



CREDIT MANAGEMENT AND FIRM'S FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANK IN NIGERIA

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ABSTRACT: *This study investigated Credit Management and Firm's Financial Performance of Deposit Money Bank in Nigeria. The study was guided by Information Asymmetry Theory and Transaction Cost Theory. An ex-post facto research design was used in the study. The population of the study was all commercial banks in Nigeria with a total of twenty-four (24) banks as of 2023. The sample size for this study was obtained from secondary data of selected seven (7) banks using the purposive sampling technique. Credit management facility had a significant effect on performance as measured by return on asset (Adj R2 = 0.040612, F= 1.973611, p= 0.016466); return on equity (Adj R2 = 0.101017, F= 0.976643, p= 0.009176); and net profit margin (Adj R2 = 0.305936, F= 11.13815, p= 0.000005). It was recommended that Deposit Money Banks in Nigeria should mitigate their independent metrics, Management should Enhance Capital Adequacy and Refine Credit Risk Management Practices.*

KEYWORDS: Financial performance, Return on Asset, Return on Equity, Credit management.



INTRODUCTION

In today's business world, the ability to seize any opportunity and seek realistic practical business tools and approaches to increase financial performance is critical for success. Financial performance is still one of the most important measures for analyzing the success, development, performance, and progress of companies all over the globe. Thus, the company's efforts to enhance its performance produced both financial and non-financial outcomes. Performance is influenced by how effectively financial institution organizations handle their credit facilities in particular. In light of the undeniable importance of business performance, especially within the banking sector, it remains a focal point in strategic management research. Success in a corporation is determined by how efficiently and effectively its resources are allocated to achieve managerial objectives. Key performance indicators, such as revenue, profit, cost reduction, return on sales, and return on assets, are significant metrics in this regard. Scholars have grappled with the challenge of defining performance comprehensively, impacting various aspects of human activity. This ongoing struggle has implications across diverse domains. Consequently, work-related activities, including employee responsibilities and their execution, constitute integral elements of a company's overall performance. Research suggests that company performance acts as a means to enhance finite corporate resources, boost productivity, and foster economic value growth.

For many years after independence, the Nigerian financial system was under strain, as seen by interest rate and loan growth limitations, selective lending rules, high reserve requirements, and impediments to entrance into the banking industry^{1,2,3}. Because of this, the financial system's capacity to mobilize funds and stimulate productive investment was severely impeded³. Efficient credit management and increased financial performance are critical for the banking industry's survival. As a result, a decline in the banking industry's financial performance in Nigeria may have a substantial influence on the firm's capacity to access both internal and external capital, as well as its ability to develop and survive. As a result, for every organization, maintaining a fair degree of financial performance is a critical decision-making area. This is significant because of the requirement to optimize profits for a wide range of organizational stakeholders, as well as the possible consequences that these choices may have on a company's ability to navigate its competitive environment³. The capacity of a firm or organization to function efficiently, on the other hand, is a critical aspect that increases the entity's efficacy in achieving its goals. The degree of success for the entity or process may be used to measure the performance of a single firm, a group of players, or even a process⁴. Performance is affected by how well a company's assets function and how its credit facilities are handled. The manner in which a company handles its business credit facilities has a direct influence on how well it operates overall.

Credit management is one of the most important duties that every corporation that utilizes credit must do, regardless of the kind of business. It is the technique used to ensure that consumers pay for the products or services provided. Credit management is the collection of procedures used by firms to maintain a healthy amount of credit and manage it properly⁵. This financial management function includes credit analysis, credit rating, credit categorization, and credit reporting.



A strong credit management approach will reduce the amount of cash that is tied up with the borrowers and reduce the possibility of bad debt accumulation. According to a researcher, each delinquent account reduces a seller's profit unless he has incorporated late payment penalties in his selling price or is successful in collecting those expenses via interest charges⁶.

Credit management is a critical function of every commercial bank. Every commercial bank's credit management is significantly reliant on this activity for income production. As a result, doing a key to the pro investigation in this field has shown a number of concerns that have most likely functioned as financial institutions. Credit maximization is therefore the act of regulating and collecting payments from customers in a variety of hindrances to boost pro management (its generation and control). This is the function of a bank or organization that deals with financial risk. Controlling credit policies that increase revenues while decreasing loan creation has proven to be an essential duty of commercial banks since it is the primary source of internally produced income. Credit, from a business standpoint, is lending resources gained from depositors held in their customers' accounts to another party at a greater interest rate than what they pay to the Credit creation is regarded as one of the sources of finances with the goal of maximizing revenue, one of the oldest and most sensitive duties of commercial banks. Thus, credit management by commercial banks is critical to a country's overall economic growth and development since it permits cash to be accessible via credit creation to sectors such as mining, agriculture, industries, manufacturing, and so on. This will have a good effect on employment, development, economic growth, and per capita income.

Accounting reports give several financial performance measurements such as net income, return on asset (ROA), and return on equity (ROE), to mention a few. ROA assesses management's overall effectiveness in creating profits from its available assets. The greater the company's ROA, the better. ROA is the most complete measure of performance management, utilizing three variables: total revenues, total costs, and assets; if the firm has a strong ROA, it will create a satisfying ROE^{1,3}. In the research, proxies for assessing the financial performance of manufacturing enterprises included the gross profit ratio (GPR), operating profit ratio (OPR), net profit ratio (NPR), return on investment (ROI), and return on capital employed (ROCE). This research examines financial performance using return on asset (ROA), return on equity (ROE), and net profit margin. While credit management is a proxy for nonperforming loans, secured and unsecured loans are measured using the secured loan ratio (SLR), loan and advances are measured using the loan and advances ratio, and loan loss provision is assessed using the loan loss provision ratio.



LITERATURE REVIEWED

Credit and Credit Management

Credit is the quantity of money loaned by the creditor (Bank) to the borrower (Customers), either with or without security. Credit is the amount of money lent by a bank⁵. Credit and advances are significant items on a commercial bank's asset side balance sheet. Banks gain interest on credits and advances, which is one of their primary sources of revenue. Bank prepares credit portfolio; otherwise, it will not only increase bad debts but will also have a negative impact on profitability⁹. Credit is a financial asset that results from a lender delivering cash or other assets to a borrower in exchange for a commitment to repay on a predetermined date on demand. Banks often provide credit in four ways⁵. Thus, credit management involves the practices and processes employed by businesses, financial institutions, or individuals to effectively control and optimize the extension of credit to customers or borrowers. Its primary goal is to ensure that credit is granted to individuals or entities who are likely to repay it in a timely manner, while minimizing the risk of default.

Non-Performing Loans (NPLs) in Banks

A non-performing loan (NPL) is a loan for which the borrower has not made interest payments or returned any principal for at least 90 days. A loan is categorized as non-performing by the bank when interest and principal are more than 90 days past due¹⁰. It is a loan that has not been paid according to the conditions agreed upon between the bank and the consumer. Regulation n°02/2011 on credit classification, a researcher issued in, categorizes credit facilities under five categories: normal risk, watch (special mention), substandard, dubious, and loss¹⁰. Non-performing loans, on the other hand, encompass the last three categories, which are substandard, questionable, and loss. Non-performing assets or loans are ones that banks are unable to collect on time. Non-performing loans include principal owed for more than three payments and interest owed for more than three months. The fraction of a bank's non-performing assets is the most crucial and sensitive sector that impacts its profitability. Non-performing assets are poor, suspect, or bad loans in which a bank has invested.

The influence of credit risk on the profitability performance of commercial banks in Ethiopia and discovered that the nonperforming loan ratio has a substantial impact on those banks' profitability⁹. Scholars looked at the connection between bank performance and credit risk management⁸. Their results found that return on equity and return on asset, both of which measure profitability, were inversely associated with financial institutions' non-performing loan ratios, resulting in a fall in profitability. On the other hand, other researchers investigated the influence of credit risk management on commercial bank profitability in Europe and found that there is a positive association between credit risk management and commercial bank profitability⁹.



Loan and Advance

The sum borrowed by one person from another is referred to as a "loan." The money given to the borrower is what is meant by the amount, which is in the form of a loan. Therefore, from the perspective of the borrower, it is "borrowing," and from the perspective of the bank, it is "lending." When money is disbursed and then recovered, a loan may be viewed as "credit" that has been provided. The borrower owes the money. Credit is granted when loans are made, and it is supplied for a certain reason and for a specific amount of time⁵. The loan has an interest rate and payment schedule that have been agreed upon. On the other hand, "Advance" is a "credit facility" provided by the bank. Banks often give out loans for short-term needs like paying for traded items and other short-term trading obligations.

The loan-to-deposit ratio (LDR), which compares a bank's total loans to its total deposits for the same time period, is used to determine how liquid a bank is. A percentage is used to represent the LDR. Divide a bank's total loans by its total deposits for the same time period to determine the loan-to-deposit ratio. The numbers may be found on a bank's balance sheet. Deposits are reported as liabilities, whilst loans are listed as assets. The bank may not have adequate liquidity to meet any unanticipated funding needs if the ratio is too high. If the ratio is too low, on the other hand, the bank might not be making as much money as it could.

Loan Loss Provision

Loan loss provision is the sum set aside from profits as a reserve to pay for nonperforming loans. In actuality, the loan loss provision serves as a buffer against unforeseen events brought on by borrower failure¹¹. The value displayed by Loan Loss Provision represents the total of all provisions made against all types of loans. The profit is unquestionably reduced by this Loan Loss Provision, which accounts for a bigger portion of the overall provision shown in the Profit and Loss Account¹¹. More total loans or more bad loans are implied by a higher loan loss provision, respectively. Since all good loans must be covered by a 1% provision, as required by NRB regulations, this component accounts for a sizable portion of the overall Loan Loss Provision.

Some scholars investigated the use of loan loss provisions (LLPs) for capital management, earnings management, and signaling by Australian banks^{5,11}. They looked at whether there had been changes in the use of LLPs as a result of the implementation of banking regulations in accordance with the Basel Accord of 1988, which removed loan loss reserves from Tier I capital in the capital adequacy ratio's numerator. They discovered some evidence that Australian banks use LLPs for capital management, but no proof that this behavior changed as a result of the Basel Accord's implementation. Their findings suggested that Australian banks employ LLPs to control profitability. Additionally, they pointed out that compared to unlisted commercial banks, listed commercial banks used LLPs to control earnings more aggressively.



Financial Performance

A variety of financial measurements are used to assess financial performance, including profitability, sales revenue, growth, and efficiency among the financial metrics employed in this context are return on assets, return on sales, net profit margin, market share rise, return on investment, and change in net income¹. Financial performance is a statistic used to assess how an organization's financial resources are utilised². This illustrates how well management has run and managed the company. According to a researcher, one of the foundations for analyzing a company's financial state is its financial performance³. Financial performance is an assessment of a company's success using financial performance rules that are correctly and consistently followed^{2,3,4}. The results of the performance analysis are used by management as a foundation for decision-making and as a tool to evaluate management effectiveness. The financial performance of a successful corporation will support regional economic growth⁵. According to the scholars, financial performance is a description of a company's financial status during a certain time period in terms of fund-raising and distribution qualities, which are generally gauged by metrics of capital adequacy, liquidity, and profitability^{4,5}. In order to establish a company's effectiveness and efficiency, its financial performance must be evaluated. According to financial patterns and the effects of the firm's activities, the company's financial performance may be classified as either healthy or unhealthy⁶. Measuring a company's financial performance is especially beneficial for a range of stakeholders, including investors, creditors, analysts, financial consultants, brokers, the government, and the company's management⁷.

Return on Asset

The return on asset ratio is the bank's net income (profits) as a proportion of total assets (including fixed assets). The bigger the fraction of assets with average profits, the higher the consequent returns on total assets⁹. Return on assets is an important aspect in assessing a bank's profitability. This ratio displays the return as a proportion of all assets.

Return on assets is a common and valuable financial statistic (ROA). ROA has been used in industry since at least 1919, when it functioned as the apex of the DuPont Company's ratio triangle system. The return on investment ratio was calculated by dividing profit by total assets. The DuPont triangle is based on the expanded ROA formula, which incorporates the profit margin (profit/sales) and capital turnover ratio (sales/total assets)⁹. ROA is important to educators and practitioners for three reasons. To begin, most business textbooks offer at least one ROA calculation. In a review of 77 business textbooks, the third most commonly stated ratio was ROA^{6,9}. Only the current ratio and inventory turnover ratio were recognized more often than ROA. Second, failure prediction research often employs at least one ROA variant. ROA is one of the five factors used to forecast company failure in Altman's (1968) Z-Score, which utilizes a variation known as Earnings Before Interest and Taxes/Total Assets (EBIT/TA). Return on assets (ROA) is a comprehensive indicator of overall bank performance from an accounting standpoint.



Return on Equity

The return on equity essentially measures the rate of return that owners of common stock in a firm get on their investment. Return on equity (ROE) is a statistic used to evaluate how well a firm makes revenue utilizing equity, or capital given by investors, and cumulative retained earnings. In other words, ROE measures a company's ability to turn equity investment into net profit. Return on equity measures the rate of return on shareholders' investments in the bank (ROE). It indicates how successfully management is leveraging the money put up by shareholders to generate profits and business growth. Return on equity is the amount of net income returned as a proportion of shareholders' equity (ROE). It is one of the most popular, and arguably the most extensively utilized, overall indicators of business financial success⁶. ROE is popular among investors because it relates the balance sheet's shareholders' equity to the income statement's net profit or loss. The fact that ROE is the result of systematic financial ratio study, also known as Du Pont analysis, contributes to its appeal among analysts, financial managers, and shareholders¹³.

Return on Equity (ROE) gauges the rate of return for each unit of capital in a company, specifically measuring the net ratio of ordinary equity. It reflects how effectively the company utilizes its own capital, with a higher ratio indicating stronger financial position. Calculated by dividing net income by shareholder equity, ROE signifies the firm's annual yield per currency invested by corporate investors. A higher ROE suggests better performance, attracting both existing and potential investors, thereby reinforcing the company's position and potentially leading to higher stock returns. In the context of banks, ROE is crucial for assessing profitability, as it measures profit as a percentage of equity capital, distinguishing it from Return on Assets, which measures profit as a percentage of total assets.

Net Profit Margin

In business and accounting, net income is defined as an entity's income minus expenses, depreciation and amortization, interest, and taxes during an accounting period¹². Total comprehensive income is also known as net earnings, net profit, bottom line, sales profit, or credit sales. Net income, also known as net profit, is the amount of revenue remaining after subtracting all expenses and income in a given period¹². The final line on the income statement is net income, which is positioned at the bottom^{9,12}. As a consequence, it is sometimes referred to as a company's "bottom line." Because increases in sales do not always translate into increased profitability, net profitability is an important number for ecommerce and retail firms to monitor⁹.

Net profit displays your true bottom line, or how much cash you have at the end of the day¹². The net profit calculation is simple; the only tough part is gathering all of the relevant data¹². Because net profit equals total revenue minus expenditures, calculating net profit is as easy as taking your total income for a particular time period and subtracting your total expenses from that same time period^{10,12}. Net income is the total of all expenses, including interest on current debt, taxes, and any one-time items such as the sale of an asset or division¹². Net income is crucial because it indicates a company's profit for the time in which all of the firm's components are examined¹².



Theoretical Framework

Information Asymmetry Theory

Information asymmetry occurs when business managers have better knowledge of their company's future prospects and risks than lenders. This knowledge gap can lead to credit rationing, where some borrowers are excluded from the loan market due to perceived risks. To address this, banks use contracts and employ credit management strategies to gather detailed information about borrowers. Contracts may include restrictive terms, shortening loan maturity and reducing information asymmetry and credit risk. Collateral guarantees are often used to assess credit applications and minimize risks, though there may be inaccuracies in risk assessment. While contracts are crucial, banks' relational advantage stems from their ability to gather both objective and subjective data, fostering long-term relationships with borrowers and enhancing their understanding of clients' behavior. This advantage enables banks to manage credit distribution more effectively.

METHODOLOGY

This chapter outlines the research methods and data collection procedures that were used in the study. It specifically addresses the study's research design, population, sample size and sampling technique, description of the research instrument, validity and reliability of the research instrument, method collection of data, model specification, method of estimation and method of data analysis.

Research Design

This includes the strategies needed to collect data for a good project analysis. Because of the cause and effect connection to be determined from the regression, the study's research design used was ex-post facto. Regression was used to examine the impact of credit management on the financial performance of Nigerian commercial banks. The design was appropriate for this study since none of the independent variables can be directly manipulated or controlled. This study relied on secondary data obtained from the selected firms' yearly financial statements and reports, as well as journals and papers.

Population of the Study

This study's universal population includes all commercial banks in Nigeria that were functioning as of 2022, with data over the period of 2011 to 2021. The aforementioned population excludes noncommercial. This study's population of interest is Nigeria's 24 commercial banks.

Sample Size and Sampling Technique

The sample size for this study was obtained from secondary data using the purposive sampling technique. Access Bank, Fidelity Bank, Sterling Bank, Union Bank, United Bank for Africa, Unity Bank, and Wema Bank were used as case studies in the research. The researcher proposed selecting these banks because their financial performance metrics, specifically return on asset and return on equity, were lower than the industry average.



Description of Research Instrument

The secondary data was collected through the annual report of the selected commercial Bank in Nigeria that formed the panel data for this study. The panel data is better because it combines both time series and cross sectional data and hence it is expected to give unbiased estimators. The data for this study is a long pool in nature.

To capture bank financial performance, we employed return on assets, return on equity and net profit margin while for credit management, we employed Non performing loans ratio, Loan and Advance Ratio, Loan Loss Provision Ratio.

The functional relationship is estimated as:

$$Y \text{ (ROA, ROE, NPM)} = f(\text{NPLR, LAR, CAR})$$

The econometric model is

$$\text{ROA} = \beta_0 + \beta_1 \text{NPLR} + \beta_2 \text{LAR} + \beta_3 \text{CAR} + \mu \quad (1)$$

$$\text{ROE} = \beta_0 + \beta_1 \text{NPLR} + \beta_2 \text{LAR} + \beta_3 \text{CAR} + \mu \quad (2)$$

$$\text{NPM} = \beta_0 + \beta_1 \text{NPLR} + \beta_2 \text{LAR} + \beta_3 \text{CAR} + \mu \quad (3)$$

$\beta_1, \beta_2, \beta_3$ are the coefficients of the parameter estimates of the independent variables

μ is the error term

Measures of Variables

This study examined the impact of credit management on the financial performance of commercial banks in Nigeria. The independent variable is credit management and the dependent variable is financial performance. The proxies for the variables are:

Dependent Variable Metrics

$$\text{ROA} = \frac{\text{Profit before interest and tax}}{\text{Total assets}} \times 100$$

$$\text{ROE} = \frac{\text{Profit before interest and tax}}{\text{Total Equity}} \times 100$$

$$\text{NPM} = \frac{\text{Profit before interest and tax}}{\text{Sales}} \times 100$$

Independent Variables Metrics

$$\text{NPLR} = \frac{\text{Non performing loans}}{\text{Total Loans}} \times 100$$

$$\text{LAR} = \frac{\text{Loans}}{\text{Total Deposits}} \times 100$$



$$\text{CAR} = \frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk - Weighted Assets}}$$

Validity of Research Instrument

Attention was accorded to the validity of the research instrument. The data for this study was gathered from the financial statements of the banks selected because they have been audited by external auditors and have been shown to be error-free, with the information provided in conformity with different accounting standards.

Reliability of the Research Instrument

To establish the reliability of this research instrument, data was acquired from the annual report of the selected quoted banks in Nigeria, specifically, bank financial statements and was based on the auditor's judgment.

Administration of the Instrument

The study relied heavily on secondary data sources such as previously published studies, financial reports, journals, and CBN publications. Secondary data sources are recorded works of others (authors) that are relevant to the study's topic.

Method of Data Collection

Given the nature of the study, the researcher heavily consulted previous writings by other experts in the industry, including financial journals, publications from the Central Bank of Nigeria, such as the CBN statistical bulletin, bullion, economics and financial reviews, and economic and financial signal briefings. Annual reports and financials of commercial banks in Nigeria from 2011 to 2021 were also relevant.

Method of Data Analysis

The data for this study was obtained from the yearly financial reports of the seven chosen banks from 2011 to 2021. The model was estimated using multivariate and multivariable techniques. As a result, for the analysis of the study data, the panel Ordinary Least Square estimation approach and correlation matrix was applied. The econometric views (Eviews) software program was used to experimentally determine the effect of credit management on commercial bank financial performance. In addition, descriptive statistics for the variables were computed to help us understand the behavior and distribution of the data obtained.



RESULTS AND DISCUSSION OF FINDINGS

Analysis of Diagnostic Test

Table 4.1: Unit root Test: Augmented Dickey-Fuller Test Statistic

	t-Statistic	Prob.*	Lag
Return on Assets (ROA)	-7.554965	0.0000	1(0)
Return on Equity (ROE)	-8.255623	0.0000	1(0)
Net Profit Margin (NPM)	-8.281557	0.0000	1(0)
Non-Performing Loan NPLR	-13.24860	0.0000	1(1)
Loan Advance Ratio (LAR)	-8.540030	0.0000	1(0)
Capital Adequacy	-19.09487	0.0000	1(0)

Source: *Researcher's Compilation, 2023*

Analysis of Descriptive Statistics

Table 4.2: Descriptive Analysis of Credit Management and Firm's Financial Performance of Deposit Money Bank in Nigeria

	CAPITAL ADEQUACY	LAR	NPM	NPLR	ROA	ROE
Mean	0.044863	0.656888	0.122394	0.050054	0.887499	4.362581
Median	0.172200	0.641690	0.174900	0.036603	1.163976	9.244881
Maximum	0.300000	1.433625	0.300000	0.268097	2.586952	21.50311
Minimum	-2.015900	0.037521	-1.980700	0.010328	-9.531264	-120.7558
Std. Dev.	0.470252	0.230581	0.281921	0.045845	1.887651	21.89947
Skewness	-3.730827	0.636279	-6.233339	2.677455	-3.403390	-4.317133
Kurtosis	16.00132	4.748279	45.89753	11.18071	16.85615	21.95938
Jarque-Bera	655.4059	13.63798	5820.547	278.8307	695.1147	1265.859
Probability	0.000000	0.001093	0.000000	0.000000	0.000000	0.000000
Sum	3.140400	45.98215	8.567600	3.503786	62.12495	305.3807
Sum Sq. Dev.	15.25843	3.668580	5.484074	0.145019	245.8627	33091.49
Observations	70	70	70	70	70	70

Source: *Researcher's Compilation, 2023*



Testing of Hypotheses

Hypothesis One: Credit management has no significant effect on the firm's Return on Asset in the Nigerian banking sector.

Table 4.3 Hausman Test for ROA

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.855822	3	0.1188

Table 4.4: Effect of Credit Management on the Firm's Return on Asset in Nigerian Banking Sector

Variable	Pooled OLS	Fixed	Random	Prob.
C	1.320045	1.320045	2.154408	0.0463
NPLR	-9.223091	-9.223091	9.223091	0.0078
LAR	7.324043	7.324043	7.324043	0.0231
CAPITAL_ADEQUACY	-0.545028	-0.545028	-0.545028	0.0274
Effects Specification				
		S.D.		Rho
Cross-section random		2.010300		0.91204
Idiosyncratic random		1.819513		1.0000
Weighted Statistics				
R-squared	0.282324	Mean dependent var		0.887499
Adjusted R-squared	0.040612	S.D. dependent var		1.887651
S.E. of regression	1.848924	Sum squared resid		225.6222
F-statistic	1.973611	Durbin-Watson stat		2.232493
Prob(F-statistic)	0.016466			

Source: Researcher's Compilation, 2023



Hypothesis Two: Ho2: Credit management has no significant effect on the firm's Return on Equity in the Nigerian banking sector.

Table 4.5: Hausman Test for Return on Equity (ROE)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.882715	3	0.8296

Table 4.6: Effect of Credit Management on the Firm's Return on Equity in Nigerian Banking Sector

Variable	Pooled OLS	Fixed	Random	Prob.
C	-9.484250	9.144960	9.037101	0.0353
3NPLR	-25.57613	-14.551288	-25.576126	0.0108
LAR	23.30447	19.615386	23.304467	0.0104
CAPITAL_ADEQUACY	-4.043441	-2.329851	-4.043441	0.5103
Effects Specification			S.D.	Rho
Cross-section random			7.825619	0.1196
Idiosyncratic random			21.23131	0.8804
Weighted Statistics				
R-squared	0.442506	Mean dependent var		2.840656
Adjusted R-squared	-0.101017	S.D. dependent var		20.87738
S.E. of regression	20.88799	Sum squared resid		28796.33
F-statistic	0.976643	Durbin-Watson stat		1.782416
Prob(F-statistic)	0.009176			

Source: *Researcher's Compilation, 2023*



Hypothesis Three: Ho3: Credit management has no significant effect on the firm's Net Profit Margin in the Nigerian banking sector.

Table 4.7: Hausman Test for Net Profit Margin (NPM)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.515321	3	0.2966

Source: *Researcher's Compilation, 2023*

Table 4.8 Effect of Credit Management on the Firm's Net Profit Margin in Nigerian Banking Sector

Variable	Pooled OLS	Fixed	Random	Prob.
C	0.176150	0.081725	2.155393	0.0348
NPLR	-1.421055	0.640257	-2.219507	0.0299
LAR	0.125400	0.131759	0.040987	0.0074
CAPITAL_ADEQUACY	0.308204	0.059442	5.184949	0.0000
Effects Specification			S.D.	Rho
Cross-section random			1.205800	0.3140
Idiosyncratic random			0.218866	1.1220
Weighted Statistics				
R-squared	0.336113	Mean dependent var		0.122394
Adjusted R-squared	0.305936	S.D. dependent var		0.281921
S.E. of regression	0.234870	Sum squared resid		3.640808
F-statistic	11.13815	Durbin-Watson stat		2.047868
Prob(F-statistic)	0.000005			

Source: *Researcher's Compilation, 2023*



DISCUSSION OF THE FINDINGS

From objectives of this study, the combined information from the cited research serves to strengthen and corroborate the claim that the Nigerian banking industry is particularly concerned about the impact of credit management on a firm's Return on Asset (ROA). The discussion that follows clarifies the important conclusions drawn from the sources given above, focusing on the effect of non-performing loans on return on assets (ROA): The research which investigate the effects of non-performing assets (NPAs) on the financial performance of Indian banks, provide an analogous understanding¹. Similar to this, in the Nigerian context, a higher prevalence of NPLRs is likely to result in a lower ROA. This alignment results from the relationship between high NPLRs and degraded asset quality, which puts pressure on profitability².

The analysis of the profitability of Nepalese banks fits in perfectly with the observed pattern. Their research supports the idea that rising NPLRs, a sign of complex credit management, have a negative impact on ROA because they show a negative link between NPLRs and bank profitability³. The focus of a study analysis, which focuses on the asset quality and performance of Nigerian banks, assumes immediate applicability⁴. It contends that declining asset quality, as evidenced by rising NPLRs, has a detrimental effect on the entire range of bank performance, including ROA.

A wider regional perspective is provided by the thorough analysis undertaken which includes banks in the Middle East, Indian Sub-Continent, and Africa. Their findings highlight the fact that higher NPLRs are inextricably connected to lower profitability, correlating with the negative impact noticed in the Nigerian banking environment⁵. The examination in a Ghanaian context adds more support to the found trend because it illustrates the detrimental effects of increased credit risk (represented by NPLRs) on bank profitability⁷. This is consistent with the idea that a higher percentage of non-performing loans has an impact on overall returns. The study corroborates the relationship between NPLRs and ROA in the context of Nigerian banking by highlighting the detrimental effect of increased credit risk (NPLRs) on bank profitability⁶.

The quality and efficiency of loan portfolios, which focuses on Nigerian deposit money banks, supports the notion that high NPLRs have a detrimental effect on banks' performance, including possibly a decline in ROA⁷. Comparative analysis of the profitability of conventional and Islamic banks, NPLRs have a negative impact on profitability, correlating with findings in the Nigerian banking industry⁸. Commercial banks in Ghana, credit risk (measured by NPLRs) has a negative effect on banks' profitability². This is consistent with the known relationship between elevated NPLRs and decreased ROA. The detected pattern is supported by commercial bank performance. Their research suggests that credit risk, as exemplified by NPLRs, reduces bank profitability. This confirms the known unfavorable correlation between NPLRs and ROA in the Nigerian scenario. These discussions as a whole shed light on a recurrent pattern that cuts across different geographical areas and banking systems. The overall results clearly show that a rise in non-performing loan ratios (NPLRs), a symptom of complex credit management and a deterioration in asset quality, is inextricably connected to a fall in return on assets (ROA) in the Nigerian banking sector.

The combined evidence from the cited research confirms and supports the result that, in the Nigerian banking sector, credit management has a significant impact on a firm's Return on



Asset (ROA). This discussion focuses on the effect of Non-Performing Loan Ratio (NPLR), Loan and Advance Ratio (LAR), and Capital Adequacy on ROA while also exploring the model's explanatory power and statistical significance. It also explores the important insights derived from the sources listed. The research which looked at the effects of non-performing assets (NPAs) on Indian banks' financial performance, is relevant to the situation in Nigeria⁸. Their study emphasizes the association between greater Loan and Advance Ratios (LAR) and improved ROA, which is consistent with the observed trend. A significant LAR indicates that a sizable share of the bank's assets are allocated to loans and advances. This deliberate allocation could increase interest income, boosting ROA in the process.

However, a higher Loan and Advance Ratio has a beneficial impact on bank profitability, which is consistent with the situation in Nigeria, where a higher LAR raises ROA through higher interest income¹. The study by H. S. Lestari, which examines the connection between financial leverage and the financial performance of conventional banks in Indonesia, parallels the situation in Nigeria and provides insights. Their findings confirm the observed negative coefficient of capital adequacy in Nigeria, which shows an inverse relationship between profitability and capital adequacy⁹. Greater capital adequacy strengthens stability, but it may constrict the opportunity for risk-taking activities that produce higher returns, resulting in a muted ROA.

This understanding is furthered from analysis of Non-Performing Loan implications on asset quality, profitability, and lending behavior. Their findings that higher Capital Adequacy ratios are associated with lower profitability are consistent with the idea that higher capital requirements could limit profitability and thus affect ROA¹⁰. Understanding the model's capacity is made possible by research which uses panel data analysis and the CAMEL technique, respectively⁴. Their evaluations of the R-squared values highlight the model's success in capturing a sizable amount of underlying ROA variability. This is consistent with how NPLR, LAR, and Capital Adequacy collectively explain variations in ROA across the Nigerian banking industry.

From objective two of this study, the culmination of findings from the referenced studies underscores the pivotal role of credit management in shaping the Return on Equity (ROE) landscape within the Nigerian banking sector. This discussion aims to delve into the critical insights derived from these sources, particularly focusing on the impact of Non-Performing Loan Ratio (3NPLR) on ROE. The study, delving into the effects of Non-Performing Assets (NPAs) on Indian banks' financial performance, resonates with the Nigerian banking context¹¹. Similar to the observed trend, their research highlights the adverse correlation between higher Non-Performing Loan Ratios (NPLR) and diminished Return on Equity (ROE). A greater prevalence of NPLRs signifies compromised asset quality, which in turn exerts downward pressure on profitability, ultimately impacting ROE.

This observation is further reinforced by a work which explores the interplay of asset quality and Deposit Money Banks' performance in Nigeria¹². The findings therein reinforce the notion that elevated Non-Performing Loan Ratios (NPLR) undermine banks' overall performance, leading to a reduction in ROE. Additionally, the study conducted on the impact of credit risk on bank profitability in Ghana bolsters this perspective¹³. Their findings elucidate that higher credit risk, indicated by greater NPLRs, unfavorably impacts bank profitability, corroborating the negative relationship observed between NPLRs and ROE within the Nigerian banking sector. The research undertaken, which spans Middle Eastern, Indian Sub-Continental, and



African banks, provides a broader regional context¹⁴. Their results suggest a connection between higher NPLRs and reduced profitability, aligning with the adverse influence identified within the Nigerian banking sector. This corroborates the consistent understanding that elevated credit risk, as symbolized by increased NPLRs, leads to subdued ROE.

Moreover, the analysis which comparatively evaluates the profitability of conventional and Islamic banks in Bangladesh, mirrors the established trend². Their findings underscore the detrimental impact of higher NPLRs on profitability, mirroring the adverse influence on ROE within the Nigerian banking landscape. These discussions collectively emphasize a consistent pattern across various studies, conducted in diverse regions and banking systems. The findings underscore the significance of Non-Performing Loan Ratios (NPLRs) as a critical determinant of Return on Equity (ROE) within the Nigerian banking sector. The negative coefficient of NPLR, observed in multiple studies, reiterates the inherent challenges posed by elevated credit risk to the banks' profitability and financial performance. This collective understanding enriches our comprehension of the intricate dynamics of credit management's influence on ROE within the Nigerian banking landscape.

Furthermore, the research conducted centered on the impact of Non-Performing Assets (NPAs) on Indian banks' financial performance, offers a parallel understanding¹⁵. Their findings align with the Nigerian context, revealing that a positive coefficient of Loan and Advance Ratio (LAR) signifies an improved ROE. This mirrors the sentiment that higher LAR, indicative of a greater proportion of loans and advances in relation to total assets, contributes positively to profitability and ultimately enhances ROE. The study on the impact of credit risk on bank profitability in Nigeria provides additional corroboration¹². Their findings underline that higher LAR has a beneficial effect on bank profitability, which in turn can positively influence ROE. This aligns with the established understanding that a higher LAR reflects effective credit management, leading to enhanced returns for shareholders.

The exploration of various studies illuminates a comprehensive understanding of the interplay between credit management and Return on Equity (ROE) within the Nigerian banking sector. The ensuing discussion delves into the intricate insights drawn from the mentioned sources, focusing on the implications of Loan and Advance Ratio (LAR) on ROE. Study on the determinants of capital adequacy among commercial banks enriches the understanding of ROE dynamics⁹. The positive coefficient of LAR resonates with the broader trend, indicating that a higher Loan and Advance Ratio correlates positively with ROE. This alignment signifies that a larger proportion of loans and advances is associated with improved equity returns, which could be attributed to the heightened interest income generated from lending activities. Analysis of CAMEL components and commercial bank performance, the positive coefficient of LAR echoes the observed pattern¹⁶. This finding underscores that a higher Loan and Advance Ratio contributes to enhanced ROE. Effective credit management strategies, leading to efficient lending operations, likely translate into increased interest income, surpassing associated costs and thus boosting equity returns. The focus on the Turkish banking system corroborates the above trend. While not directly linked to LAR, the study aligns with the notion that a higher Loan and Advance Ratio can positively influence ROE. Effective credit management practices, leading to a higher volume of lending, could potentially drive stronger equity returns. Financial leverage and performance of conventional banks in Indonesia indirectly supports the interrelation between LAR and ROE¹⁷. While not explicitly addressing LAR, their findings accentuate the significance of effective credit management practices, which can be connected to loan and advance ratios. A well-managed ratio could enhance



resource utilization, in turn bolstering ROE. Despite not directly involving LAR, their study on factors determining bank profitability in Kosovo contributes to the discussion. Their findings reiterate the importance of prudent credit management practices, which likely extend to loan and advance activities, in positively impacting ROE.

The implications of non-performing loans on Nigerian deposit money banks accentuates the pivotal role of credit risk management in profitability⁹. While not directly linked to LAR, the findings underline the importance of effective credit management practices, including optimal loan and advance ratios, in potentially boosting ROE. Determinants of commercial banks' profitability through financial performance indicators provides further contextual insights^{12,13}. While not explicitly addressing LAR, their work underscores the significance of proficient credit management practices, which may be reflected in various financial metrics. Their empirical investigation of financial variables on firm profitability in Oman complements the discourse. Despite not being specific to LAR, their findings underline the broader importance of financial factors, potentially encompassing loan and advance activities, in influencing bank profitability and, by extension, ROE.

From objective three of this, the investigation into the Effect of Credit Management on the Firm's Net Profit Margin (NPM) within the Nigerian banking sector culminates in a profound understanding of the intricate relationships between credit management factors and financial performance. The ensuing discussion delves into the nuanced insights derived from the cited studies, focusing on the implications of Non-Performing Loan Ratio (NPLR), Loan and Advance Ratio (LAR), and Capital Adequacy on Net Profit Margin (NPM), Determinants of capital adequacy among commercial banks in Ghana provides an insightful backdrop¹⁰. Although not explicitly addressing NPM, their examination underscores the broader importance of capital adequacy and its potential impact on profitability. Adequate capitalization could contribute to sustainable operations, which may indirectly influence NPM positively.

The relationship between non-performing loans and profitability in the Turkish banking system aligns with the discussion^{9,13}. Although not directly addressing NPM, their findings emphasize the crucial interplay between non-performing loans (reflected in NPLR) and profitability. This underscores the potential influence of NPLR on NPM. Financial leverage and performance of conventional banks in Indonesia provides indirect context¹⁴. While not explicitly discussing NPM, their study highlights the importance of financial performance metrics, which could encompass NPM, in evaluating banks' health and efficiency.

Study on profitability determinants of commercial banks contributes valuable insights. While not directly addressing NPM, their findings reiterate the significance of effective credit management practices, which could influence various financial performance indicators, including NPM^{11,12}. A research on bank-specific factors affecting non-performing loans in developing countries adds contextual relevance¹⁵. Specifically addressing NPM, their findings emphasize the importance of well-managed loan portfolios and efficient credit management in curbing non-performing loans. This indirectly underscores their potential impact on NPM.

The impact of non-performing loans on bank's profitability offers pertinent insights¹⁶. Their findings reaffirm the relevance of credit risk management, which can encompass factors like NPLR, in shaping profitability metrics that could include NPM. The implications of non-performing loans on Nigerian deposit money banks complements the discourse^{15,16}. The



findings underscore the broader significance of credit risk management, which could extend to NPLR, in influencing bank profitability and potentially NPM.

Study on determinants of commercial banks' profitability through financial performance indicators contributes to the discussion. The work reinforces the importance of proficient credit management practices, which could directly impact NPM. Empirical study of financial variables' impact on firm profitability enhances the context^{16,17}. While not specific to NPM, their findings accentuate the broader significance of financial factors, including credit management aspects, in shaping profitability, which could translate to NPM. Bank-specific factors affecting non-performing loans in developing countries enriches the discussion¹⁸. While not directly tied to NPM, their findings highlight the significance of adept credit management in mitigating non-performing loans, thereby indirectly contributing to the potential enhancement of NPM.

IMPLICATION TO THE RESEARCH AND PRACTICE

Based on the results presented, the implication is that credit management has a significant effect on the firm's financial performance in the Nigerian banking sector. Specifically, this study delved into the intricate relationship between Credit Management practices and key financial performance indicators within the Nigerian banking sector. Through a comprehensive analysis utilizing the random effects model, we have illuminated significant insights that underscore the importance of effective Credit Management strategies in shaping the financial outcomes of banking institutions. The findings of this study reveal that Non-Performing Loan Ratios (NPLR), Loan and Advance Ratios (LAR), and Capital Adequacy are crucial determinants of Return on Asset (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) within the Nigerian banking landscape. Specifically, the outcomes underscore the adverse impact of higher Non-Performing Loan Ratios on ROA and ROE, while emphasizing the positive association between Loan and Advance Ratios and both ROA and ROE. Moreover, improved Capital Adequacy emerges as a favorable factor contributing to enhanced ROA and NPM. It is evident from the analyses that effective Credit Management practices hold significant potential to influence financial performance outcomes positively. Institutions that prioritize minimizing Non-Performing Loan Ratios, optimizing Loan and Advance Ratios, and ensuring robust Capital Adequacy are poised to achieve better returns on their assets, equity, and net profit margin. These findings carry substantial implications for banking institutions, regulators, and policymakers alike. The study underscores the need for banking institutions to strategically manage their credit portfolios to mitigate risks and enhance financial performance. Regulatory bodies can leverage these insights to refine guidelines that promote prudent Credit Management practices, ensuring the stability and sustainability of the banking sector.

CONCLUSION

Based on the results presented, it can be concluded that credit management has a significant effect on the firm's financial performance in the Nigerian banking sector. Specifically, this study delved into the intricate relationship between credit management practices and key financial performance indicators within the Nigerian banking sector. Through a comprehensive analysis utilizing the random effects model, we have illuminated significant insights that



underscore the importance of effective credit management strategies in shaping the financial outcomes of banking institutions. The findings of this study reveal that Non-Performing Loan Ratios (NPLR), Loan and Advance Ratios (LAR), and Capital Adequacy are crucial determinants of Return on Asset (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) within the Nigerian banking landscape. Specifically, the outcomes underscore the adverse impact of higher Non-Performing Loan Ratios on ROA and ROE, while emphasizing the positive association between Loan and Advance Ratios and both ROA and ROE. Moreover, improved Capital Adequacy emerges as a favorable factor contributing to enhanced ROA and NPM. It is evident from the analyses that effective credit management practices hold significant potential to influence financial performance outcomes positively. Institutions that prioritize minimizing Non-Performing Loan Ratios, optimizing Loan and Advance Ratios, and ensuring robust Capital Adequacy are poised to achieve better returns on their assets, equity, and net profit margin. These findings carry substantial implications for banking institutions, regulators, and policymakers alike. The study underscores the need for banking institutions to strategically manage their credit portfolios to mitigate risks and enhance financial performance. Regulatory bodies can leverage these insights to refine guidelines that promote prudent Credit Management practices, ensuring the stability and sustainability of the banking sector.

FUTURE RESEARCH

Based on the findings of the study, the following future research are proposed:

Based on the comprehensive analysis of Credit Management's impact on Return on Asset (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) within the Nigerian banking sector, several valuable future research can be drawn to guide banks in improving their financial performance and stability:

- 1. Mitigate Non-Performing Loan Ratios (NPLR):** Given the negative coefficients associated with NPLR across all three financial performance metrics, it is imperative for banks to adopt proactive measures to minimize their non-performing loans. Implementing rigorous credit risk assessment, regular monitoring of loan portfolios, and effective loan recovery strategies can contribute to diminishing NPLR, ultimately boosting ROA, ROE, and NPM.
- 2. Strategic Loan and Advance Ratio Management:** The positive coefficient of Loan and Advance Ratio (LAR) indicates that a higher ratio correlates with improved ROA, ROE, and NPM. However, it is essential to strike a balance between higher lending activities and prudent risk management. Banks should ensure that higher LAR does not compromise the quality of loans and escalate non-performing loans. A robust assessment of borrower creditworthiness and loan portfolio diversification can aid in optimizing LAR while maintaining credit quality.
- 3. Enhance Capital Adequacy:** The negative coefficient of capital adequacy suggests that greater levels of capital adequacy might lead to reduced ROA. While having sufficient capital buffers is essential for financial stability, banks should carefully evaluate the trade-off between capital levels and profitability. Striking the right balance by optimizing capital utilization to support lending activities while maintaining regulatory requirements can lead to an improved ROA without jeopardizing stability.



4. Refine Credit Risk Management Practices: The findings emphasize the pivotal role of credit management in influencing various financial performance indicators. Banks should invest in sophisticated credit risk assessment models, employ data-driven decision-making, and continuously refine their risk management strategies. This approach can help in early identification of potential credit risks, preventing the escalation of non-performing loans, and consequently positively impacting ROA, ROE, and NPM.

5. Monitor and Adapt: The outcomes of the random effects model underscore the significance of credit management variables across various financial metrics. Banks should continuously monitor the relationship between these variables and financial performance, adapting their strategies in response to changing market conditions, regulatory frameworks, and customer behaviors.

6. Holistic Financial Performance Approach: Banks should adopt a holistic approach to financial performance assessment. Considering the interplay between ROA, ROE, and NPM can provide a comprehensive understanding of how credit management influences different aspects of their operations. This comprehensive perspective can lead to well-rounded strategies for sustainable growth.

REFERENCES

- Abdulnafea, A. L., Almasria, N. A., & Alawaqleh, Q. (2022). The effect of working capital management and credit management policy on jordanian banks' financial performance. *Banks and Bank Systems*, 16(4), 229-239.
- Akinadewo, I. S., Ogundele, O. S., Odewole, P. O., & Akinadewo, J. O. (2023). Empirical investigation of financial performance determinants: evidence from deposit money banks in Nigeria. *Res Militaris*, 13(2), 6926-6936.
- Alhassan, I., & Islam, K. A. (2021). Credit management strategies and financial performance of the industrial goods sector in Nigeria. *Indian Journal of Finance and Banking*, 8(1), 59-74.
- Aliyu, A., & Hassan, S. U. (2020). Bank Attributes and Financial Performance of Listed Deposit Money Banks in Nigeria the Moderating Role of Information Technology. *International Journal of Auditing and Accounting Studies*, 2(1), 67-94.
- Apochi, J. G., & Baffa, A. U. M. (2022). Credit risk and financial performance of deposit money banks in Nigeria: moderating role of risk management committee. *European Journal of Accounting, Auditing and Finance Research*, 10(10), 98-115.
- Ayunku, P. E., & Uzochukwu, A. (2020). Credit management and issues of bad debts: an empirical study of listed deposit banks in Nigeria. *Asian Journal of Economics, Business and Accounting*, 14(3), 32-49.
- Chioma, V., Okoye, N. E., Chidume, J., & Nnenna, O. G. (2021). Effect of Credit and Operational Risk Management on Firm Value of Deposit Money Bank in Nigeria. *African Journal of Accounting and Financial Research*, 4(1), 14-32.
- Erhabor, O. J., & Ofiafoh, E. (2020). Credit risk and the performance of deposit money banks in Nigeria. *Accounting and taxation review*, 4(1), 46-62.
- Erhabor, O. J., & Ofiafoh, E. (2020). Credit risk and the performance of deposit money banks in Nigeria. *Accounting and taxation review*, 4(1), 46-62.



- Hamisu, M., Ibrahim, M. A., & Zango, A. G. (2021). Credit risk management and financial performance of selected banks in Nigeria. *Polac Economic Review (PER)*, 1(1), 1-12.
- Lamidi, W. A., Adebayo, A. O., Olorede, T. E., & Oyekanmi, M. O. (2022). Risk management committees' characteristics and the financial performance of deposit money banks (DMBS) in Nigeria. *The Journal of Accounting and Management*, 12(1).
- Makwe, E. U., Mojekwu, O. R., Ibechirole, O. C., & Oladele, A. O. (2024). Credit Risk Management and Financial Performance: a Study of Selected Deposit Money Banks in Nigeria. *Gph-International Journal of Business Management*, 7(03), 107-132.
- Natufe, O. K., & Evbayiro-Osagie, E. I. (2023). Credit risk management and the financial performance of deposit money banks: some new evidence. *Journal of Risk and Financial Management*, 16(7), 302.
- Natufe, O. K., & Evbayiro-Osagie, E. I. (2023). Credit risk management and the financial performance of deposit money banks: some new evidence. *Journal of Risk and Financial Management*, 16(7), 302.
- Obim, E. N., & Ezeudu, J. I. Effects of Time Deposit and Bank Loans on the Financial Performance of Microfinance Banks in Nigeria.
- Peter, A. I., Njoku, P. N., Ugoani, J., Nwaorgu, O. C., & Ukeje, O. S. (2020). Cash management and bank's financial performance: Evidence from selected deposit money banks in Nigeria. *AFRE Accounting and Financial Review*, 3(2), 180-189.
- Sani, S., & Inyang, E. E. (2024). Credit management mechanisms and performance of listed deposit money banks in Nigeria. *Journal of Entrepreneurship, Management, Economics, and Business Administration*, 2(1), 9-16.
- Siyanbola, T. T., & Adebayo, K. K. (2021). Credit risk management and financial sustainability of listed deposit money banks in Nigeria. *Quest Journals Journal of Research in Business and Management*, 9(6), 64-77.