

Original article

Credit Risk Management and Financial Performance of Deposit Money Banks: Evidence from Nigeria

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Received Date: 23 September 2021

Revised Date: 24 October 2021

Accepted Date: 30 October 2021

Abstract -The study examined the effect of credit risk management on the financial performance of deposit money banks in Nigeria with the view to know what influence non-performing loans of deposit money banks have on return on assets. The study employed the Autoregressive Distributed Lag on the variables between 1995 and 2019. The findings show that non-performing loan as a percentage of total loan has a negative and significant effect on return on asset. It was also found out that capital adequacy possessed a positive but not significant effect on return on assets while liquidity ratio had a negative influence on return on asset. The study that credit risk management is a fundamental and vital aspect of deposit money banks and its proper monitoring could help foster financial development. It was recommended in the study that deposit money banks should employ modern techniques in the performance of their financial intermediation function.

Keywords – Capital Adequacy, Credit Risk Management, Credit Risk, Deposit Money Banks Performance, Financial Sector

I. INTRODUCTION

The Nigerian banking sector is characterized by different and diverse financial intermediation roles and different regulations across various agencies of government as a result of years of bank distresses and failures (Altanashat, Dubai & Alhety, 2019). To this end, it is important for financial institutions, according to Tasmin, Muazu, Aziati, and Zohadi (2020), to re-strategize their business towards excellence, to meet up with the needs of their stakeholders and the environmental pressures at large and at all times. This includes the management of risks in order to achieve optimal performance in the banking industry. Therefore, in managing the organization and recording performance, credit risk management is important (Mahmodet. al, 2018). Banks, through the financial services they provide, are linked to economic development. Its role as an intermediary can be

described as a catalyst for economic growth. The efficient and effective performance of the banking sector over time is an indicator of a country's financial stability. The extent to which a bank extends credit to the general public for productive purposes accelerates a country's economic growth and long-term sustainability. (Kolapo, Ayeni, & Oke, 2012). Risk is known to affect the projected performance of firms. Indeed, one of the most general definitions of risk was provided by the International Organisation for Standardization in the ISO 31000 standard. The risk was defined by ISO as the effect of uncertainty on objectives (ISO, 2015). Customers or counter-parties defaulting is the most significant credit risk facing banking and financial intermediaries. One of the most important indicators of a bank's existence and sustainability in the business climate is its performance. Risk management is a way of detecting, analyzing, assessing, rating, monitoring, regulating, and reporting risks related to any bank's activity, function, and operations. Risk management is a way for discovering, analyzing, assessing, monitoring, controlling, and communicating risks connected with a bank's business, function, or process in order to avoid or minimize losses and maximize opportunities. It must address all risks associated with companies' past, present, and, in particular, future operations in a systematic manner.

Credit risk is determined by examining commercial banks' financial performance in order to limit the effects of credit defaults. Commercial banks' financial stability is dependent on their ability to handle credit risk effectively. Deposit money banks may be acutely aware of the importance of identifying, measuring, monitoring, and controlling credit risk, as well as ensuring that they have adequate capital to mitigate these risks and that they are adequately compensated for those risks. (Bhattarai, 2016). A quick look at the statistics given by the Nigeria Deposit Insurance Corporation (NDIC) shows that non-performing loans have been on the increase since 1997. For example, NPL was ₦0.01 Trillion; it rose gradually over the years and



stood at ₦0.02 Trillion. In 2009, NPL was ₦2.99 Trillion, ₦0.65 in 2015, it increased to ₦2.08 Trillion, and it also increased to ₦2.36 Trillion in 2017 before a reduction to ₦1.79 Trillion in 2018. From the statistics given above, it can be deduced that NPL fluctuates during these periods, with most of its fluctuations in the increase. These fluctuations do not make economic sense despite the provisions and policies made by the monetary authorities to prevent the huge amount in NPLs. These policies include the development of a deposit tracer system, the introduction of the Nigerian Deposit Insurance Corporation, Know Your Customer (KYC), among others.

In another development, given the close link between bad credit risk policy, inadequate internal monitoring, and poor management, terrible credit risk management induced by poor lending practices could be considered one of Nigeria's financial services sector's most important sources of hardship (Kolapo, Ayeni, & Oke, 2012). Poor credit risk management has resulted in the accumulation of non-performing loans (NPLs), which has become a serious concern in the Nigerian banking system. Non-performing loans (NPLs) diminish bank liquidity, credit expansion, and real-estate growth, all of which have direct implications for bank performance, the defaulted firm's performance, and the economy as a whole. While the above research outcomes provide valuable insights into credit risk management, there has been no consensus on the effect of credit risk on the financial performance of deposit money banks in Nigeria. The current study examines the effect of credit risk management on the financial performance of deposit money in Nigeria.

This study differs from the previous ones as it considers the use of the CAMELS approach to measuring the credit riskiness of all deposit money banks in the country. Furthermore, this study differs from other studies because it employed the Autoregressive Distributed Lag (ARDL), a more sophisticated method of data analysis, to measure the effect of credit risk on bank performance.

Deposit money banks play a crucial role in the development of the economy. However, if the proper precautions are not taken in respect of the loans and advances given to customers, the incessant increases in the value of NPLs of deposit money banks and the series of bank distress being experienced in the sector will continue unabated and could result in outright liquidation. This study is, therefore, out to beam more empirical light on the impact of credit risk management on the financial performance of deposit money banks in Nigeria.

II. LITERATURE REVIEW

A. Conceptual Clarification

Credit Risk Management

Risk has been defined differently by different authors. However, the most common characteristic of the definition of risk is that it involves uncertainty. The International Organisation for Standardization (ISO, 2015) defined risk as

to the effect of uncertainty on the objectives of firms. Similarly, Hopkin (2010) defined risk as an occurrence that has the potential to influence (inhibit, enhance, or cast doubt on) the mission, strategy, project, routine operation, objective, core process, important dependencies, and/or the fulfillment of stakeholder expectations. Crane, Gantz, Isaacs, Jose, and Sharp (2013) also defined risk as to the chance of loss or an unfavorable outcome associated with an action. Uncertainty involves not knowing what will happen in the future. The greater the uncertainty, the greater the risk. In fact, Martin (2013) defined it as the natural tendency of the organization to balance between opportunities.

Akinsulire (2010) described unsystematic risks as diversifiable, unique, specific, residual, and idiosyncratic and a non-market-imposed risk. Such risk may be caused by bad management, location of the business, dependency on the limited market for the product, nature of the product, etc. This type of risk is known to be avoidable. On the other hand, systematic risk is also known as non-diversifiable, non-specific, general, and market-imposed risk. Certain factors, according to Akinsulire (2010), are known to cause such risk, and such factors include inflation, economic problem, political problems, war, death of the president, etc. This risk is known to be unavoidable as it affects all the aspects of the economy in which the business is operating.

Risk management as a formal discipline involves; identification, measurement, and Estimation of risk exposures, assessment of the effect of risk exposures, finding instruments and facilities to shift or trade risks, assessing costs and benefits of the instruments, forming a risk mitigation strategy (avoid, transfer, mitigate, keep) and evaluate performance (GARP, 2015). Altanashat, Dubai & Alhety (2019). Risk management is described as a continual process of making and implementing decisions that reduce the degree of uncertainty associated with exposure to business-related risks. Risk management is the process of identifying, evaluating, and prioritizing hazards, as well as the deployment of resources in a coordinated and cost-effective manner to reduce, monitor, and control the probability or impact of unfortunate events or to maximize the realization of opportunities. Risk management provides a mechanism to facilitate risk classification and reaction to risk while providing control over reality, the effectiveness of actions, and compliance with the regulation. Proper risk management creates a new vision of the company's internal or external, estimated or retrospective exposures.

Credit risk is probably considered the most important type of all risks. It refers to the customer's inability to service his debts and may constitute a major source of loss not only to banks' profitability but also to the total assets of such banks. Non-performing loans of banks must be properly monitored so as to avoid credit risk's influence on eating deep into the asset of the banks and bring about insecurity in the financial industry. One model introduced to examine the financial soundness of banks and understand the riskiness of such bank's loans is CAMELS. CAMELS is an acronym that

stands for Capital adequacy, Asset quality, Management efficiency, Earnings quality, Liquidity management, and Risk sensitivity Rostamin (, 2015). This CAMELS approach is useful to examine the safety and soundness of deposit money banks and help to curb potential risks which may lead to bank failures in any developing economy, especially Nigeria.

Deposit Money Banks (DMBs) are exposed to a diverse set of market and non-market risks, and risk management has become a major function within the organization. Banks have been investing in risk management for good economic reasons that their owners and creditors have demanded. However, banking regulators have a clear interest in promoting sound risk management in banking organizations because a secure and robust banking system is critical to economic growth and financial market stability. Nevertheless, identifying, evaluating, and promoting sound risk management practices have become critical components of good supervisory practices.

Risk management is a human activity that includes recognizing risk, assessing risk, devising risk management strategies, and mitigating risk utilizing managerial resources. (Hilson&Sameul (2012). The significance of studying risk management is that it may help in a variation of the actual outcome from the expected. It can make the difference between survival and failure of a company and may prevent large losses, which may cripple a firm. Risk management can improve profits by reducing expenses as well as increasing income. This may be through lowering expenses through preventing or reducing accidental losses as a result of certain low-cost measures or transferring potentially serious losses to others at the lowest transfer fees possible and preparing the firm to meet most economically those losses it has decided to retain. A risk-management program, therefore, should have a single overarching goal: to ensure that a company has the cash available to make value-enhancing investments (Froot, David, Scharfstein& Stein 1994).

Effective credit risk management by banks not only ensures the profitability and profitability of their activities but also contributes to systemic stability and efficient capital allocation in an economy (Psillaki et al., 2010). Efficient and effective risk management is essential for the survival of banks, as it allows them to allocate resources to risk units by balancing risk and investment return (Ogbol and Okallo, 2013). Mekasha (2001) studied credit risk management and its effects on the performance of Ethiopian commercial banks. The study found a link between return on assets and provisioning for loans, non-performing loans, and total assets.

Given the variety of risks that banks face, special attention is always paid to credit risk management because loan losses have a direct impact on banks' profitability. As a result, robust credit risk management policies maximize the bank's performance by managing credit risk exposure within acceptable limits. Banks often closely monitor and conduct rigorous credit analyses on counterparties and various

products. Banks have also worked hard to improve their forecasting capabilities in order to assess risk in stressed market conditions.

Bank Performance:

Bank performance refers to the success of a bank in the market with different outcomes. It is a focal, complex and multidimensional phenomenon. The performance itself can be characterized as the ability of the bank to create acceptable outcomes and actions (Philip, 2011). Bank performance includes financial and non-financial measurements (Laitinen& Chong, 2006). Financial performance is a measure of a firm's overall financial health over a given period of time. Solvency, profitability, and liquidity are some of the metrics that can be used to assess it. Solvency is a metric that compares the amount of borrowed capital used by a company to the amount of equity capital contributed by its owners. In order to attain an acceptable level of reliability, a financial soundness evaluation must consider both quantitative and qualitative indications (Udaibir et al., 2017). Therefore, it is important to note that proper risk asset management (RM) may lead to enhanced financial performance. Proper and efficient risk asset management by banks is essential to their survival and will generally influence their financial performance.

The overall performance of banks is based on those factors that, directly or indirectly, affect the quality of services provided to customers and their costs. Therefore, in addition to explicit costs, other factors also have an effect on the performance of banks (Abreu, Kimura &Sobreiro, 2019). Therefore, a diversified combination of factors is critical to measuring and explaining banks' performance (Lee, Yang, and Chang, 2014). Therefore, to improve overall efficiency, studies on banking performance. Most studies cited non-performing activities as an important indicator of performance and are therefore included in the study.

B. Theoretical Framework

The PRISM Model

The PRISM model involves the full process of loan administration and recovery, and the study is based on this model. The PRISM credit risk management model is a modern paradigm that is utilized in credit risk management today. Perspective, Refund, Intention, Safeguards, and Management (PRISM) is the abbreviation for it. Management, which is part of PRISM, is concerned with the borrower's background and perspectives. The loan's objective or purpose acts as the foundation for repayment. This focuses on internal and external sources of cash. Internal operations and asset sales produce internal liquidity, while new injections of debt or equity provide external sources of liquidity. Internal guarantees derive from the quality and soundness of balance sheets, while guarantees and covenants provide external guarantees. The final component, the perspective, brings together other sections; the risks and considerations of the agreement and the operational and financial strategies broad enough to have a positive impact

on shareholder value, allowing the borrower to repay the loan (Glantz, 2004).

C. Empirical Review

Mohamed and Onyiego (2018) examined whether risk management practices in Kenya affected bank performance. Specifically, the study assessed the effect of credit risk management on the financial performance of commercial banks in Kenya and also determined the effect of interest rate risk on the financial performance of the selected commercial banks in Kenya. The study’s independent variables were credit risk management, liquidity risk management, interest rate risk management, and operational risk management, while the dependent variable was performance. Primary data analysis was employed through the use of a questionnaire and analyzed using the ordinary least square as well as ANOVA. In the study, it was discovered that operational risk was the most important variable that determines the performance of commercial banks in Kenya.

Noman, Pervin, Chowdhury &Banna (2015) looked at the effect of credit risk on the profitability of the banking sectors of Bangladesh. The study employed 18 private commercial banks from the country from 2003 to 2013. The study’s dependent variables were net interest margin, return on average asset, and return on average equity. The independent variables, on the other hand, were the ratios of non-performing loans to gross loans, loan loss reserve to gross loans, loan loss reserve to non-performing loans, and capital adequacy ratio. It was discovered in the study through the use of a two-step generalize moment mean (GMM) that a negative and significant relationship exists between all profitability indicators and ratio of non-performing loan to gross loan and ratio of loan loss reserve to gross loan. In the same vein, a negative and significant relationship existed between capital adequacy and return on average equity.

Abiola and Olausi (2014) have analyzed the impact of credit risk management on commercial banks' performance in Nigeria. The study used a panel regression model as the estimation technique. Non-performing loans (NPLs) and capital adequacy ratios (ERA) were used as credit risk management indicators in this model, while return on capital (ROE) and return on assets (ROA) were used as performance indicators. Credit risk management has a major impact on the performance of Nigerian banks, according to the research. Credit risk management has a major impact on the performance of Nigerian banks, according to the research. Furthermore, the results also show that the sampled have poor credit risk management practices, hence the high levels of non-performing loans in their loans portfolios. Despite the high levels of the NPLs, their profit levels keep rising as an indication of the transfer of the loan losses to other customers in the form of large interest margins.

Singh (2015) has stated that there was a significant relationship between bank performance (in terms of return on assets) and credit risk management (in terms of non-performing assets). The study also found that banks with

higher profit potentials were better able to absorb credit losses when they occurred, resulting in superior commercial bank performance in India. Furthermore, the study discovered that return on asset (ROA) and the ratio of non-performing assets had a direct but inverse link (NPA).

Most of the studies have used panel variables, selecting a number of banks, but this study differs in that it looked at the entire financial sector, comprising commercial banks and merchant banks. This study also differs from other studies as the use of the CAMELS approach is divided to extract the credit risk component of the model. Previous studies have not considered using just the credit risk components of the model.

Furthermore, the majority of the studies have used simple linear regression, but this study employed the use of the Autoregressive Distributed Lag and Bounds test to check for the long-run cointegration of the variables for policymaking.

In the same vein, this study made use of non-performing loans as a percentage of total loans and advances as the proxy for credit risk and also employed capital adequacy and liquidity ratio as controlled variables.

III. METHODOLOGY

The study used a descriptive research design with data sourced from the Nigeria Deposit Insurance Corporation. The population of the study comprised all the banks in Nigeria between 1995 and 2019. The base year was selected due to the economic policy and trade practices introduced in 1995, and the study stopped in 2019 due to the availability of data. The research instrument used in the study is the CAMELS approach with little modifications so as to accommodate the credit riskiness of the deposit money banks. The study adopted the use of the ordinary least square as the method of data analysis. Specifically, the Autoregressive Distributed Lag (ARDL) was used, and its Bounds Test was employed to check for the long-run cointegrating relationship among the variables.

A. Model Specification

The study’s dependent variable shall be returned on assets, while the independent variables include non-performing loans, capital adequacy, total loan, and liquidity ratio.

$$ROA = f(NPLTL, CA, LR)$$

Econometrically,

$$ROA_t = \beta_0 + \beta_1NPLTL_t + \beta_2CA_t + \beta_3 LR + \mu_t$$

Where ROA_t is the return on assets of deposit money banks which will be extracted from calculated from the financial statement of the listed firms at time t.

$NPLTL_t$ represents the non-performing loan as a percentage of the total loan, which will also be extracted from the NDIC CA_t is the capital adequacy of the DMBs.

TL_t is the total loans and advances of DMBs

LR_t represents the liquidity ratio of DMBs as reported by NDIC

μ_t is the error term or the stochastic variable.

The expected sign is a statistical technique that shows the Apriori relationship between two variables. The positive expected sign means that as one variable increases, the other also increases, while the negative sign means that as one variable increases, the other decreases. It is expected that non-performing loans as a percentage of total loans should show a negative sign on return on assets. It is also expected that capital adequacy should show a positive sign while liquidity ratio should show a negative sign if a theory is followed by the result of the study.

IV. ANALYSIS AND INTERPRETATION

The study first looks at the unit root test of the variables in order to know their stationarity so as to avoid spurious regression. Table 1. shows the result of the Augmented Dickey-Fuller (ADF) unit root test.

Table 1. Augmented Dickey-Fuller Unit Root Test

Variable	Level			First Difference			Stationarity
	t-stat	critical	Prob	t-stat	Critical	Prob	
ROA	-0.32	-3.05	0.9025	-4.36	-3.05	0.0039	I(1)
NPLTL	-2.75	-2.99	0.0812	-5.50	-3.00	0.0020	I(1)
CA	-3.41	-3.00	0.0219	-	-	-	I(0)
LR	-3.40	-3.00	0.0221	-	-	-	I(0)

Researcher's Computation, 2021.

The ADF unit root test showed that return on asset and non-performing loan as a percentage of the total loan was stationary at first difference while capital adequacy and liquidity ratio were stationary at level. From the result of the ADF unit root, the study then employed the use of the Autoregressive Distributed Lag (ARDL) as the method of data analysis because of the mixture of stationarity among the variables between level and first difference. However, before the ARDL can be estimated, it is vital that the lag length be known, and this is done by estimating the unrestricted Vector Autoregression (VAR) and selecting the lag length criteria

Table 2. VAR Lag Length Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-258.2684	NA	11479617	27.60720	27.80603	27.64085
1	-226.8206	46.34410*	2374589.*	25.98112*	26.97527*	26.14937*
2	-212.9078	14.64508	3907150.	26.20082	27.99029	26.50367

Researcher's Computation, 2021.

The VAR lag length criteria show the required number of lags to be employed in the study. Gujarati (2004) opined that the criterion with the lowest value should be employed at the number of lags in which it falls. Specifically, lag lengths should be selected between the Akaike Information Criterion (AIC) and Schwarz Information Criterion (SC). From the result of the VAR lag length, there is a consensus on the selection of lag 1 as the required number of lag because all the criteria are pointed at its section. Therefore, the study estimated the ARDL using lag 1.

A. Presentation of Result

The study presents the result of the ARDL in Table 3, its interpretation, and implications.

Table 3. ARDL Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ROA(-1)	0.291450	0.238676	1.221111	0.2409
NPLTL	-0.306579	0.075967	-4.035680	0.0011
NPLTL(-1)	0.232331	0.075466	3.078616	0.0076
CA	0.032672	0.082429	0.396360	0.6974
LR	-0.047059	0.041028	-1.146983	0.2694
C	5.173367	3.467170	1.492101	0.1564
R-squared	0.616052	Mean dependent var		2.136190
Adjusted R-squared	0.488069	S.D. dependent var		2.872291
S.E. of regression	2.055105	Akaike info criterion		4.513488
Sum squared resid	63.35187	Schwarz criterion		4.811923
Log-likelihood	-41.39162	Hannan-Quinn criter.		4.578256
F-statistic	4.813555	Durbin-Watson stat		2.183369
Prob(F-statistic)	0.007982			

Researcher's Computation, 2021.

Hypothesis One: Non-performing loans as a percentage of total loans have no significant relationship with return on assets of quoted deposit money banks in Nigeria. The result of the ARDL revealed that NPLTL has a coefficient of -0.306579 with a probability value of 0.0011. This shows that non-performing loan as a percentage of total loans of deposit money banks in Nigeria exerts a negative relationship with its return on assets. This could mean that a percentage change, increase or decrease, in NPLTL will bring about 30.65% change, decrease or increase, in return on assets of deposit money banks in Nigeria. However, one

lag period value of NPLTL produces a positive and significant relationship with ROA such that a percentage increase in one past period value of NPLTL will lead to about a 23.23% increase in ROA. Therefore, the first hypothesis is rejected, and the study confirms that non-performing loan as a percentage of total loans has a significant relationship with return on assets of deposit money banks in Nigeria.

Hypothesis Two: there is no significant relationship between capital adequacy and return on assets of quoted deposit money banks in Nigeria.

From the result in Table 3, capital adequacy showed a coefficient of 0.032672, which signifies a positive influence on return on assets of the deposit money banks in Nigeria. The result further showed that capital adequacy, although positively influencing return on assets, does not have a significant influence. It, therefore, means that the hypothesis is accepted.

Hypothesis Three: Liquidity ratio has no significant effect on return on assets of deposit money banks in Nigeria. The result also revealed that the liquidity ratio possesses a negative and not significant effect on return on assets with a coefficient value of -0.047059, which implies that the higher the liquidity ratio of the banks is, the lower will be the performance of these banks using return on asset as the measure for performance. Therefore, hypothesis three is accepted.

B. Coefficient of Determination

The coefficient of determination, symbolized as R² is used to measure the extent to which the variation in the model’s dependent variable is explained by variations in the independent variables. The result of the coefficient of determination revealed that about 61.61% of the variations in return on assets of deposit money banks in Nigeria are explained by the immediate past return on asset, non-performing loan, capital adequacy, and liquidity ratio. This is a good representation as less than 39% of the variations are explained by variables that are not captured in the model of this study.

C. F-statistics

The F-statistics is used to check for the overall significance of the independent variables on the dependent variable. The result of the test showed that past period value of return on asset, non-performing loan as a percentage of total loans, capital adequacy, and liquidity ratio jointly have a significant effect on present period return on an asset with a probability value that is less than the required level of significance.

D. ARDL Bounds Test

The ARDL Bounds test is employed to ascertain the long-run cointegrating relationship among the variables used in the study. Table 4 depicts the ARDL Bounds test result

Table 4: ARDL Bounds Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	3.055606	10%	2.37	3.2
k	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

Researcher’s Computation, 2021.

The result of the Bounds test revealed that the long-run cointegrating relationship among return on asset, non-performing loan as a percentage of the total loan, capital adequacy, and liquidity ratio is inconclusive. This is as a result of the F-statistic value (3.055606) being greater than I(0) bound value at a 5% level of significance (2.79), but less than the I(1) bound test value (3.67).

E. Discussion of Findings

The relationship between the immediate past period value of return on the asset has a positive influence on its present value. This implies that commercial banks' assets which are made use of in the immediate past period, serve as an important tool for the present period return on assets. Therefore, land and buildings, furniture, computers, and other ICT equipment used by banks in the previous period also serve as return generating assets of the present period. The non-performing loan was found to reduce the return on assets of deposit money banks in Nigeria. This implies that bad loans and unmonitored loans issued by deposit money banks really do not yield returns for the banks. This is due to the fact that other profit-generating and income-producing investors will not be able to get funds from deposit money banks because of those who have not been able to pay back. Capital adequacy, on the other hand, entails the management of capital from owners of the banks, and if properly managed and adequate, it leads to a positive effect on return on assets for deposit money banks in Nigeria. Finally, lending rate when high will scare investors away from borrowing funds from the bank, and this will make profitability reduced, but when the bank lending rate is found favorable by the investors, it attracts the borrowing of funds, and when funds are borrowed by investors, profitability is enhanced.

The study has looked at how important credit risk management is in influencing the financial performance of deposit money banks in Nigeria. The results of the study are in conformity with Abiola and Olausi (2014); Singh (2015) and Noman, *et al.* (2015), which showed that non-performing loan has a negative and significant effect on the financial performance of deposit money banks in Nigeria as proxied by return on asset.

V. CONCLUSION AND RECOMMENDATIONS

The study has examined the effect of credit risk management on the performance of deposit money banks in Nigeria. The management of credit is a very crucial part of

the functions of deposit money banks in every economy, and its impact cannot be overemphasized as it affects the performance of the banks and the economy at large. It is therefore concluded in the study that credit risk has a significant effect on the performance of deposit money banks in Nigeria. The study then recommends that deposit money banks should employ modern techniques in the performance of their financial intermediation function so that there can be a huge reduction in the amount of non-performing loans. In addition, a balance should be found by banks between lending money to the productive sector and meeting the depositors' demand as at when due so as to have a favorable liquidity ratio and keep customers' trust in the Nigerian banking system.

The regulator (Central Bank of Nigeria) may use this study to design and improve the current risk management framework for all deposit money banks in Nigeria. The findings of this study may be a valuable addition to the literature review. Therefore, students of risk management, finance, insurance, governance, information technology, human resource management, and law may find this research finding critical in terms of broadening their minds in this area.

REFERENCES

- [1] Abiola, I., & Olausi, A. S. The impact of credit risk management on the commercial banks' performance in Nigeria. *International Journal of Management and Sustainability*, 3(5) (2014) 295-306.
- [2] Abreu, E. S., Kimura, H & Sobreiro, V., What is going on with studies on banking efficiency? *Research in International Business and Finance*, Elsevier, 47(C) (2009) 195-219.
- [3] Akinsulire, O., *Financial Management*, 4th Edition, EL-Toda Venture Press, Lagos, (2010).
- [4] Altanashat, M., Dubai, M., Alhety, S. The impact of enterprise risk management on institutional performance in Jordanian public shareholding companies. *Journal of Business and Retail Management Research*, 13(3) (2019) 256-268.
- [5] Angell, R. J., & Brewer, B. L. Improving the coverage of the DuPont approach of financial analysis in finance courses through the use of the net leverage multiplier. *Journal of Economics and Finance Education*, 2(2) (2017) 1199-1207.
- [6] Bhattarai, Y.R. The effect of credit risk on the performance of Nepalese commercial banks. *NRB Economic Review*, 28(1) (2016) 41-62.
- [7] BNM Malaysian financial system can weather current global financial turmoil. 14th October, available at: www.bnm.gov.my/index.php?ch=8&pg=14&ac=1701 (2008) (Accessed 27, Feb 2021).
- [8] Demidenko, E & McNutt, P. The ethics of enterprise risk management as a key component of corporate governance. *International Journal of Social Economics*, 39(10) (2010) 802-815.
- [9] Eisenhardt, K. Agency theory: An assessment and review. *Academy of Management Review*, 14(1) (1989) 57 – 74.
- [10] Froot, K. A., David S. Scharfstein, and J. Stein., *A Framework for Risk Management*, Harvard Business Review 72(6) (1994) 59–71.
- [11] Hillson D. A. & Simon P. W. *Practical project risk management: The ATOM Methodology* (second edition). Vienna, US: Management Concepts.
- [12] Hopkon, P., *Fundamentals of Risk Management: Understanding Evaluating and Implementing Effective Risk Management*, Kogan Page, (2012) 384.
- [13] International Organisation for Standardisation (ISO)., (2015).
- [14] Jensen, M. & Meckling, W. *Theory of the firm: Managerial* [15]. Kolapo, T. F., Ayeni, R. K & Oke, M. O. Credit risk and commercial banks' performance in Nigeria: a panel model approach. *Australian Journal of Business and management research*, 2(2) (2012) 31-38.
- [15] Lee, C., Yang, S., & Chang, C., Non-interest income, profitability, and risk in the banking industry: A cross-country analysis, *The North American Journal of Economics and Finance*, Elsevier, 27(C) (2014) 48-67.
- [16] Mahmood, M. S., Aziz, K.A., Yazid, A. S., Rasid, N., Salleh, F., Ghazali, P. L., & Mahmood, S. A conceptual framework of enterprise risk management practices among SMEs in Malaysia, *International Journal of Academic Research in Business and Social Sciences*, 8(11) (2017) 1209-1221.
- [17] Mekhasha, G. *Credit risk management, and performance of commercial banks in Ethiopia*. Addis Ababa University., (2001)
- [18] Mohamed, A. M. & Onyiego, G. Effect of risk management on the financial performance of commercial banks in Kenya: A case study of commercial banks in Mombasa County. *The Strategic Journal of Business and Change Management*, 5(4) (2018) 1605-1630.
- [19] Noman, A. H., Pervin, S., Chowdhury, M. & Banna, H. The effect of credit risk on the banking profitability: A case on Bangladesh. *Global Journal of Management and Business Research: C Finance*, 5(3) (2015) 41-48.
- [20] Ogbol, c. & Okallo, K. U. Impact of credit risk management and capital adequacy on the financial performance of commercial banks in Nigeria. *Journal of Emerging Issues in Economics, Finance, and Banking*, 2(3) (2013) 703–717
- [21] Philip, M. Factors affecting business success of small & medium enterprises (SMEs). *Amity Global Business Review*, 6(1) (2011) 118–136. <https://doi.org/10.5539/ass.v7n5p180>.
- [22] Psillaki, M., Tsolas, I.E., and Margaritis, D. Evaluation of credit risk based on firm performance, *European Journal of Operational Research*, 201(3) (2010) 873-881.
- [23] Rostamin, M. Determination of CAMELS models on banks' performance, *International Journal of Multidisciplinary Research and Development*, 2(10) (2015) 652-664
- [24] Salas, P. & Saurina, J. Credit risk in two institutional regimes: Spanish commercial and savings banks. *Journal of Financial Services Research*, 22(3) (2002) 203-224.
- [25] Tasmin, R., Muazu, M.H., Aziati, A.H.N., & Zohadi, N.L. The mediating effect of enterprise risk management implementation on operational excellence in the Malaysian oil and gas sector: A conceptual framework. *Future Business Journal*, 6(7) (2020) 1-6.
- [26] Udaibir, S., Das, N. D. & RiPodpiera, R. *Insurance and issues in financial Soundness*. IMF Working Paper., (2017).
- [27] Wiseman, R. & Catanach, A. A longitudinal disaggregation of operational risk under changing regulations: Evidence from the savings and loan industry, *Academy of Management Journal*, 40(4) (1997) behaviour, agency costs and ownership structure. Harvard University Press, 3(4) (1976) 1 – 78.