Credit Risk Management and the Performance of Commercial Banks in Nigeria (2009-2023)

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Abstract
This research work investigated the effect of credit risk management on the performance of commercial banks in Nigeria, the researchers' specific objectives were to investigate the effect of non-performing loan on the performance of commercial banks in Nigeria, to ascertain the effect of loan loss provision on the performance of commercial banks in Nigeria, and to determine the effect of cash reserve ratio on the performance of banks in Nigeria. The study adopted ex post facto research design and employed the ordinary least squares (OLS) regression technique to analyze the data. The findings showed that loan-loss provision has positive significant effect on the performance of commercial banks in Nigeria (the p-value is 0.0000 while the t-statistic is 7.922521), cash reserve requirement has positive significant effect on the performance of commercial banks in Nigeria (the p-value is 0.0001 while the t-statistic is 6.125682), and there is positive but insignificant effect of non-performing loans on the performance of commercial banks in Nigeria (p-value is 0.2551 while the t-statistic is 1.207419). based on the findings, the researchers made the following recommendations: the banks should adopt a coordinated credit recovery scheme to reduce the effect of the non-performing loans on the banks, the banks should keep the loan loss provisioning moderately low as it will free up more capital available for other bank credit operations and enhance performance, and the central bank should ensure to adopt a marginal reduction in the reserve requirement in order to enhance the credit creating capacities of the banks and improve their performances.

Keywords: *Credit risk, Credit risk management, Deposit money banks performance*

Introduction

One of the core business functions of commercial money banks is the management of risks so as to generate profits. The banks effectively make investments in expectation of good returns at minimal risk exposure. As reported by Kajola, Babatunji, Olabisi and Babatolu (2019), these investments of deposited funds are made within accepted risk profile but there are still some measures of credit risk exposure.

As defined by Ajayi, and Ajayi (2017) risks are uncertainties that are ascribable to variations that occur in the expected returns and a popular finance dictum supposes that higher risks imply higher returns; that is to say that risks can be likened to opportunities or threats. To achieve the goal of securing higher returns, banks can decide between the increasing its risk or lower its operating costs. Consequently, bank managers have the core responsibility of evaluating and balancing this trade-off (risk and returns). Poor credit risk management culture has resulted in the folding and or collapse of a handful of commercial banks in Nigeria (Uwalomwa, Uwuigbe & Oyewo, 2015), they further asserted that the profitability and overall performance of those banks whose nonperforming loan portfolio have reached a disturbing level in the balance sheet has been negatively impacted.

Banks face numerous risks which include but not limited to risks that are associated with liquidity, credit, foreign exchange, market, and interest rate (Jekinson, 2008). The banks are expected to manage all of these risks in such a way as not only to guarantee profitability but also significantly enhance their survival. Similarly, the banks are required to establish and run a credit administration department whose primary function is proper credit administration, control and maintenance, this view agrees with Ajayi and Ajayi (2017). As averred by Bessis (2002) credit risk management is a core function for bank management since banks are risk takers and absorbers; the risks they absorb risks are transformed into banking products and services that are offered to customers for returns.

The credit quality of the Nigerian banking industry has deteriorated to a disturbing degree; an outcome that can be attributed to the accumulation of non-performing loan portfolio, significant fall in equity market indices, continuous lose of value of the naira relative to other global market currencies, and also the global oil prices, this assertion is consonance with Kargi (2011). Studies have revealed that non-performing loans possess the capacity to, and do reduce the banks' liquidity and credit expansion, further, it leads to retardation in the growth of the real sector, and this has attendant dire consequences on the banks' performance. This created the need for the establishment of AMCON (Asset Management Corporation of Nigeria) as an agency of the federal government in July, 2010. This agency is saddled with the responsibility of providing lasting solutions to tackle the recurring menace of non-performing loans bedevilling banks in Nigerian (Kolapo, Ayeni & Oke, 2012).

Available empirical evidence has shown that the financial industry in Nigeria is facing serious poor risk management practices which are streamed to include absence of basic measures for checking and control, ineffective corporate governance, dangerous exposures to credit risks, and a nondisclosure and nontransparent characteristics (Audu, 2014). Besides the poor risk management practices, there is the non-performing loan portfolio is huge, there is unattended indebtedness in the inter-bank system, flagrant noncompliance and adherence to supervisory and regulatory provisions, the internal control system is weak, insider procedural abuse, macroeconomic instability (Okorie & Uwaleke, 2010).

A sure indicator or determinants of high exposure to credit risk by commercial banks can be linked to the size of the nonperforming loans, the loan loss provisions and the cash reserve ratio. Hence as a way of reducing and achieving control the dangerous growth in credit management crisis facing most of the commercial banks, the central bank has recently made two (2) separate releases (January 31 and February 23, 2018 respectively) in which it sought to regulate dividend payments of financial institutions and bring it agreement with the badly performing loans and the capital adequacy ratios. This was to serve as checks to be implemented while taking the decision to pay dividends to their shareholders. The CBN mandated that the commercial banks which have a capital adequacy ratio of at least 3% above the minimum requirement, a low cash reserve requirement (CRR) and non-performing loans (NPL) ratio of over and above 5% but below 10% to only distribute to shareholder profit after tax not exceeding 75%. Although the bank: which meets the minimum capital adequacy ratio with average cash reserve ratio (CRR) above average, NPL ratio more than 5% but less than 10%; are authorized to pay out dividend not more than 30%. The banks which are classified to have high composite risk rating or a non-performing loan ratio over and above 10% were restrained from paying out dividends (Ilugbemi, 2020)..

Many scholars have strongly suggested that the risk taking ventures of the banks have adverse effects on the value of the profits accruing to the banks as well as their financial safety. There are ongoing arguments on whether the credit risk management of banks actually affect the profitability of banks. Many scholars have carried out studies on this topic and came out with mixed results. While some suggest that credit risk management has positive effect on the financial performance of banks, others say the effect is negative. Scholars such as Ogbulu and Eze (2016), Abiola and Olausi (2014) some of the few evidences which suggest that credit risk surely affect the assets value and profit performance of the commercial money banks in Nigeria. Mistakes in the planning and implementation of credit risk management strategies can affect operations of the commercial banks and might exhibit long-term effect on the economy (Edem, 2017).

In Nigeria, the collapse of some commercial banks in the past is traceable to inability of corporate financial managers to secure the best credit performance that will help them in carrying out daily operations which engender profitability and continuity in banking system. Throughout the world, corporate entities are faced with the problem of ensuring a credit management mix that will boost the value of the entity and maximize the wealth of shareholders. The expectation of all shareholders are exclusively on how the overall wealth will be maximized and consistency in achieving this objective can only be guaranteed if the going concern of the bank is not threatened by any constraints as survival is determined by the credit risk management function (Amenawo and Ajaude (2017). However, competition in the banking sector has tightened due to technological advancements and major changes in the financial and monetary environment. Therefore, the vacuum of knowing the best credit risk management strategies that will really improve the performance of the banks is yet to be filled.

Commercial banks in Nigeria, banks have not lived up to expectation of achieving good performance, this is because they are experiencing banking problems requiring major reforms to address weak banking supervision and poor risk exposure management in the banks. According to Aremu,Ekpo, Mustapha and Adedoyin (2013), It has been shown that in addition to other banking strategies, the management of credit risk exposure regulations play a crucial role in aligning the incentives of bank owners with their creditors. But there is no clear position on whether the credit management requirements actually reduces or improves the performance of the banks, this is because scholars have found conflicting results in their research. Hence, this study therefore aims to study the effect of credit risk management on the performance of commercial money banks in Nigeria for the period covering 2009-2021.

Specifically the study seeks to investigate the effect of non-performing loan on the performance of commercial banks in Nigeria; to ascertain the effect of loan loss provision on the performance of commercial banks in Nigeria; and to determine the effect of cash reserve ratio on the performance of banks in Nigeria.

The scope is covering the period of 2009 to 2021. The rationale for the choice of this time scope is due to the banking sector reform of 2009 which was aimed at strengthen the credit risk management ability of the commercial banks.

Review Of Related Literature

Provision for Loan Loss

The provision for loan loss is a portion of the banks income which is set aside as an allowance for uncollected loan payments (Alpert, 2021). This provision is usually used to cover different kinds of loan losses such as non-performing loans, customer bankruptcy and renegotiated loans that incur lower-than-previously-estimated payments (Ahmad,Tahir and Aziz, 2014). Taaxxman(2006) asserts that loan loss provisions are consistently made to incorporate changing projections for losses from the banks' lending products. While standards for lending have greatly improved, banks still experience late loan payments and loan defaults. In the Nigerian financial space, improved regulations have been severally introduced; some of them focused on increasing the standards for lending which have mandated banks to require higher credit quality borrowers and also increased the capital liquidity requirements for the banks. Alpert (2021) submits that despite these improvements, banks still have to account for loan defaults and expenses that occur as a result of lending. Cash reserve ratio is a regulatory requirement prescribed by the Central Bank of Nigeria mandating the deposit money banks to make provisions that meet up with reserve requirements (Alpert, 2021). Babakovia (2020) reports that the required cash reserve is 30% of total deposits of a bank, he further asserts that such provision affects the performance of banks.

Credit Risk

Greuning and Bratonovic (2013) defined credit as the faith a lender has in a borrower so that resources can be transferred to the borrower without immediate payment. Banks face different risks, but credit risk is more devastating than any other risk. This is why the progress of commercial banks tends to depends largely on its ability to manage its credit. This does not come as a surprise, because credit management is essential in strengthening financial institutions in their financial standing (Tetteh, 2012). Duffie and Singleton (2003) defines credit risk as the risk that is associated with the default or of reductions in market value that is a consequence owing to changes in the credit quality of issuers or counter-parties. Another submission by Ajayi and Ajayi (2017) suggested credit risk to be seen as the quantitative probability that a financial institution incurs losses directly in connection with customers' inability to meet the contractual credit obligation of repayment of debt(s) agreed to and obtained. Credit risks usually arise from the dealings of a bank with individuals, corporations, financial institutions or a sovereign body. (Driga, 2012).

Some reasons have been given as the causes of credit risk among which includes both internal and external sources. Some of these causes include poor financial governance, misdirected credit management policies and laws, reckless lending, poor credit assessment, inadequate values of collaterals, bad lending practices, and external effects of government interference (Wagner (2011). Pandy (2006) is of the view that credit risk arises because we cannot anticipate the occurrence of possible future events with certainty and consequently cannot make any correct prediction about the cash flow sequence.

Credit Risk Management

The development of effective key risk indicators and their management pose significant challenge in literature. Policies and regulations have tried to provide useful direction in deriving key risk

indicators expressed as risk management indicators. According to Radivojevic and Jovovic (2017), the most commonly used indicators to identify credit risk among the many indicators prevalent in measuring banks' lending activity are the ratio of non-performing loan to total loans, and the ratio of loan loss provision to total loans.
The management strategies to credit risk relates to those strategic activities which the banks undertake in order that they may avoid and where avoidance is impossible, to at least minimize the adverse effect of credit risk. For this reason, a sound management framework for credit risk administration is crucial and imperative for banks so as to enhance profitability and guarantee survival. For Lindergren (1987), the key principles in credit risk management process are in a sequence comprising of establishment of a clear structure, allocation of responsibility, processes have to be prioritized and disciplined, responsibilities should be clearly communicated and accountability assigned. The strategies for hedging credit risk include but not limited to credit securitization, credit derivatives, compliance to Basel accord, adoption of a sound internal lending policy, and credit bureau.

Bank Performance
Bank performance can be seen in terms of the profitability of the bank. According to Adewusi and Dada (2017), profitability has no significant meaning unless it is expressed in terms of an increase in net asset. The subject of bank performance has attracted the interest of policymakers, scholars, bank managers, supervisors, capital market participants, financial market operators and other stakeholders (Ajayi & Ajayi 2017). As opined by Yuga (2016), profitability remains the primary goal of all businesses. There are various approaches to the measurement of the performance of banks. Yuga (2016) has also put forward the measures of bank performance as: the return on assets (ROA), the return on equity (ROE), indices such as the profit-after-tax (PAT), the income-cost ratio (CIR) and the net-interest margin (NIM). Ajayi and Ajayi (2017) argued that for the banks, choosing the best performance measure is a tedious task. That is to say that in studying the subject of bank performance especially in relation to credit management, series of results are often generated and this make the entire process dependent on the nature of the stakeholders who are responsible for the analysis.

Non-Performing Loans
Caprio and Klingebiel (2016), suggest that non-performing loans relates to those loans which characteristically do not generate income over relatively long period of time – meaning that the principal and/or interest on these loans have been left unpaid after due date of repayment. Most of the non-performing loans are caused by unprofessional ways the Nigerian bank managements disburse loans influenced by personal affiliations with the customers and the poor credit risk management systems. Rather than follow the standard procedures of granting loans as provided by the bank, they grant loans based on personal relationships with customers who do not meet the bank's requirements for granting such loans. Most of these loans turnout to be non-performing loans in the future.

Empirical Review
Uwuigbe, Ranti and Babajide (2020) assessed the effects of credit management on banks performance in Nigeria. In achieving the objectives identified in the study, the audited corporate annual financial statement of listed banks covering the period 2010-2011 were analyzed. More so, a sum total of ten (10) listed banks were sampled for the study using the purposive method.

However, in assessing the research postulations, the study adopted the use of both descriptive statistics and econometric analysis using the panel linear regression method consisting of periodic and cross sectional data in the estimation of the regression equation. Findings from the study revealed that the ratio of non-performing loans and bad debts do have an inverse significant effect on Nigerian banks while secured and unsecured loans were not significant.

Ilugbemi (2020) carried out a study assessing credit management in relation to the profitability of Nigerian Banks, sampling for a 13year period spanning (2004-2018). The study utilized time series data that were sourced from the Central Bank of Nigeria Statistical Bulletin and the annual reports of Nigerian Deposit Insurance Corporation. The study employed inferential statistics and the OLS regression technique. From the finding, all the credit management determinants (explanatory variables - lending interest rate, monetary policy rate, Treasury Bill rate and ratio of cash balance to total liabilities) were indicated to be positive but insignificant as per their relationships with the return on assets (explained variable - profitability) of Nigerian banks. The study concluded that lending interest rate was an insignificant determinant of banks' profitability in Nigeria. The study recommended that banks must strike a good balance in their loans pricing and investment decisions as this will help them to cover cost associated with lending while maintaining good banking relationship with their customers.

Adeyemi, Adewale and Kolawole (2020) studied credit efficiency and financial performance of commercial banks in Nigeria. Specifically, they ascertained the effects of efficiency in fuelling and maintenance costs and efficiency in general administrative expenses on the performance of deposit money banks in Nigeria. The study employed panel least squares regression technique to analyze the data from a sample of 13 selected Nigerian deposit money banks over a 10yearperiod spanning from 2010 to 2019. The study found cost efficiency to be significant on financial performance of Nigerian banks. The implication of the finding is that bank managements tend to increase profitability by increasing power-running cost efficiency, and by reducing general administrative cost efficiency. It was recommended that bank management need to use alternative source of energy and holistic approach to monitor wastages and theft of fuel to reduce administrative expenses and power running cost to improve bank performance in Nigeria.

The study by Asiedu and Gadzo (2019) investigated credit risks in relation to the financial performance of banks listed on the Ghana stock exchange. The authors estimated the sign and magnitude of the effects of bank credit risk on the corporate financial performance of the sampled banks for 15year period spanning 2003 to 2017. The 2 stage least squares (2SLS) regression technique was utilized for the analysis. The study found that the capital adequacy ratio (CAR), the operating efficiency, the profitability, and net the interest margin variables were negative on the dependent variable (credit risks); while the variables (bank size and financing gap) were positive on the credit risk. The authors recommended the management of the banks to pay critical attention credit risk exposures.

Similarly, Kajola, Babatunji, Olabisi and Babatolu (2019) carried out a study of credit management and the financial performance of ten selected banks in Nigeria. The study covered a 12year period (2005 – 2016). The study modeled credit management using the variables (Non-performing Loan to total Loan Ratio (NPLLR); Non-performing Loan to total Deposit Ratio (NPLDR) and Capital Adequacy Ratio) as proxy, and Return on Asset (ROA) as measure for financial performance. The panel least square random effect model (PLS) regression was employed to estimate the model. The findings confirmed all three credit risk parameters to have significant relationship with the return on asset and the return on equity. Based on the findings, the study recommended that there was need for the deposit money banks management to expediently implement rigorous and robust credit management policies which would assist banks to effectively assess the creditworthiness of their customers..

Furthermore, Olabamiji and Michael (2018) researched on credit management practices and the financial performance of banks in Nigerian (using First bank Plc as case study). The data were collected using Purposive sampling technique with a sample size of thirty (30) respondents. The study adopted combined descriptive and inferential statistics to analyze the data, such as. The findings showed the credit management variable to be significantly positive on the financial performance of the bank. The study also found that credit risk control, client appraisal, and the collection policy appeared as the major predictors of financial performance.

A similar study by Aigbomian and Akinlosotu (2017) evaluated credit risk management with respect to the profitability of selected banks Edo State. The study used descriptive design compiling nine (9) banks. The sample size comprised one hundred and fifty (150) respondent-bankers selected from the selected banks. The variable instruments used in the study were: banks' credit risk management practices (BACRIMAP) and the profitability satisfaction inventory (PSI) of the banks. The study employed percentage (%) analysis to analyzed the data as well as other descriptive statistics. Findings showed credit derivatives, credit securitization, and adoption of a sound internal lending policy as significant credit management variables which the banks utilize, hence credit risk management was found to be positively significant on the profitability of deposit money banks.

Nkwede, Ele, Uguru, & Igwe,(2021) who explored the impact of credit risk management on banking system stability with particular attention to Nigeria banking industry. The study adopts descriptive research design and an econometric estimation approach anchored on Vector Error Correction Estimation model (VECM) with time series data covering the period of 1990 to 2016, sourced from the Central Bank of Nigeria. Money supply(M2) as a ratio of GDP was used as a proxy for banking system stability which serves as the endogenous variable; whereas non-performing loans, bank total deposit and bank credit to customers were used as proxy for credit risk management- the exogenous factors. The co-integration test reveals that there is a long run relationship between all the exogenous factors and the banking system stability in Nigeria with low speed of adjustment. The output of the analysis also shows a significant negative impact of non-performing loan on banking system stability in Nigeria; while bank deposit and bank credit showed a positive significant influence.

Ajayi and Ajayi (2017) examined the effects of credit risk management on the performance of deposit money banks in Nigeria from 2001-2015. The study made use of Panel regression analysis wherein Profit After Tax (PAT) was used as proxy for bank performance while Non-performing Loan Ratio (NPLR), Loan Loss Provision Ratio (LLPR), Loan to Total Asset Ratio (LTAR) and Cost Per Loan Ratio (CPLR) were used as indicators of credit risk management. The researchers conducted the Fixed effect, Random effect and Hansman tests on the variables. The study revealed that the profitability of banks is influenced negatively by NPLR, LLPR, and CPLR; furthermore, the study revealed that LTAR influences the performance of banks positively. The study therefore concluded that deposit money banks in Nigeria have high growth rates on loans and advances, with corresponding high rate of non-performing loans by customers. Also, the provisions for loan loss were slightly below the amount required by Basel Accord which is 8 percent (8%). The recommendations of the study were that banks in Nigeria should ensure high quality credit management and should adhere strictly to professional banking ethics. Also, deposit money banks should make adequate efforts towards the mobilization of deposits and the reduction of credit administration cost so as to achieve efficiency and enhance profitability.

Uwuigbe, Uwuigbe and Oyewo (2015) critically assessed the effects of credit management on 10 listed banks' performance in Nigeria for the period 2007-2011. The study adopted the use of both descriptive statistics and econometric analysis using the panel linear regression methodology consisting of periodic and cross sectional data in the estimation of the regression equation. The findings revealed that while ratio of non-performing loans and bad debt do have a significant negative effect on the performance of banks in Nigeria, on the other hand, the relationship between secured and unsecured loan ratio and bank's performance was not significant. Hence, the study recommends that banks management should put in place or institute sound lending framework, adequate credit administration procedure and an effective and efficient machinery to monitor lending function with established rules.

Theoretical Framework

This theory was propounded in 1973 by George Akerlof. Asymmetry in information is said to arise when a borrower directly or indirectly possesses better information about the potential risks and returns associated with a lending contract than the lender. The Asymmetry theory assumes an inherent difficulty when distinguishing between good and bad borrowers. This therefore may result to the problems of adverse selection and moral hazards with the consequence of significant accumulation of bad loan basket by the banks. The entity that possesses more information (whether the lender or the borrower) regarding a particular transactional item or process is also assumed to be better placed in to negotiating appropriate terms for the transaction than the other party (Athanasoglou, 2005)). Adewusi and Dada (2017) argued that lack of adequate information about borrowers on the part of the lending bank leads to loan failures. This study adopts this theory and supports the assumption that salient personal information of borrowers is to be properly considered before granting their loan applications. The asymmetric information theory is used here as the theoretical framework relevant for the study. Relevant Previous literature has shown that there exists information asymmetry in accessing bank lending applications.

Methodology

Research Design

This study adopted the *Expost facto* research design; this is because data on past events were used for the study. Similarly, *Expost facto* research design helps a researcher to make predictions on possible causes behind an effect that has already occurred. The Analytical Techniques that were employed in the study include; ordinary least squares regression (OLS) Correlation test, and Unit Root test. All were done using the E-views 10 environment.

Sources of Data

The data for this study were obtained from a secondary source-the financial statements and annual reports of banks 2009-2021 as published in the CBN's statistical bulletins. The 2022 edition of the statistical bulletin was used. Some of the data were also gotten from the online portals of the banks.

Model Specification

The model for this study assumed an underlying relationship between effects of credit risk management on commercial banks performance in Nigeria. The study OLS regression model as stated below:

ROA = $\beta_0 + \beta1NPL + \beta2LLP + \beta3CRR + U_t$. . . (2)

Where;

ROA = return on asset as measure of bank performance

NPLR = Non-Performing Loan Ratio

LLPR = Loan Loss Provisions Ratios

CRR= Cash Reserve Ratio

β_0 = intercept

$\beta_1 - \beta_3$= Coefficient of the independent variables

U_t = Residual or error term.

Description of Model Variables

Non-performing loan ratio: This is used to measure the level of the bank's credit risk and quality of outstanding loans. A high ratio means the bank bears a greater risk of loss if it fails to recover the owed amounts, while a low ratio means that the outstanding loans pose a low risk to the bank (Caprio and Klingebiel, 2016).

Ratio of loan loss provision: This variable is an indicator of how protected a bank is against future losses. A higher ratio means the bank can withstand future losses better, including unexpected losses beyond the loan loss provision (Taxxman, 2006).

Cash reserve ratio (CRR): The cash reserve ratio measures the percentage of the total deposits that must be reserved by the bank; it is usually 30% of the total deposit (Babakovia, 2020).

Results

Descriptive Test

The study carried out descriptive test to check for some of the descriptive qualities if the data and to ensure that the data is from a normal distribution. The tests include the mean, standard deviation and the skewness. The result is presented below:

Table 1: Descriptive result

	ROA	NPL	LLP	CRR
Mean	18.14577	904102.3	0.030145	14.96154
Std. Dev.	2.841246	1.5309.1	0.024660	0.362769
Skewness	-0.135813	1.556479	1.008777	-0.559367
Observations	13	13	13	13

Source: Researchers' computation 2023

From the descriptive result as presented above, the study found that the mean value of the return on assets during the period (2009-2021) was average of 18.15% annually. The nonperforming loan, loan loss provision and the cash reserve requirement averaged 904102.3 billion, 0.03% and 14.96% respectively.

On the deviation, the values were 2.84, 1.53, 0.02 and 0.36 for return on assets, nonperforming loans, loan-loss provision and the cash reserve requirement respectively. This means that the data are from normally distributed sample, therefore suitable for this analysis.

Correlation Test

The researchers also carried out the correlation test in order to check the nature of the relationship that exist between credit risk management and the performance of commercial banks in Nigeria. The correlation test result is presented below:

Table 2: Correlation test result

	ROA	NPL	LLP	CRR
ROA	1.000000			
NPL	0.073050	1.000000		
LLP	0.659732	-0.139972	1.000000	
CRR	-0.746270	0.062559	-0.890385	1.000000

Source: Researchers' computation 2023

The correlation result is presented in diagonal form to show both the relationship between the dependent variable (return on asset) and the independent variables (nonperforming loan, loan-loss provision and cash reserve requirement); and among the independent variables themselves. The result as presented above show that during the period, nonperforming loan and loan loss provision had positive relationship with the return on asset while the cash reserve ratio had negative relationship. This means that the commercial banks had relatively an effective credit risk management strategy during the period 2009-2021.

Regression

The ordinary least square regression was used to investigate the effect of credit risk management on the performance of commercial banks and to extract the coefficient of the independent variables. The result is presented below:

Table 3: Regression result

Dependent Variable: ROA
Method: Least Squares
Date: 06/07/23 Time: 09:10
Sample: 2009 2021
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPL	1.590006	1.320106	1.207419	0.2551
LLP	270.4200	34.13307	7.922521	0.0000
CRR	0.543835	0.088779	6.125682	0.0001
R-squared	0.635179	Mean dependent var		
Adjusted R-squared	0.622214			

Source: Researchers' computation 2023

According to the result, the coefficient of determination which shows the strength of the effect indicated that the variation in the return on assets (ROA) due to the credit risk management of the banks is about 63.52%. Variable by variable analysis show that the all the credit management variables have positive effect on the bank performance. The nonperforming loan variable affected the bank performance by 1.59 billion while the loan loss provision affected the performance by 270 billion naira. The cash reserve requirement affected the commercial banks performance by 0.54 billion naira. However, only the effect of the loan-loss provision and the cash reserve requirement were significant as shown by the probability values.

Test of Hypotheses

The null hypotheses formulated in the introductory sections were tested. The decision rule for accepting or rejecting the null hypothesis is as follows:

Decision rule one: reject the null hypothesis if the p-value is less than 0.05, or the t-statistic greater than or equal to 2.0

Decision rule two: accept the null hypothesis if the p-value is greater than 0.05 or the t-statistics less than 2.0

$H0_1$: there is no significant effect of non-performing loans on the performance of commercial banks in Nigeria.

From the result in table 3.0 above, it showed that the p-value is 0.2551 while the t-statistic is 1.207419. Since the p-value is greater than 0.05 and the t-stat less than 2.0, we accepted the null hypothesis and rejected the alternative. In conclusion, there is positive but insignificant effect of non-performing loans on the performance of commercial banks in Nigeria

$H0_2$: there is no significant effect of loan loss provisioning on the performance of commercial banks in Nigeria.

From the result in table 3.0 above, it was observed that for the variable loan-loss provision (LLP), the p-value is 0.0000 while the t-statistic is 7.922521. Since the p-value is less than 0.05 and the t-stat greater than 2.0, the study rejected the null hypothesis and accepted the alternative. In conclusion, loan-loss provision has positive significant effect on the performance of commercial banks in Nigeria.

$H0_3$: there is no significant effect of cash reserve ratio on the performance of commercial banks in Nigeria.

From the result in table 3.0 above, it was observed that for the variable cash reserve requirement (CRR), the p-value is 0.0001 while the t-statistic is 6.125682. Based on the decision rule, since the p-value is less than 0.05 and the t-stat greater than 2.0, the study rejected the null hypothesis and accepted the alternative. The study concluded that cash reserve requirement has positive significant effect on the performance of commercial banks in Nigeria.

Summary, Conclusion and Recommendations

Summary of Finding

This study investigated the effect of credit risk management on the performance of commercial banks in Nigeria. The study covered the period 2009-2021. The researchers reviewed the conceptual, theoretical and empirical literatures on the topic. The summary of the major findings are:

1. Loan-loss provision has positive significant effect on the performance of commercial banks in Nigeria (the p-value is 0.0000 while the t-statistic is 7.922521).
2. Cash reserve requirement has positive significant effect on the performance of commercial banks in Nigeria (the p-value is 0.0001 while the t-statistic is 6.125682)
3. There is positive but insignificant effect of non-performing loans on the performance of commercial banks in Nigeria (p-value is 0.2551 while the t-statistic is 1.207419)

Conclusion

The study focused on investigating the effect of credit risk management on the performance of commercial banks in Nigeria for the period 2009-2021. Based on the results from the analytical tests carried out, the researchers concluded that credit risk management has significant positive effect on the performance of commercial banks in Nigeria

Policy Recommendations

Based on the findings, the study recommended the following:

1. The banks should adopt a coordinated credit recovery scheme to reduce the effect of the non-performing loans on the banks.
2. The banks should keep the loan loss provisioning moderately low as it will free up more capital available for other bank credit operations and enhance performance.
3. The central bank should ensure to adopt a marginal reduction in the reserve requirement in order to enhance the credit creating capacities of the banks and improve their performances.

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