differently by researchers. Singh et al. (2021) found that borrowers who miss principal and interest payments default on non-performing loans. Loan payments over 90 days late are non-performing. Kingu et al. (2018) define non-performing loans as those that have not been repaid in full, including principal and interest, for 90 days after maturity. According to Magali and Qoing (2015), a bad loan is over 90 days late and ceases paying interest for the bank. A non-performing loan is past due and the borrower cannot return the principal and interest within the specified period, according to Budiharya et al. (2017). However, banking institutions put up loan loss provisions to mitigate this risk. These financial institutions also exclude uncollectable loans from their profit and loss accounts. Commercial banks continue to lend to for-profit corporations and others.

There are no agreed-upon standards for operational non-performing loans. Classification, scope, and substance are debatable. This worsens NPL uncertainty and instability. The loan is non-performing when principal and/or interest payments are more than 90 days late or have been refinanced, capitalised, or mutually agreed upon to be postponed. The loan may be non-performing if there are legitimate concerns about repayment, such as a debtor becoming bankrupt, even while payments are still less than 90 days late (Bondarenko, et al., 2020). Additionally, Nigerian banking law defines nonperforming loans as: Nonperforming loans have deteriorated creditworthiness, making it uncertain that principal and interest will be repaid as agreed (CBN, 2015). Non-performing loans have unpaid principal and interest for six months following the initial default (Prudential Financial Policy Department, 2014). Still, section 15.1 of the 2010 CBN prudential standards for money deposit banks classified non-performing credit facilities into sub-standard, doubtful, and lost loans. Banks, lenders, and borrowers use interest rates to calculate cost. Banks promote capital transfers from savers to borrowers by accepting deposits, lending money, and reacting to interest rate signals. Nepal's Central Bank classifies loans as pass, substandard, questionable, or poor. Pass, bad, problematic, and lost loans perform poorly. According to John (2018).

2.1.2 Lending Rate

A World Bank working paper by Feyen and Zuccardi (2020) defines the bank lending rate as "a weighted average interest rate on short-to-medium-term fixed-interest loans supported by the institution for people and companies." This notion explains how interest rates are calculated and how loan conditions, risk profiles, and borrowers' finances affect them. Focusing on short-to-medium-term loans for people and enterprises in need of rapid liquidity highlights their importance (Feyen et al., 2020). Kariuki (2023) noted that loan interest rates affect commercial banks' profits. He said lowering lending rates improves borrowing, consumer spending, and company investments, which boosts economic development. If rates are excessively high, borrowers may not borrow, slowing the economy.

2.1.3 Inflation Rate

Ughulu and Odion (2023) argue low inflation indicates economic growth. Stable economies with low inflation promote saving, investment, growth, and global competitiveness. High inflation rates lower real income, which increases non-performing loans and makes it harder for borrowers to repay debt (Rinaldi & Arellano, 2006). In addition, Ghosh (2015) showed that inflation considerably and favourably impacts US commercial and savings bank non-performing loans (NPLs). According to this analysis, inflation will significantly benefit NPLs.

2.1.4 Financial Performance

Financial performance is a company's ability to achieve its financial objectives via its policies. Kariuki and Peddy (2017) suggest that managers and decision-makers use corporate financial performance to assess strategy and operations more objectively. A company's financial health may be examined over time and compared to comparable firms in the same sector. Shrivastava et al. (2018) say financial success measures an organization's ability to transform assets into profits. This notion gives a comprehensive assessment of a company's financial health throughout time, making it valuable for comparing

organisations in the same or different industries (Eshna, 2022). Shoukat and Nadeem (2015) define financial success as a company's capacity to benefit from its core business assets. According to Pinto et al. (2017), deposit bank financial performance is a key indicator of monetary policy success. Economic officials need this data. Any financial performance evaluation focuses on how effectively a company utilises its assets in connection to its main operations and revenue generation (Will et al., 2022). Abdolazim (2015) suggests assessing one DMB's financial performance based on size, capitalisation, and staff while assessing others in the same sector. NPI, ROE, EBIT, ROA, PAT, and NAV are the financial performance measurements Hawaldar et al. (2017) and Pinto et al. (2017) provide for DMB. ROA and ROE are the sole financial performance indicators in this study.

2.1.5 Financial Performance Measures

Return on assets (ROA): Return on assets (ROA), "the ratio of net income to total assets" (Onyefulu et al., 2019), shows an organization's investment profitability. Return on assets (ROA), which evaluates a company's earnings from its invested assets, is a reliable tool to evaluate its performance (Abdel Megeid et al., 2020). Net income before unusual items and taxes divided by the average value of all assets, financial and nonfinancial, during the same period yields the return on assets, a measure of banking profitability (Albulescu, 2015). Albulescu (2015) suggests the following asset return calculation method:

ROA= net operating profit/total assets.

Return on assets might indicate a company's success and profitability. Khrawish (2011) says overall assets and income ratio are strongly correlated. A bank's return on assets (ROA) as a percentage might indicate its efficiency in converting assets into cash (Schmidt, 2023). It demonstrates how successfully a bank uses its resources to produce money. It also illustrates that the bank's management system generates net revenue utilising all its resources (Khrawish, 2011). Return on assets (ROA) is a reliable metric of financial sector capital strength, according to Akonga'a (2015). Industry-specific statistics vary. Banks with high beginning investments have lower ROA.

2.2 Theoretical Review

2.2.1 Credit Market Theory

Karl Brunner proposed his credit market hypothesis in 1966. Credit markets are important to the economy because they boost growth. The idea claims that the lending rate only controls how much credit the banking sector provides if collateral and other conditions stay constant. Due to loan demand exceeding availability, interest rates have soared. Each bank-funded project should have a risk premium equivalent to the risk of default added to the loan rate. The underlying principal is that interest rates are proportionate to borrower default risk. Thus, the interest premium rises with borrower failure risk (Brunner, 1971). This idea fits the inquiry since it represents credit management and a company's overall production. This idea may explain debt management and bank performance, which is crucial to our research.

2.2.2 Financial Theory

This study use financial theory to classify borrowers. The hedge borrower repays the conventional loan's principal and interest (Siddaiah, 2009), while the speculative borrower has a watch loan. Thus, if principal or interest is not repaid within 30–90 days, it is rolled into a new loan. The Ponzi schemer would maintain the debt in bad shape (Wanjala & Gachanja, 2020). Therefore, payments are inadequate to repay interest accruing as principal rises. Main source funding is inadequate to satisfy loan obligations. More than 90 days have passed since the loan was due. This explanation fits the present inquiry well because of non-performing loans.

2.2.3 Bad Management Hypothesis

Berger and De Young (1997)'s Bad Management hypothesis states that poor financial institution management leads to substandard loans, lower profitability, and more non-performing loans. This shows that loan administration due diligence would lower non-performing loan values and boost profitability. This idea suggests that ineffective management may allocate more resources to inspect and underwrite difficult loans to prevent the growing flood of NPLs. Operational expenditures exceed interest revenue, raising the cost-to-income ratio and lowering cost efficiency over time. This principal supports much empirical research. Norden and Stoian (2014) and Louzis et al. (2010) revealed that bank-specific performance and efficiency measures affected NPLs. The concept received strong approval. This research found that non-performing loans should be negatively connected to profitability metrics like ROA and ROE.

2.2.4 Alternative Hypothesis

In contrast, the "skimping" idea links non-performing loans to cost efficiency. This statistic affects banks' productivity and loan monitoring resources. Financial institutions must balance present operational expenses with future loan performance issues. To reduce operational expenses, long-term banks may slash loan underwriting and supervision expenditure in the short term. This will increase future repair expenses and non-performing loans. When they reduce expenses, banks may seem efficient in the near term because they may maintain loan or other outputs while

spending less on operations. "Skimping indicates a positive effect of cost efficiency on bad loans" and "the correlation between cost efficiency and non-performing loans contradicts the bad management hypothesis," say Wood and Skinner (2018).

2.3 Empirical Review

Saliu et al. (2020) investigated Nigerian non-performing loan and deposit money institution claims and counterclaims using the autoregressive distributed lag (ARDL) estimation technique. Nigerian deposit money banks' long-term performance was strongly correlated with their non-performing loan ratio. Nigerian deposit money banks have more nonperforming loans. Non-performing loans lower deposit money institutions' return on assets. The research found that Nigerian deposit money banks deploy qualified risk managers to decrease non-performing loans. The study revealed that Nigerian deposit money institutions should monitor customer spending to avoid non-performing loans and capital misallocation. Allen et al. studied Tanzanian commercial banks' non-performing loans and performance in 2020. The research evaluated macroeconomic variables longitudinally using panel data from 41 commercial banks from 2006 to 2019. The three analysts used PLS-SEM and regression models with fixed and random effects to analyse the data. ROA, NPL Ratio, and ROE were negatively correlated, although not statistically. The research found that annual GDP rate lowers ROA and ROE. The research defined inflation and studied its effects on ROA and ROE. In contrast to GDP, inflation remained positive and did not affect ROA or ROE. Exchange rates positively and statistically significantly affected ROE and ROA, although interest rates did not. According to the results, bank management should create a system to identify non-performing loans and strengthen credit risk management to avoid certain concerns.

Budiarto (2020) investigated Central Java BPR financial performance and non-performing loan frequency. 260 in Central Java, 150 Select BPR leaders participated in the research. Non-performing loans (NPLs) positively affect credit collectibility, including debtor performance, firm prospects, and affordability, according to SEM AMOS data. Nonperforming loans hurt BPR's finances. From 2015 to 2019, Ugwu et al. (2020) used descriptive statistics and multiple regression to study Nigerian deposit money institutions and non-performing loans. Substandard and questionable loans affected return on assets more than delayed loans. The research shows that non-performing loans would hurt Nigerian banks' long-term financial performance. The study advises strengthening regulatory agencies and credit reporting institutions to assist Nigerian deposit money banks lower their high non-performing loan rates. High non-performing loan rates may prevent certain institutions from weathering the storm.

Nwosu et al. (2020) examined how non-performing loans affected profitability using commercial bank data from Q1 2014 to Q4 2018. Research uses panel fixed effects and auto-regressive distributed delays. Inflation, liquidity ratios, and non-performing loans lowered bank profitability, but larger banks and stronger capital adequacy ratios enhanced it. According to the study's authors, banks should strengthen credit management and provide expert investment advice to reach their ROI targets. Afolabi et al. (2020) examined how loan-loss provisions and non-performing loans influenced Nigerian microfinance enterprises' profitability using Granger causality analysis. Unit root tests were performed on secondary data from six microfinance organisations between 2012 and 2018 using E-VIEW 9. Phillips-Perron and Augmented Dickey-Fuller unit root tests were utilised. Based on the data, VAR model variables seem stable. The Granger causality analysis found a one-way causation link between nonperforming loans, loan-loss provisions, and returns on assets. Credit risk indicators and financial performance are strongly correlated. The survey says non-performing loans hurt Nigerian microfinance firms. They assist microfinance enterprises manage loan portfolios and establish credit limits based on risk tolerance and credit criteria.

Okoli et al. analysed Nigerian deposit money banks' non-performing loan management in 2020. We selected 10 NSE-listed banks from 2009 to 2018 using secondary data from annual reports and the fact book. The data was analysed using a correlation matrix. Non-performing loans hurt Nigerian deposit money institutions, although not statistically at the 5% level. The research rejected the competing hypothesis and supported the null hypothesis. At the 5% threshold of relevance, Nigerian deposit money institutions had a negative ROA owing to their liquid asset-to-total asset ratio. LATA elimination would cut ROA by 244%. Research shows that return on assets indicates success. From 2015 to 2019, Ugwu et al. (2020) evaluated how non-performing loans affected Nigerian stock market deposit money banks. Research data was analysed using correlation, multiple regression, and ex-post facto analysis. Study methodologies included correlation and ex-post facto analysis. A multivariate regression and descriptive statistics study. Secondary data for the study comes from the Central Bank of Nigeria statistics bulletin, audited annual accounts of publicly listed deposit money institutions in Nigeria, and the Nigeria Deposit Insurance Corporation. Dubious and poor loans hurt return on assets, whereas defaulted loans did not. Inefficient banking and non-performing loans were examined by Eddy et al. (2020). Management prioritised NPL above net interest margin because they lower return

on assets. Non-performing loans decrease bank performance. NPL BUKU 4 does not affect ROA for major financial institutions above IDR 30 trillion.

Çollakua and Aliub (2021) studied the impact of non-performing loans on bank profitability in Kosovo from 2010 to 2019. Both variables were studied using econometric methods. The research found that non-performing loans considerably harmed profitability. With everything else constant, a 1% rise in non-performing loans decreased Return on Assets by 0.19%. Adeleke et al. (2022) examined how non-performing loans affect Nigerian deposit money banks' profitability. The research used regression and purposive sampling. LLPR, which accounts for non-performing loans, somewhat affects financial performance indicators such return on assets and equity ($\beta = -0.463$, $p = 0.346$). The loan and advances ratio (LAAR) ($\beta = 0.858$, $p = 0.566$) indicates that non-performing loans somewhat improve financial performance, including return on assets and equity. Restrictions on research influence analysts. Lack of measuring tests limits the analyst's assessment of NPLs' financial effect. In 2021, there is no evidence relating non-performing loans to financial performance. According to studies, loan loss provisions (LLPR) and loans and advances do not effect return on average equity (ROAE). The CBN requires deposit money banks to evaluate their loan portfolios regularly to decrease non-performing loans.

Ughulu and Odion (2023) explore how non-performing loans influenced Nigerian deposit money banks' profitability from 1990–2020. Research estimate employed VECM and autoregressive distributed lag models. Statistics show non-performing loan levels hurt deposit-taking institutions' profits. According to the research, Nigerian deposit money institutions should recruit skilled risk managers to reduce non-performing loans. Renegotiating loans, consumer spending control, and tailored payback lengths were its credit strategy. NPL cuts would benefit Nigeria's deposit money institutions. Ezu et al. (2023) assessed Nigerian deposit money banks' profitability and non-performing loans. Study estimates employed Ordinary Least Squares regression and panel data. A significant correlation ($p < 0.05$) was established between problematic assets, ROE, lost assets, and net interest margin in selected Nigerian deposit money institutions. Nigerian banks must consult customers and investors before lending if they wish to profit. Banks should evaluate "four C's"—capacity, character, creditworthiness, and collateral—before lending money. This will prevent bad loans and losses.

Ogbonna (2024) studied debt management in Nigerian deposit money institutions from 2005 to 2023. Study estimation used conventional least squares. Studies show that Nigerian deposit money institutions suffer when loans fail. According to further study, bad debt provision improved these banks' profitability dramatically, whereas the ratio of non-performing loans to total loans did not. Research from 2005 to 2023 indicated that debt management affected Nigerian banks differently. The report advised banks to lower the percentage of non-performing loans to total loans, keep bad debt provisions low to free up cash for other credit operations and improve performance, and create a single credit recovery plan. The consequence will be lower NPLs and higher credit ratings. Osayi and Akemieyefa (2024) study Nigerian deposit money banks' nonperforming loans from 1991 to 2021. Researchers estimated variables using ordinary least squares. Nonperforming loans hurt Nigerian deposit money banks, according to the figures. As the major supervisor of the money market where DMBs operate, the CBN must eliminate nonperforming loans in the banking sector, according to the report. Nigeria's central bank should monitor deposit money institutions with high interest rates. Thus, banks with more problematic loans are less likely to fail.

Ogunsanwo et al. (2025) evaluated how numerous banking parameters affected Nigerian bank performance from 2012 to 2023. These variables included POS terminals, ATMs, NABSS, fraud, and their values. We investigate quarterly Central Bank and Deposit Insurance Corporation of Nigeria data using unit root tests, correlation matrices, ARDL regression, and moderating regression models. ATMs and the NIBSS system improved bank performance more than POS terminals. The number of fraud cases was positive, but the quantity hurt the bank. Deposit money institutions contributed to financial innovation but had little impact on fraud or profitability. According to Adebayo et al. (2025), currency rate fluctuations affected Nigerian exports and imports from 1986 to 2023. It examined how interest, inflation, and currency rates influenced Nigeria's foreign commerce. Exchange Rate (EXCR) was the dependent variable, whereas GDP, INFR, INTR, and BOP were independent variables. We analysed using OLS. LNGDP and international commerce in Nigeria had a positive but modest correlation in the short term, whereas LNEXCR was positive and significant, LNINFR was negative and negligible, and LNINTR was positive and significant. Nigeria's foreign commerce benefits temporarily from currency rate indices.

Nigeria's macroeconomic policies influenced bank efficiency, according to Adebayo et al. (2025) using 1986–2023 data. The research focused on how money supply, lending rates, and bank liquidity ratio influenced Nigerian banks. The study's dependent variable was return on equity, with money supply, lending rate, and bank liquidity ratio as independent factors. Estimation using cross-sectional data

analysis. Money supply and return on equity were strongly correlated, although lending rate, liquidity ratio, and GDP were not. The findings demonstrated varied macroeconomic effects on bank performance. Adebayo et al. (2025) examined Nigerian company performance and dividend policy from 2019 to 2023. The equity or stock price of a publicly listed Nigerian corporation represents corporate performance. DPR, EPS, and PER were employed as explanatory factors. Study methods included panel data analysis with fixed and random effect estimates. The findings showed that dividend payment index improved EQR but not significantly.

3 Research Method

This study employs longitudinal research design and adapts the model of Osayi and Akemieyefa (2024) which is expressed mathematically as:

TAS = f (NPL, LR, INFR) - - - - - ---------- 1

However, the econometric form of the model is stated below:

TAS = a0 + a1NPL t, + a2LRt + a3INFR t + e - - ------ 2

Where; TAS = Total Assets

NPL = Non performing loans

LER = Lending Rate

INF = Inflation Rate

a0 = Intercept or constant term

a1 – a3 = Coefficients of independence variables

e = Error term which is usually 5% (0.05)

t = Time period

This research adds NPLs to the model to assess Nigerian deposit money institutions' profitability. Return on assets is used to evaluate Nigerian banks, using inflation, lending rates, and non-performing loans as independent factors. Thus, the modified model:

ROA = (NPL, LR, INFR) …… 3

This model can for the purpose of simplicity be stated in the econometric form of equation as depicted below:

$ROA = \beta_0 + \beta_1 NPL + \beta_2 LR + \beta_3 INFR + \mu$…… 4

Where;

NPL = Non performing loans

LER = Lending Rate

INF = Inflation Rate

β_0 = constant parameter

β_1- β_5 = coefficient of regression

μ = error term

4 Data Analysis and Interpretation

4.1 Introduction

A series of empirical research examined how nonperforming loans impacted Nigerian deposit money banks' profits. This research examined secondary data from five Nigerian non-bank financial groups. The six-year research runs from 2020 to 2025. The optimal effect result was derived utilising panel regression analysis using ordinary least squares, pooled regression, fixed effects, random effects, and the Hausman test. The independent factors were inflation, nonperforming loans, and lending, whereas ROA was the dependent variable.

Table 1: Regression Estimation Result

Dependent variable: ROA

Variable	Coefficient	Std. Error	T-Statistic	Prob.
LNNPL	0.034761	0.423807	0.082022	0.9353
LNLR	-1.655474	4.270753	-0.387631	0.7014
LNINFR	-0.315392	1.798581	-0.175356	0.8622
C	1.468900	13.13503	0.111831	0.9118
R-Squared	0.040922			
Adjusted R-Square	-0.069741			
F-Statistics	0.369789			
Prob(F-Statistics)	0.775422			
Durbin-Watson Stat	0.981791			

Source: Authors Computation using Eview 10 (2026)

Table 1 shows the correlations between INFR, LNNPL, and ROA. The estimated coefficient of the constant parameter increases return on equity by 1.468900 units with all other variables set to zero. In keeping with theory, nonperforming loans and return on assets had a positive but statistically insignificant association of 0.034761 units. Each unit rise in nonperforming loans increases return on assets by the same amount. The loan rate was negatively associated to return on assets, with a negative correlation of -1.655474 units. For every unit rise in the lending rate, return on assets fell by the same amount.

Finally, inflation and return on assets correlated -0.315392 units. Thus, for every unit rise in inflation, asset returns decline by the same amount.

Table 2: Fixed Effect
Dependent Variables: ROA

Variable	Coefficient	Std. Error	T-statistics	Prob.
LNNPL	0.034761	0.364402	0.095393	0.9249
LNLR	-1.655474	3.672124	-0.450822	0.6565
LNINFR	-0.315392	1.546475	-0.203942	0.8403
C	1.468900	11.29390	0.130061	0.8977
Fixed effect (cross)				
ZENITH-C	1.468900			
ACCESS-C	1.468900			
ECO-C	1.468900			
FBN-C	1.468900			
FCMB-C	1.468900			
R-Squared	0.400031			
Adjusted R-Squared	0.209131			
F-Statistics	2.095506			
Prob (F-Statistics)	0.087476			
Durbin-Watson Stat	1.569438			

Source: Author's Computation using Eview 10 (2026)

Table 2 shows the logistic regression model's link to INFR and ROA. The estimated coefficient of the constant parameter increases the return on assets by 1.468900 units with all other variables set to zero. In keeping with theory, nonperforming loans and return on assets had a positive but statistically insignificant association of 0.034761 units. Each unit rise in nonperforming loans increases return on assets by the same amount. The loan rate was negatively linked with return on assets at -1.655474 units, implying that for every unit increase in the lending rate, return on assets fell by the same amount.Finally, return on assets and inflation had a -0.315392 unit connection. Thus, a one-unit inflation rise would lower return on assets.

Table 3: Hausman Test

The Hausman test is used to test for the best effect model between the fixed effect and the random effect model.

Chi Sq. Statistics	Prob.
0.000000	1.0000

Source: Author's Computation using Eviews 10 (2026).

Table 3 shows that the fixed effect model is best for the investigation since the Hausman test probability value is less than 5%. Thus, the fixed effect model will dominate the study.

Coefficient of Multiple Determination

The fixed effect result's R-squared value of 40% shows that independent variable changes explain 40% of the dependent variable's behaviour, with the error term accounting for 60% of the variation. After some modifications, independent variables may account for 40% of dependent variable variation.

Tests for Statistical Significance of Parameters (Probability -Test)

This test determines how well each accepted model explanatory variable explains the dependent variable (ROA). The p-value for each independent variable coefficient in the OLS regression results will indicate if the parameters are statistically significant. The 95% confidence interval test has a 5% significance threshold.

Table 4: Summary of Probability Test-Random Effect

Variable	Probability Value	Decision
LNNPL	0.9249	insignificant
LNLR	0.6565	insignificant
LNINFR	0.8403	insignificant

Source: Author's Computation using Eviews 10 (2026).

The Table 4 explanatory variables' P-values over 0.05 give significant insight into the ROA dependent variable's behaviour.

Test for the Overall Significance of the Research Model (F-Test)

Probability Tests assess the study's research model's importance and validity. The test hypothesis is:

H_0: There is no overall significance in the model

H_1: There is overall significance in the model

Table 5: F-Test

F-Statistics	Prob (F-statistics)
2.095506	0.087476

Source: Author's Computation using Eviews 10 (2026).

The model's overall explanation for ROA behaviour is statistically significant since the F-statistic is larger than 0.05.

4.2 Summary of Findings

This research examines how nonperforming loans have affected Nigerian deposit money banks. According to data research, loan rates, inflation, and return on assets (ROA) were negatively correlated. Nonperforming loans little affected bank performance. This suggests that NPLs have little impact on Nigerian banks' profits. A goodness-of-fit score of 0.400031 for the model's multiple determinants (R) computed from the random effect shows that the explanatory variables explain 40% of the sampled businesses' ROA variance, while the error term accounts for 60%. The factors utilised to explain the dependent variable explain 40% of the endogenous variable's behaviour. Finally, empirical data reveals that Nigerian deposit money banks' nonperforming loans seldom affect their profits.

4.3 Conclusion and Recommendations

Nigerian deposit money banks' nonperforming loan performance is examined in this research. From 2020 to 2025, the research will last six years. The research examined ROA and nonperforming loans. The study considers lending and inflation independent factors. From 2020 to 2025, cross-sectional data was collected. Nonperforming loan indices have little effect on Nigerian deposit money banks' profitability. Deposit money institutions should recruit qualified risk managers to decrease non-performing loans in Nigeria, according to the research. These banks must monitor customer spending to prevent non-performing loans generated by misdirected funds. Before lending to investors or customers, financial institutions should closely follow lending criteria such ability, character, creditworthiness, and collateral to reduce the risk of bad loans and financial losses.

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