



IMPACT OF CREDIT RISK MANAGEMENT ON PROFITABILITY OF SELECTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

The focus of the study is mainly on the impact of credit management on the financial performance of deposit money banks. It is based on secondary data obtained from the audited financial statement of the companies available online. The study extracted data from thirteen (13) deposit money banks in Nigeria, and it considered variables such as loan losses ratio as a proxy for the independent variable (Credit management) and used Return on equity and return on assets as proxies for the dependent variable (profitability). These variables were analyzed using multiple regression in SPSS statistical software. The result of the analysis shows that credit management has significant relationship with profitability of the deposit money banks, and this was because their proxies shows a p-value that was less than 5% benchmark specified in SPSS statistical software. Based on these result, the study recommend that management of banks should develop a good strategy to ensure that the loan facilities are repaid as at when due, so as to reduce problem associated with delay in servicing loan which have a direct proportional effect on the profitability of this banks.

Keywords: Loan, Return on asset, Return on equity, credit risk management, profitability

INTRODUCTION

The banking sector of every country plays a significant role in its economy's growth and development. One of such roles is to act as an intermediary between lenders and borrowers. Associated with this role is the risk that depositors will suddenly withdraw their deposits (liquidity risk) and the risk that borrowers will default in repayment of interest and the principal loans on time (credit risk). These risks, especially credit risk, have a high tendency of adversely affecting financial performance of these institutions and if not well managed, persistent exposure to these risks poses threat to the survival of these institutions. Credit plays a prominent role in the financing of economic activities all over the world. Credits are granted to finance various production, investment and consumption activities, across various sectors of the economy. Credits therefore constitute critical tools for economic growth (Ugoani 2013). However, once credits are created, credit risk exposure has commenced and if not carefully handled, it could spiral into monumental global financial crisis, such as was witnessed in year 2006, arising from concentration of financial institutions' loan portfolio on overvalued sub-prime mortgage-related assets which were built up over time. By mid-2007, most of the underlying assets in the sub-prime mortgage crisis had suffered default (CBN 2015). North America and Europe instantly felt the impact as it manifested in form of a drastic reduction in available credit and the consequential slump in aggregate demand. The crisis spread like wild fire, cutting across one economy after another, in both developed and developing nations. The Nigerian economy, being a mono-product economy in foreign exchange earnings, was touched through the oil slump, erosion of foreign direct investment, pressure on foreign reserves and a sharp decline in the performance of the stock market. The global economic melt-down affected the Nigerian banking industry, particularly, those that had large portfolio exposure to the oil and gas industry, the capital market and through paucity of off-shore credit lines (Kolapo, Ayeni and Oke, 2012).

According to Kolapo, Ayeni and Oke (2012), the development, growth and sustained stability of the economy of any country is substantially a function of the volume of credit made available by banks to fund production and commercial activities that adds value to the economy. Abdulraheem, Yahaya and Aliu (2011); Bashir and Kadir (2007); Yanfei (2013) aligned with these views, stressing that, the role of commercial banks in an economy is indispensable.

Commercial banks facilitate the development, expansion and growth of a nation's economy by making funds available for investment in the economy through the use of various financial instruments to mobilize surplus funds from those that tend to save current consumption for the future and they make same funds available to the deficit unit, by way of lending, for production, investment and consumption purposes.

Stoner (2003) as cited in Turyahebya (2013), defines financial performance as the ability to operate efficiently, profitably, survive, grow and react to the environmental opportunities and threats. In agreement with this, Sollenberg and Anderson (1995) as cited in Gatuhu (2011) assert that, performance is measured by how efficient the enterprise is in use of resources in achieving its objectives.

Hitt, Hoskisson, and Johnson, (1996) believes that many firms' low performance is the result of poorly performing assets. Commercial banks earn financial revenue from loans and other financial services in the form of interest fees, penalties, and commissions. Financial revenue also includes income from other financial assets, such as investment income. Bank financial activities also generate various expenses, from general operating expenses and the cost of borrowing to provisioning for the potential loss from defaulted loans.

The interest on loans given to customers also serves as one of the main streams of income in the banking industry and banks are usually confronted with the dilemma of protecting depositors' money and so also confronted with the risk of giving out loans to eligible individual customers, corporate organizations and even the government and evidence from extant literatures on credit management indicates that, credit risk triggers all other forms of risk if not properly managed (Uwalomwa, Uwuigbe & Oyewo, 2015; Poudel, 2012). Therefore the impact of credit risk management on the banks' financial performance must be examined.

Statement of the Problems

Despite the stringent regulations put in place the Central Bank of Nigeria and other regulatory bodies, the banking industry is still plagued with high credit risk in the form of non-performing loans. The rate of non-performing loans had its peak of 37.3% in 2009 and had a low rate of 3.0% in 2014 and it has been increasing consisting to the rate of 11.4% in 2018 (Central Bank of Nigeria, 2019).

Credit management has often been a challenge to many deposit money banks in Nigeria, because, despite best practices measures in credit risk management put in place by the management of these banks, customers still have strong tendencies to delay or completely stop repayment of their loan, which often lead to problem of non-performing loans. Most researches considered by this study (e.g. Gadzo, Oduro, and Asiedu, 2019 ; Nwanna and Oguezue, 2017; Li and Zou 2014; Ndubuisi and , Amedu ,2018; Ojiong, Okpa, Egbe,(2014) adopted data on credit risk management and profitability, obtained between year 2000 and year 2017, and they all emphasize that credit risk management have significant positive relationship with profitability of deposit money banks. The problem of this study is to identify whether any relationship still

exist between credit risk management and profitability using data stating from 2003 -2018, since none of the existing studies considered in this research work have fully adopted these period.

Research Questions

- What relationship exist between loan and advances and return on asset of the selected deposit money banks in Nigeria
- How does loan and advances relate to return on equity of the selected deposit money banks in Nigeria

Research Objectives

The main objectives of this study is to consider the impact of credit risk management on profitability of selected deposit money banks in Nigeria while the specific objectives are to

- examine the relationship between loan and advances and return on asset of the selected deposit money banks in Nigeria
- determine the relationship between loan and advances and return on equity of the selected deposit money banks in Nigeria

Research Hypotheses

Ho₁ There is no relationship between loan and advances and return on asset of the selected deposit money banks in Nigeria

Ho₂ There is no relationship between loan and advances and return on equity of the selected deposit money banks in Nigeria

LITERATURE REVIEW

Conceptual Framework

Concept of Credit Management

Credit management is an important issue in any organization and cannot be overlooked by any economic enterprise engaged in credit irrespective of its business nature. It is the process which ensures that customers will pay for the products delivered or the services rendered. Myers and Brealey (2003), describe credit management as methods and strategies adopted by a firm to ensure that they maintain an optimal level of credit and its effective management. It is an aspect of financial management involving credit analysis, credit rating, credit classification and credit reporting. Nelson (2002), views credit management as simply the means by which an entity manages its credit sales. It is a prerequisite for any entity dealing with credit transactions since it is impossible to have a zero credit or default risk.

According to Hettihewa (1997), Credit Management is extremely important as granting credit is considered to be the equivalent of investing in a customer. However, payment of the debt should not be postponed for too long as delayed payments and bad debts are a cost to the company.

According to Edwards (1993), unless a seller has built into his selling price additional costs for late payment, or is successful in recovering those costs by way of interest charged, then any overdue account will affect his profit. In some competitive markets, companies can be tempted by the prospects of increased business if additional credit is given, but unless it can be certain that additional profits from increased sales will outweigh the increased costs of credit, or said costs can be recovered through higher prices, then the practice is fraught with danger. An efficient and effective credit management will reduce the capital that is locked with the debtors, as well as reduces the possibility of bad debts.

John Greijmans (2015), discussed that there are important steps in the credit management process which includes; reviewing credit worthiness and deciding whether or not to extend credit, monitoring amounts that are not yet due, but on which you nevertheless run the risk of late or non-payment and collecting the cash of amounts that are past due, but have not yet been settled. Several factors are also used as part of the credit management process to evaluate and qualify customer for the receipt of some form of commercial credit. This may include; gathering data on the potential customer's, current financial condition including the current credit track record that discloses the character of a customer in meeting obligations as well as collateral value. The current ratio between income and outstanding financial obligations will also be taken into consideration.

Concept of Credit Risk

Attempts have been made by various authors to define the term credit risk. One of them is Kanchu and Kumar (2013), who defined credit risk as the potential that a bank borrower or counterparty fails to meet the obligations on agreed terms. Kolapo, Ayeni and Oke (2012) defined credit risk as the exposure faced by banks when a borrower (customer) defaults in honoring debt obligations on due date or at maturity, this risk is capable of putting the bank in distress if not adequately managed. Kolapo et al (2012) and Chen and Pan (2012), viewing the concept of credit risk from another perspective, defined credit risk as the degree of value fluctuations in debt instruments and derivatives due to changes in the underlying credit quality of borrowers and counterparties. Coyle (2000) defined credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. Gizaw, Kebede and Selvaraj (2015) described credit risk as the risk that arises from default or delay in repayment of

obligations and affects most assets held by credit institutions including loans, marketable securities and equity interests. The Basle Committee on Banking Supervision (2001) described credit risk as the possibility of losing the outstanding loan partially or totally, due to credit events (default risk). Kolapo et al (2012) and Psillaki, Tsolas and Margaritis (2010) stated that Basel Accord's emphasis on sound credit risk management practices and strict compliance with credit policies is premised on the increasing growth of non-performing loans across various jurisdictions, a problem which the accord is partly out to address, in order to ultimately improve bank performance. Kithinji (2010) defined credit risk of a bank as the possibility of loss arising from non-payment of interest and principal or both or non-realization of securities on the loans. In another breath, Conford (2000) also defined credit risk as the possibility that the actual returns on an investment or loan extended will deviate from that which was expected. Mbucho and Senaji (2015) defined credit risk as change in the value of the asset portfolio of a bank, due to the failure of an obligor to meet his payment commitments. Kithinji (2010) identified the main causes of credit risk which include, absence of adequate institutional capacity, improper credit policies, volatility of interest rates, low capital, insider lending, weak judicial systems, poor management, low capital and liquidity levels, massive licensing of banks, reckless lending, poor credit assessment, poor lending practices, government interference and inadequate supervisory and regulatory responsibilities. Another scholar who examined the concept of credit risk management is Onaolapo (2012), who compared the proportion of owner's equity to total asset of banks and observed that a deposit money bank like most financial institutions ideally hold little owner's capital relative to the aggregate value of its assets. This implies that, even if only a small percentage of total loans turn bad, it could taint the entire credit portfolio and expose the bank to threat of failure. Onaolapo (2012) differentiated between credit risk and credit risk management. The study stressed that, credit risk refers to the probability that the credit portfolio of a deposit money bank will decline in value and perhaps become worthless, while credit risk management refers to various processes designed to control and protect banks against losses associated with these risk exposures. Kithinji (2010) concluded that the credit risk framework and governance structure must be properly set up to ensure that they cover credit risk process as well as models for risk quantification and ranking. Onaolapo (2012) added that the need to mitigate a number of risk events such as self-interest of managers and impact of capital market imperfection constitute reasons advanced for credit risk management, others include credit appraisal goal and high cost of financial distress. Credit risk management also involves deploying strategies to minimize loss events arising from credit risk exposure and maintaining an optimum balance between credit risk and underlying returns. Corroborating this assertion, Kolapo, Ayeni and Oke (2012) pointed out that by maintaining credit risk exposure and

deploying credit risk management tools, banks are in a position to leverage on credit risk management activities to maximize their risk adjusted rate of return. This implies that at every portfolio aggregation level, an effective credit risk management system will ensure that credit risk exposures are appropriately priced and diversified to maintain an optimum portfolio equilibrium and acceptable risk-return trade-off. Coyle (2000), Kithinji (2010) and Ugoani (2016) also defined credit risk management as an end to end process that involves identification, measurement, monitoring and control of risk arising from the possibility that loan repayment may be defaulted. It involves a comprehensive process driven by appropriate technology, structure, policies and skilled man power to ensure that in the first place, lending decisions are a product of quality analysis and credit control. It also involves

Theoretical Framework

Credit Risk and Chaos Theory

Carter (2008) conducted a study on the relationship between credit risk and environmental market factors and came up with the Credit Risk and Chaos Theory which upholds that; just as the hip bone is connected to the thigh bone, these markets are all interconnected. The study analyzed further that, if a homeowner in California does not pay his mortgage, a hedge fund in London goes bankrupt, there is a sort of chaos theory to it. The implication of this is that external environmental factors must be taken into account in all credit risk management activities. Banks must have in place adequate credit risk management structure and framework to identify and manage not only the direct risk of the exposure on hand, but also the environmental market risk events in order to prevent crystallization of the chaos theory on the bank's exposure.

Theory of Financial Crises

This theory, according to Kithinji (2010) contends that, crisis in the financial sector affects the ability of commercial banks to extend credit as well as the ability of the borrowers to service their loans. Such crisis could manifest by way of liquidity squeeze, weak demand, declining margins, currency devaluation, inconsistent government policy, unfavorable monetary policies and regulatory measures, hostile business environment, inflationary economy and high cost of business. When such crises rear their heads, ability of banks to create credit may be impaired and when they do create, default rate becomes high across various business sectors and customer types. The theory, therefore, advises additional care and caution in lending activities during periods of crisis and skillful re-strategizing to aid portfolio management and minimize loan loss accordingly.

Empirical Review

Li and Zou (2014) investigated a study titled credit risk management and profitability of commercial banks in Asia. The statistical analysis was done using regression analysis. The findings of the study reveal that credit risk management have positive effects on profitability of commercial banks, and this was reflected in the analysis of the proxies of credit risk management and profitability such as; non-performing loan ratio, return on asset, return on equity which reveal positive relationship, while only capital adequacy ratio showed a negative and insignificant relationship, The study concluded that credit risk management has significant positive relationship profitability. It therefore, recommends that management of banks should put more effort on the control of none performing loan, because of its significant effect on profitability. However, despite, all the effort put in place by management of these banks, the problem of non -performing loan still continue to affect them.

Nwanna and Oguezue (2017) examined a study titled investigated a study titled Effect of Credit Management on Profitability of Deposit Money Banks in Nigeria. The study employed multiple regression analysis in Eviews 9. The findings of the study reveal that loans and advances and loan loss provision have positive and significant effect on profitability, while non-performing loan has a negative and insignificant effect on profitability. The study concludes that management of banks should evaluate credit request before granting any form of loan to customer(s) to circumvent high rate of non-performing loan. It recommends that the banks should ensure that customers have verifiable guarantors and collateral before granting them loan. The rapid increase in Non-performing loan in most deposit banks shows that some deposit money banks may not be complying with guidance issued by regulating agencies in charge of loan facilities across the banks.

Gadzo, Oduro, and Asiedu (2019) investigated the Impact of credit risk on corporate financial performance, using data from listed banks on the Ghana stock exchange, and the data was analyzed using regression analysis. The result from the study indicates that variables such as capital adequacy, operating efficiency, profitability, and net interest margin are inversely related to credit risk. Conversely, bank size and financing gap tend to relate positively with credit risk. The study concludes that capital adequacy, operating efficiency, profitability, and net interest margin are inversely related to credit risk. Conversely, bank size and financing gap tend to relate positively with credit risk. Also, annualised changes in inflation tend to positively affect credit risk. Again, it was observed that, increase in bank credit risk negatively affects corporate financial performance. This result is however, completely different from other researchers(e.g. Li and Zou, 2014; Nwanna and Oguezue, 2017) who were of the view that credit risk have positive and proportional relationship with profitability of deposit money banks.

Ndubuisi and Amedu (2018) studied the Relationship between Credit Risk Management and Bank Performance in Nigeria using Fidelity Bank Nigeria PLC as a case study. The statistical analysis for the study was done using Pearson Correlation Coefficient. The findings of the study reveal that there is weak significant relationship between credit risk management and bank performance in Nigeria. The study conclude that there is no significant relationship between credit risk management and bank performance in Nigeria and it recommend that deposit money banks should establish sound competent risk management units which must adopt best practice in risk management. This is however contradictory to the findings of Ndubuisi and Amedu, 2018; Nwanna and Oguezue, 2017) who emphasized that there is positive relationship between credit risk management and performance of deposit banks.

Ojiong, Okpa and Egbe (2014) conducted an investigation on the impact of credit and liquidity risk management on the profitability of deposit money banks in Nigeria, it adopted the Pearson product moment correlation. The results of the study revealed that there is a significant relationship between credit management and bank profitability and there is a significant relationship between bank liquidity and profitability among deposit money banks in Nigeria. The study conclude that deposit money banks must set up effective system of internal controls to monitor the risk control mechanisms in use in order to ensure complete compliance with bank philosophy and it recommends that banks should always maintain a balance between deposit-loan ratio in order to avoid asset liabilities mismatch. This system of control for credit, are usually not always effective as some customers still default in paying their loan. This also contradict the findings of Gadzo, Oduro, and Asiedu (2019), who stated that there is negative relationship between credit risk management and profitability of deposit money banks.

METHODOLOGY

Research Design

The study is based on ex-post facto research design, since it makes use of existing database relating to the variables obtained from online financial statement of the deposit money banks in Nigeria. The variables considered by the study include loan and advance, return on asset and return on equity, while the analysis was done using regression analysis in SPSS (i.e. Statistical Package for Social Science) statistical software.

Population and Sampling

The population of the study includes twelve quoted deposit money banks in Nigerian and these banks were chosen, because of their popularity and because of the researcher's interest. The banks include, Zenith bank Plc, Union bank Plc, First bank Plc, Skye Bank Plc, Access Bank

Plc, Wema bank Plc, Sterling bank Plc, Unity Bank Plc, GTB Bank Plc, Unity bank Plc, UBA plc, Stanbic IBTC Bank Plc. The study adopted the purposive sampling techniques, which involves choosing the research samples, based on the researcher's judgment.

Model Specification

The Model specification for this study will be determined from the relationships that exist with variables stated in the hypothesis. This is stated mathematically as follows

$$Y = f(X) \text{ -----(1)}$$

Where,

Y = Dependent Variable which is profitability represented with return on equity and return on asset of the selected deposit money banks

X = Independent Variable which is Credit management represented loan and advances

$$X=(x_1)$$

Where x_1 = loan ratio.

$$Y= (y_1, y_2)$$

Where,

$$y_1= ROA, y_2=ROE$$

The multiple linear regression model for this study is defined as:

$$Y= \beta_0 + \beta_1 X_1 + e \text{ ----- (2)}$$

$$ROA= \beta_0 + \beta_1 LonRt_1 + e \text{ ----- (3)}$$

$$ROE= \beta_0 + \beta_1 LonRt + e \text{ -----(4)}$$

Where,

β_0 = Regression Constant

β_1 = Regression coefficient

LonRt = Loan loss Ratio

e = Error term

Hypothesis testing Decision Rule

Reject the null hypothesis if the P-value is less than the 5% benchmark specified in SPSS for this analysis, and accept the alternate Hypothesis, But if otherwise accept the Null hypothesis and reject the alternate hypothesis. While for the T-statistic, we accept the alternate hypothesis if the T-value is greater than P-value, but if otherwise, reject, the alternate hypothesis and accept the Null Hypothesis.

ANALYSIS AND FINDINGS

Hypothesis One

There is no relationship between loan and advances and return on asset of the selected deposit money banks in Nigeria

Table 1 ANOVA^b for hypothesis 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3024.787	1	3024.787	6.477	.012 ^a
	Residual	103676.046	222	467.009		
	Total	106700.833	223			

a. Predictors: (Constant), LOANRATIO

b. Dependent Variable: ROA

Table 2 Coefficients^a for hypothesis 1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.787	2.149		4.088	.000
	LOANRATIO	.067	.026	.168	2.545	.012

a. Dependent Variable: ROA

Interpretation of Statistical Analysis:

The statistical analysis show that P-value (i.e. 0.012) obtained is less than the 5% benchmark specified in SPSS statistical software for this analysis. Therefore according to the decision rule, the null hypothesis will be rejected while the alternate hypothesis will be accepted, this means that loan and advance have proportional relationship with return on asset of the deposit money banks, this also confirms that both credit management and profitability have direct relationship with each other this was supported by the result of the regression coefficient which also shows a P-value (i.e. 0.012) that is lower than 5% specified in SPSS statistical software for this analysis, this was also affirmed by the T-statistic result (i.e. 2.545) which revealed a value that is higher than the P-value (0.012)

Hypothesis two

There is no relationship between loan and advances and return on equity of the selected deposit money banks in Nigeria

Table 3 ANOVA^b for hypothesis 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.494	1	83.494	8.957	.003 ^a
	Residual	2069.477	222	9.322		
	Total	2152.971	223			

a. Predictors: (Constant), LOANRATIO

b. Dependent Variable: ROE

Table 4 Coefficients^a for hypothesis 2

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.906	.304		2.983	.003
	LOANRATIO	.011	.004	.197	2.993	.003

a. Dependent Variable: ROE

Statistical Interpretation for Hypothesis two:

The statistical analysis show that P-value (i.e. 0.003) obtained is less than the 5% benchmark specified in SPSS statistical software for this analysis. Therefore according to the decision rule, the null hypothesis will be rejected while the alternate hypothesis will be accepted, this means that loan and advance have proportional relationship with return on equity of the deposit money banks, this also confirms that both credit management and profitability have direct relationship with each other this was supported by the result of the regression coefficient which also shows a P-value (i.e. 0.012) that is lower than 5% specified in SPSS statistical software for this analysis, this also corresponds with the T-statistic result (i.e. 2.993) which revealed a value that is higher than the P-value(i.e. 0.003)

DISCUSSION OF FINDINGS

The findings of this study shows that this is significant relationship between credit management and profitability of the deposit money banks, this is because the loan losses ratio has significant relationship with Return on asset and this is in agreement with the study of (Njanike, 2009) who also stated that credit management have effect on profitability of deposit money banks in Nigeria. The finding also lend some credence to the fact that loan and advance of the bank have significant positive relationship with the return on equity and this also correspond with the result obtained by (Njanike, 2009) who stated that credit management have effect on profitability of deposit money banks in Nigeria

CONCLUSION AND RECOMMENDATIONS

The study concludes that credit risk management has significant relationship with profitability of the deposit money banks and this was confirmed in the statistical analysis, which shows that the proxies of both the dependent and independent variable; have significant positive relationship with each other, in other words, loan and advance ratio has significant relationship with return on asset and return on equity of the deposit money banks, based on this conclusion, the study recommends that management of deposit money banks should improve their credit risk management strategies and policies, so as to encourage their customers to see the urgent need to pay their loans and advances as at when due, since this have been proven to have direct statistical effect on the profitability of the banks.

SUGGESTIONS FOR FURTHER STUDIES

This research work only focus on an aspect of credit risk management in deposit money banks, because it only related credit risk management with loan and advances, however, to ensure a better understanding of credit risk management, the researchers suggest, that future researchers should consider topic like; Best practices in credit risk management in deposit money banks, this is a very important aspect of credit risk management that will significantly help these banks to reduce problem associated with non performing loans. Future researches should also consider impact of credit risk management on customers satisfaction, since this, will give help the bank's management to significantly improve its credit management policies.

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