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# Credit risk management and share value of listed deposit money banks in Nigeria

Usman Sabo<sup>1\*</sup>, Musa Muhammad Bello<sup>2</sup>, Garba Yakubu<sup>3</sup> \*Corresponding Author: <u>usmansabo99@gmail.com</u> <u>https://doi.org/10.33003/ijmass-2025.v1i1.5.11-23</u>

### Abstract

The paper examines the effect of credit risk management on share value of listed deposit money banks in Nigeria. The population of the study is made up of all listed deposit money banks with international authorization which are the sample of the study. The multivariate regression and correlation matrix have been used in analyzing the data collected. The findings of the study reveal that nonperforming loan ratio (NPLR) has significant effect on earnings per share (EPS). Firm size (FSIZE) has significant effect on earnings per share (EPS). Moreover, the research recommends that nonperforming loan ratio (NPLR) of listed deposit money banks in Nigeria should be given utmost regard by finding ways to reduce the nonperforming loans of the banks so as the ratio of nonperforming loan to total loans would be improved. Adequate regard should also be given to collateral as well as history of the borrower and borrower credit ratings before granting loans.

Keywords: Credit risk management, share value, International authorization, non-performing loan, Nigeria.

### 1. Introduction

Credit risk has recently captured the attention of the global economy; many have highlighted it as the most significant danger threatening many economies' collapse. Banks have been the economy's nerve center, and they face ongoing issues in successfully managing credit risk. Furthermore, Fredrick (2012) acknowledges that credit risk is the possibility that a bank borrower will be unable to repay the debt at the agreed-upon terms; it can develop as a result of different actions across sectors (BIS, 2015). However, credit risk is present in all of the bank's activities, both on and off the balance sheet, including bank acceptance, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, and options, as well as in the extending of commitments and guarantees and transaction settlement (Adeusi, Oluwafemi, Akeke, Israel, Adebisi, Simeon, Oladunjoye, Olawale, 2013; Fredrick, 2012).

Similarly, scholars concur that banks' primary roles are to take deposits and provide loans; they profit from the difference between the interest that depositors pay and the interest that borrowers receive; this is referred to as financial intermediation (Perera & Morawakage, 2016; Alshatti, 2015). However, the process that led to the necessity of monetary policy and economic transformation is characterized by credit risk created by this financial intermediation. Once again, banks offer great ways to allocate resources, mobilize savings, provide liquidity and payment services, manage investment portfolios, and implement monetary policy (Adesugba & Bambale, 2016; Rufai, 2013; Gheorghe, 2012).

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In spite of making loans, banks must account for loan losses in their books. These banks become riskier as this provision rises relative to total loans. It is a sign that the bank assets are getting harder to collect when the value of such a provision rises in relation to the entire amount of loans (Tsorhe, Aboagye & Coleman, 2009). Conversely, assets that aren't making money are known as non-performing assets. In general, assets are deemed non-performing if the principle or interest is due but hasn't been paid for ninety days or more. Global financial crises are mostly caused by non-performing loans and investments in unproductive economic sectors. The issue was exacerbated by the devaluation of domestic currencies, which raised the actual cost of debt repayments, particularly when these projects are financed by short-term capital inflows (Mačerinskienė et al., 2014; Carse, 1999).

The capacity of a bank to fund customer withdrawals is shown by its loan to deposit ratio. A bank that takes deposits often has enough liquidity to cover its day-to-day operations. However, consumer loans are typically regarded as long-term investments rather than liquid assets. Although a bank must typically set aside a portion of its deposits as reserves, it may alternatively decide to maintain a specific proportion of its non-lending funds in liquid form to support daily operations. Thus, the loans to deposit ratio is the ratio of the bank's loans to its total deposits (Adesugba and Bambale, 2016).

Almost all authorities specify a minimum requirement for controlling credit risk. These include identifying actual and future risk, defining rules that demonstrate the bank's risk management philosophy, and establishing parameters for controlling credit risk. A bank normally defines the scope and allocation of its credit facilities, as well as how its credit portfolio is managed--that is, how investment and financing assets are given, appraised, overseen, and collected. Flexibility is required to enable for rapid reaction and adaptability to changing conditions in a bank's asset mix and market environment (Gheorghe, 2012; Greuning & Bratanovic, 2009).

The 1952 Bank Ordinance and the 1958 financial Ordinance, which created the Nigerian Central Bank, were the first pieces of law pertaining to the country's financial system. The Banks Act 1969, the Central Bank of Nigeria Act 1991, and the Banks and Other Financial Institution Act 1991 were all passed in an effort to enhance banking operations in Nigeria. These two statutes formed the cornerstones governing Nigeria's financial sector. A section of these regulations also gave the Central Bank of Nigeria (CBN) the power to prevent any bank that disobeyed its orders from making any advances, loans, credit facilities, financial guarantees, or new investments (Sunusi, 2006).

However, history has shown that collateral rarely leads to loan recovery in Nigeria. Furthermore, the legal process is time-consuming and difficult to access, as well as prohibitively expensive. In actuality, many of these loan seekers are crooks who take loans with no intention of repaying them, diverting funds away from the intended purpose (Sunusi, 2006). None of the prior study in Nigeria examined the relationship between credit risk management and the share value of

Impressive Journal of Management and Social Sciences ISSN: 3043-6311 Volume 1, Issue 1 March 2025 Nigerian listed deposit money banks. Th

Nigerian listed deposit money banks. This study aims to fill this gap by examining the relationship between credit risk management and the share value of Nigeria's listed deposit money institutions.

From the forgoing explanations, the main objective of the research is to examine the effect of credit risk management on the share value of listed deposit money banks in Nigeria.

## 2. Literature review

### 2.1 Conceptual framework

Credit risk has played a significant part in triggering bank failures around the world, despite several safeguards put in place over the years to mitigate it. Furthermore, it is precisely stated by Mačerinskienė et al. (2014) and Greuning and Bratanovic (2009) that over 70% of certain banks' balance sheets are related to credit risk. The condition that a bank's debtor will not make principle payments or other investment-related cashflows in accordance with the conditions specified in the credit agreement is known as credit risk. Credit risk, which includes late or nonexistent payments, is likely unique to the banking sector and can impact cash flows and bank liquidity. In a similar vein, Adausi et al. (2013) emphasize that credit risk has existed for a considerable amount of time and is not an uncommon occurrence; it impacts banks' cash flows, profit, and liquidity situation. However, banks use risk management as a tool to lower or eliminate credit risk.

Similarly, scholars have outlined three (3) policies for managing credit risk. Policies pertaining to concentration and significant exposures to various types of borrowers and lending to associated parties are one that seeks to minimize or reduce credit risk. The second set seeks to distinguish assets based on several classifications, which makes it easier to periodically assess the credit instrument portfolio's collectability while the third set aims to provide allowances or provisions for loss at a level sufficient to absorb expected loss (Greuning & Bratanovic, 2009). Furthermore, the definition of the word "single-client" raises additional concerns. A single client is defined by international practice as an individual, legal entity, or affiliated group to which a bank is exposed. A connected group is any customer that has some sort of relationship to a bank's management, such as a parent company, subsidiaries, affiliate businesses, directors, executive officers, or a dominant shareholder who has the authority to decide on management and policy. Practically speaking, a high exposure indicates the bank's dedication to supporting a particular client, making it nearly impossible to fairly assess a client's eligibility prior to making a loan offer (Mačerinskienė, Ivaškevičiūtė & Railienė, 2014; Rufai, 2013; Greuning & Bratanovic, 2009).

In certain economies, banks are even compelled to make loans to businesses that aren't profitable. This approach is especially detrimental to the bank's incentive to use credit judgment and makes the company vulnerable to economic downturns by allowing it to become too leveraged. Name lending and relationship lending are common worldwide, and they are occasionally supported by insiders or political power. This coincided with an over dependence

Impressive Journal of Management and Social Sciences ISSN: 3043-6311 Volume 1, Issue 1 March 2025 on collateral, whose value often drops precip inadequate provision, improper asset classifi

on collateral, whose value often drops precipitously when asset values plummet. As a result, inadequate provision, improper asset classification, and bad debt are examples (Rufai, 2013; Gheorghe, 2012; Jorion, 2009; Carse, 1999).

In a same spirit, the borrower's ability and authority must be given first priority while making loan decisions. A bank's client or borrower can be categorized as either natural or non-natural. An adult in good physical and mental health is the ideal client. The non-natural clients include government organizations, clubs, associations, corporations, lawfully incorporated businesses, and firms. Before entering into a contract or giving a customer credit, banks are supposed to evaluate their capability and legality, both natural and non-natural. A bank's credit risk is essentially based on the borrower's credit worthiness, the loan amount, and the amount that can be recouped through collateral or guarantee in the event of default. In order to effectively manage risk, one must lend to eligible and qualified clients, set reasonable limits, and obtain sufficient collateral (Sunusi, 2006).

Furthermore, there is no denying that credit risk poses a threat to a nation's economy. In actuality, credit risk is the primary driver of the various financial crises that have recently occurred and pushes numerous economies to the verge of collapse. In actuality, it is a worldwide problem that impacts both developed and developing nations. The main concerns that researchers are addressing include lending to people with connections, name lending, excessive exposure to a person, nation, or area, and lending without collateral, to name a few.

### 2.2 Review of empirical studies

In a study conducted in China by Carse (1999), inadequate lending tactics were found to be responsible for Asian financial crises, as revealed by conceptual research. Tsorhe, Aboagye, and Coleman (2006) discovered that board strength has no significant impact on capital risk, credit risk, or liquidity risk in Ghana when using regression analysis to analyze the data. At the same time, most banking institutions' risk management has failed to enforce the basic criteria for a safe business, according to Sabato's (2009) research conducted in Scotland, which used risk adjusted performance metrics in the data analysis.

Similarly, Kashyap (2010) found that inadequate corporate governance was responsible for poor risk management in the United States, based on data analysis utilizing graphical expressions. However, Fredrick (2012) discovered a strong association between risk management and financial performance of commercial banks in Kenya using regression and correlation analysis of the data.

In his research, Gheorghe (2012) discovered that credit growth based on increased credit demand, interest rate differentials between countries, and regulatory framework relaxation makes banks more vulnerable to a subsequent downturn in economic activity in Romania, using a simple linear table in the data analysis. Adeusi et al. (2013) found conflicting results on the

Impressive Journal of Management and Social Sciences ISSN: 3043-6311 Volume 1, Issue 1 March 2025 association between credit risk management and financial performance of Nigerian banks when

they used panel data estimation techniques to analyze the data.

Furthermore, Rufai (2013) discovered that credit risk management had a positive effect on the performance of Union Bank of Nigeria, utilizing correlation coefficient and regression analysis to analyze the data obtained. Similarly, an inadequate regulatory structure based on the assumption that banks could be trusted to police themselves is one of the primary causes of financial crises. Mačerinskienė et al. (2014) found that commercial banks' credit risk management methods and models were accountable for the 2007/2008 financial crises, based on graphical analysis of data.

In contrast, a study by Ewuigbe et al. (2015), which used panel linear regression and descriptive statistics to analyze the data, found that credit risk management had a significant negative relationship with bank financial performance. Similarly, Alshatti (2015) used panel regression to find a positive and significant relationship between credit risk management and bank financial performance in Jordan.

Perera and Morawakage (2016) discovered that credit risk has a significant impact on shareholder value in all eight (8) banks they analyzed in Sri Lanka, using regression analysis and descriptive statistics to analyze the data. Similarly, Adesugba and Bambale (2016) found similar results while evaluating the association between credit risk management and deposit money bank performance in Nigeria using panel linear regression and descriptive statistics. The findings show that credit risk management has a considerable impact on the performance of these banks.

In the same vein, Ogbulu et al. (2016) discovered a substantial association between credit risk management and bank performance in Nigeria by analyzing data using ECM and granger causality methodologies. Similarly, Fapetu et al. (2016) reported mixed results in a study conducted in Nigeria that used descriptive statistics and panel linear regression to analyze the data. Annor and Obeng (2023) disagree with these conclusions, citing a study conducted in Ghana that used panel regression to analyze the data. The study discovered a substantial association between credit risk and the financial performance of Ghana's banks.

Hypothesis one: credit risk management has no effect on the share value of listed deposit money banks in Nigeria.

### 2.3 Theoretical Framework

#### 2.2.1 Loan Pricing Theory

According to this view, credit risk represents a possible cost to banks. As a result, banks must properly evaluate and estimate the cost in order to price loan rates based on the borrowers' risk level. The interest rate (loan price) changes directly with the sort of risk taken on. Banks typically use information about various customer qualities such as borrower character Impressive Journal of Management and Social Sciences ISSN: 3043-6311 Volume 1, Issue 1 March 2025

(reputation), capital (leverage), capacity (earnings volatility), and collateral to assess whether or not to make loans. However, in the absence of these criteria, the type of risk and the interest rate determine who receives loans. Furthermore, credit risk is a concern that might cost a lending bank; thus, high risk draws a high interest rate (Chodecai, 2004). Similarly, Burger and Udell (1995) emphasize that the firm's financial data provides the parameters for calculating and using important ratios in determining loan rate decisions. These essential ratios include the leverage ratio, current ratio, quick ratio, account receivables turnover, inventory turnover, account payable turnover, and total assets.

Furthermore, because it can be challenging to determine the type of borrower, especially in the early stages of a banking relationship, banks cannot always set high interest rates in an attempt to maximize interest income without taking moral hazard and adverse selection into account (Stiglitz, Jospeh, Weiss & Andrew, 1981). Once more, banks may face adverse selection issues if they set high interest rates since high-risk borrowers would be ready to pay them. Due to their propensity to invest in extremely dangerous ventures or investments, these borrowers may exhibit moral hazard behaviors as soon as they obtain the loans (Chodecai, 2004).

#### 2.2.2 Signalling augument theory

This theory suggests that well to do corporations should supply more collateral so that they can indicate to the banks that they are less hazardous type of company organization so as to be charged reduced interest rates In a nutshell, signaling enhancement underlines that banks only require collateral and or covenant for somewhat riskier enterprises that also pay high credit rates (Chodechai, 2004).

Although any knowledge asymmetry increases risk, banks have always charged high interest rates to borrowers with weaker signaling skills. Once more, the degree of information asymmetry is determined by the firm's attributes, such as size, age, management, and corporate leadership. Because large companies can afford any disclosure costs, banks used to get more and clearer information from them than from smaller ones. Older businesses with a solid credit history provide banks with more information than do recently founded businesses. Information asymmetry is also influenced by the status or leadership style of the companies. For instance, banks have less information asymmetry when dealing with listed businesses than when dealing with unlisted ones (Chodechai, 2004).

Furthermore, banks believed that collateral had signaling and incentive effects that mitigated adverse selection and moral hazard in the context of asymmetric information. When a loan is backed by a particular asset, the borrower is less likely to choose a riskier investment when the loan is paid back (Lehmann and Neuberger 2001). Collateral requirements were another tactic used by banks to get borrowers to disclose hidden risks. This can be accomplished by classifying borrowers according to their willingness to accept collateral requirements with lower interest

Impressive Journal of Management and Social Sciences ISSN: 3043-6311 Volume 1, Issue 1 March 2025 rates, which indicates a reduced default risk, and those who are unwilling to accept this term, which indicates a higher default risk (Besanko and Thakor 1987).

This research is best suited to loan pricing theory and signaling enhance theory because loan pricing theory demonstrates that loan that happens to be of high risk attracts high interest and loan of low risk attracts low interest. On the other hand, signaling augment theory, suggests that the firms must give collateral as a signal to the banks, indicating they are less risky type of firms and hence, acquire loans of low interest. Kangogo and Olweny (2015), Olokoyo (2011), and Chodechai (2004) have all employed the two ideas.

### 3. Methodology

The population of the study includes all of Nigeria's internationally authorized listed deposit money banks. The population of the study is the entire set of cases from which sampling is taken (Saunders et al., 2009). The research will use all listed deposit money banks with international authorization in Nigeria as a sample, unless it is proven that a specific bank or banks have been removed from the lists of banks with international authorization and/or delisted from the Nigeria stock exchange during the study period. Finally, most banks published full financial statements during the study period.

The research employed an ex-post facto (correlational research design) approach because the data were derived from an already completed yearly report and the study investigated cause and effect relationships. The study will run for ten (10) years, from 2013 to 2022, and will only look at Nigerian listed deposit money institutions. Secondary data sources were used, including qualifying banks' financial statements and the Nigeria stock market fact book. The dependent and independent variables are broken down as follows:

S/N	Variables		Measurements					
1	Non-performing (NPLR)	loan ratio	Non-performing loan divided by the total loan of a bank (Perera & Morawakage, 2016)					
2	Loan to deposit rat	tio	Total loans and advances divided by total deposit (Perera & Morawakage, 2016)					
3	Firm size (log)		Logarithm of total assets of a bank					
4	Return on equity		Profit after tax divided by shareholders equity					
5	Earnings per share		Profit after tax divided by number of ordinary shares in issue					

Table 1 Variables of the study and their measurement

Source: Author's compilation 2023

**Table 2 Listed Nigeria Deposit Money Banks** 

March 2025 Date of Listing Banks **Date of Incorporation** S/N Access Bank PLC 1998 1989 1 2005 1987 2 Fidelity Bank PLC 3 First City Monument Bank PLC 2013 2012 4 First Bank of Nigeria PLC 1971 1894 5 Guarantee Trust Bank PLC 1996 1990 Union Bank of Nigeria PLC 1971 1969 6 7 United Bank for Africa PLC 1970 1961 8 Zenith Bank PLC 2004 1990

Impressive Journal of Management and Social Sciences ISSN: 3043-6311 Volume 1, Issue 1 March 2025

Source: Nigeria Stock Exchange Fact Book 2022

#### 3.1 Model of study

To examine the effect of the independent variable (credit risk management) on the dependent variables (share value of the firms), a model has been established, and it has been modified from the model used by Sabo (2017) and Fapetu et al. (2016). Any variables affecting bank share value not included in the study are represented by an error term  $\mu$ .

FSIZE = denote logarithm of total assets for bank i in year t

- $\mu$  = denote an error term for bank i in year t
- i = bank
- t = year

#### 4. Results and discussion

## Table 3. Correlation matrix

Variables	ROE	EPS	NPLR	LDR	FSIZE
ROE	1.0000				
EPS	0.3373	1.0000			
NPLR	-0.0481	-0.0381	1.0000		
LDR	0.0462	-0.0858	-0.1524	1.0000	
FSIZE	0.0279	0.1053	0.1513	-0.2297	1.0000

Source: author

In Table 3 the first row and the first column indicated both dependent and explanatory variables used in the study. The diagonal assigned value of 1.0000 throughout shows that each variable is

Impressive Journal of Management and Social Sciences ISSN: 3043-6311 Volume 1, Issue 1 March 2025 perfectly correlated with itself. The coefficient from -1 to 1. The sign (-/+) indicated the dire

perfectly correlated with itself. The coefficients reveal the strength of the relationship ranging from -1 to 1. The sign (-/+) indicated the direction of the correlation whether positive or negative direction.

ROE and EPS have moderate relationship of 34%. This means that in the model if ROE increase by 34%, the EPS is likely to increase by 34% and vice versa. Return on equity and non performing loan ratios (NPLR) have negative relationship but insignificant; if return on equity increases by 4.8%, NPLR is expected to decrease by 4.8%. Return on equity and loan to deposit ratio have positive relationship; if return on equity increases by 4.6%, loan to deposit ratio (LDR) is expected to increase by the same percentage. The firm size and return on equity have positive relationship but insignificant. If return on equity increase or decrease by 3% then firm size is expected to increase or decrease in the same percentage.

The EPS and NPLR have negative relationship but insignificant, if EPS increase or decrease by 3.8% so also NPLR will decrease or increase in the same percentage. EPS and LDR also have negative relationship. If EPS increase or decrease by 8.6%, LDR will also decrease or increase in the same percentage. The EPS and firm size have positive relationship; if EPS increase or decrease by 10.5%, the LDR will increase or decrease by 10.5% respectively.

The non-performing loan ratio (NPLR) and loan-to-deposit ratio (LDR) have a negative and insignificant relationship; if the non-performing loan ratio increases by 15.3%, the loan-to-deposit ratio is expected to decrease by the same percentage and vice versa. Nonperforming loans and firm size have a positive relationship; if nonperforming loans increase or decrease, the firm size will increase or decrease by the same percentage. And finally, the loan-to-deposit ratio and firm size have a negative relationship; if the loan-to-deposit ratio increases by 23%, firm size are expected to decrease by 23%, respectively.

VARIABLES	ROE (FIXEI	D EFFECT)	EPS (FIXED EFFECT)			
	Coeff.	P>(t)	Coeff.	P>(t)		
NPLR	0.0172	0.199	-0.2299	0.048**		
LDR	-0.3373	0.166	-2.2996	0.270		
FSIZE	0.0119	0.759	0.5719	0.090*		
CONS	0.1703	0.709	-3.1510	0.423		
Sig	0.0000	0.0000				
F	1.05	2.73				
Prob>f	0.3775	0.0518				

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Source: Annual Report and Account Data of Listed Nigeria Deposit Money Banks legend: \* p<.1; \*\* p<.05; \*\*\* p<.001. Indicate 10%, 5% and 1% significant level.

In Table 4 the first row and column present the dependent and independent variables, in which case the fixed effect of the pool panel data was employed in the regression. The prob > f indicates the independent variables' predictive power over the dependent variables. Usually, a p-

Impressive Journal of Management and Social Sciences ISSN: 3043-6311 Volume 1, Issue 1 March 2025 value of 0.05 is adequate to demonstrate a significant association between the dependent and independent variables.

At the 90% confidence interval and based on the results of the first model, the independent variables NPLR (0.199), LDR (0.166), and FSIZE (0.759) had no significant connection with the dependent variable ROA. Therefore, we accept the null hypothesis, which states that credit risk management has no effect on the value of listed deposit money banks in Nigeria. This finding is consistent with the result found by Fapetu et al. (2016), Uwuigbe et al. (2015), Adeusi et al. (2013), and Tsorhe et al (2006).

However, on the basis of a 90% confidence interval, the result of the second model reveals a significant relationship between NPLR (0.048) and EPS and a significant relationship between FSIZE (0.090) and EPS, which allows us to reject the null hypothesis and state that credit risk management has an effect on the value of listed deposit money banks in Nigeria. This result is consistent with the findings of Annor and Obeng (2017); Perera and Morawakage (2016); Adesugba and Bambale (2016); Ogbulu et al (2016); Alshatti (2015); Mačerinskienė et al. (2014); Rufai (2013); Gheorghe (2012); Fredrick (2012); Sabato (2009); and Jorion (2009).

#### 5. Conclusion and Recommendations

The research concludes that nonperforming loan ratio (NPLR) has significant effect on earnings per share (EPS) of listed deposit money banks in Nigeria.

It also concludes that firm size (FSIZE) has significant effect on earnings per share (EPS) of listed deposit money banks in Nigeria.

Moreover, the research recommends that nonperforming loan ratio (NPLR) of listed deposit money banks in Nigeria should be given utmost regard by finding ways to reduce the nonperforming loans of the banks so as the ratio of nonperforming loan to total loans would be improved. Adequate regard should also be given to collateral, history of the borrower and borrower credit ratings before granting loans.

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