Impact of Non-Performing Loans on Profitability of Deposit Money Banks in Nigeria

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Abstract

This study examines impact of Non-Performing Loans on Profitability of Commercial Banks in Nigeria. The cardinal objective is to investigate the relationship between Non-Performing Loans Ratio (NPLR) and Return on Assets (ROA) from 2011 to 2012. Simple linear regression model and data collected from secondary sources; Audited Annual Reports of listed commercial banks in Nigeria and the Nigerian Exchange Group Plc were used to conduct analysis. The findings reveal the independent variable (NPLR) impacts on the dependent variable (ROA). We recommend the regulatory bodies introduce incentive system to reward the banks that operate within their NPLR threshold. The banks should evolve a mechanism of detecting Non-Performing Loans early, conduct periodic test on collaterised assets against impairments and upgrade accordingly and monitor loans granted from disbursement to the end to ensure the funds are not mis-used.

Keywords: Return on Assets, Non-Performing Loan Ratio, Quoted commercial banks, Agency Theory, Information Asymmetry Theory

INTRODUCTION

Deposit Money Banks (DMBs) otherwise called commercial banks play an indispensable role in the attainment of economic growth and development of nations. Through financial intermediation, banks transform short-term deposits into medium and long-term credits by lending surplus deposits of the community for different investment purposes to develop the economy (Yvonne, 2015). According to Wanjira (2016), lending is the core business of commercial banks and this also contributes significantly to probability of default. Although other sources of default exist through other activities of the banks that undermine intermediation role of banks. In consideration of the fact that Non-Performing Loans (NPLs) are mainly responsible for the occurrence of Credit Risk, banks are therefore expected to adhere strictly to well-defined credit criteria as improper management of loans could lead to bank failure (Wanjira, 2016).

Profit maximation is one of the prime objectives of Commercial banks but rising non-performing loans continue to threaten the profitability of the banking sector. Moreover, the existence of Non-Performing Loans in the operations of commercial banks is not without severe negative implications on the banking system and the economy as a whole.As a consequence, management of commercial banks spends heavily in trying to recover non-performing loans thus worsening already bad situation. The banks continue to incur opportunity costs as the affected funds would have been invested in other income generating areas. Also, the statutory deductions in terms of provisions for Non-Performing Loans against the statement of financial performance may not only reduce profitability but managers could capitalize on the situation to indulge in profits smoothening.Excessive level of Non-performing Loans in the banking sector creates panic in management as their efforts would be mainly geared towards the recovery of bad loans instead of concentrating on strategies to grow the business. Management's lending appetite would equally change as they become risk shy by concentrating on giving out risk free loansonly toprospective loanees toprevent further non-performing loans, an art capable of nose-diving the entire economy.Non-Performing Loans have become a global challenge hampering the financial performance of financial institutions (Talata, 2015). In Nigeria, NPLs have assumed an alarming dimension for recent past decades due to a number of factors that need urgent attention. Non-Performing Loans rose from 3.3% in 2013 to 6.1% in 2020. The CBN's 2020 4th quarter economic report revealed NPL ratio for the month of December 2020 increased from 6.06% in December 2019 to 6.1% In spite of the mechanisms put in place by the relevant authorities to ensure problems loans are curtailed, they have continued to increase uncontrollably. Therefore, considering the unique features of commercial banks in relation to their operations, continuous increase in NPL level requires further investigations among researchers with a view to further addressing the impact on profitability of firms, particularly commercial bank in Nigeria.

LITERATURE REVIEW

Conceptual Framework

Non-Performing Loans

Non-Performing Loans have been defined in different ways and the variation that exists in terms of classification (system, scope and contents) shows there is no generally accepted definition (Awuor, 2015). The World Bank defined NPLs as ratio of nonperforming loans to aggregate amount of loans of which the non-performing loans variable is without provisions for loan losses. The loan value recognized in the statement of financial position represents the non-performing loans not the amount that is simply past due. Also, the International Monetary Fund described NPLs as; the inability of borrowers to pay amount due (principal and interest) for a period of eight weeks and six days upwards; adding a minimum of 8 weeks and 6 days old interest to the outstanding balance; replacing the existing loan with another under different conditions after 8 weeks and 6 days; not making payment as scheduled due to a new arrangement after 8 weeks and 6 days and; existence of the probability that the loan sum will not be completely settled even if the period is below 8 weeks and 6 days.

Hamisu (2011) stated that poor corporate governance practices, lax credit administrative processes and absence or non-adherence to credit risk management practices are responsible for the alarming rate of NPLs. Again, most of the NPLs are due to unprofessional manner Nigerian banks managements disburse loans usually influenced by personal affiliation with their customers. Instead of granting loans to borrowers in accordance with the standard provided by the banks, they gave loans to customers without recourse to the set standards by banks to control such lending thus, turn the loans to non-performing in future (Adebisi, Benjamin & Matthew 2015).Base on the forgoing, NPL could be defined as the deliberate or non-deliberate refusal of loanees to honour the loan repaymentagreement due to pre and post actions or inactions of management. The determinants of Non-Performing Loans includes; Liquidity Ratio(LR), Non-Performing Loans to Total Loan Ratio(NPL Ratio), Cost Efficiency (CE), and Economic Growth (EG) (Dang &Uyen, 2011). Liquidity Ratio measures the ratio of total loan disbursed to the total deposit. Non-Performing Loans (NPL) is a function of the proportion of loans granted to customers of which the possibility of recovery is in doubt. The management of banks continuously evolves strategies to keep NPL ratio at minimal level to boost customers confidence in the safety of their investments thus increase the ability of the banks in generating profits through the use of its assets (Fiola, C.&Ratnawati, K., 2016).

Profitability

Profit maximization is one of the fundamental objectives of commercial banks and operating otherwise could lead to closure of banks. Profitability occurs where revenue generated exceeds expenses incurred in making it for same period of time (Sanni, 2006). According Ahmed (2003), the widely used indicators of profitability includes, Net Interest Margin(NIM), Return on Assets(ROA) and Return on Equity (ROE). Although, the concept of banks profitability has drawn the attention of many scholars to examine its determinants, they are yet to settle the controversy of superiority of one measure of profitability to another. Goudreau and Whitehead (1989) and Uchendu (1995) weighted NIM, ROA and ROE equally. Net Interest Margin is the ratio of the difference between interest receipts and payments to the total sum of interest-earning assets controlled by the bank.Return on Equity measures number of naira in terms of profits generated for each naira of shareholder's fund; it is a metric of how well the bank uses its equity to maximize profits. The determination of profitability of a financial establishment base on its assets is referred to as Return on Assets (Rahman,Asaduzzaman&Hossin, 2017). The interest earning capacity and profitability of banks are reduced due to the provisions they make on account of non-performing loans. Even though net profit gives a clue of the financial performance of banks, it does not take bank's size into consideration. Therefore, it will be misleading to compare the results of one bank with another without adjusting for bank's size.
Although other methods of computing profitability of banks adjusting for size exist, but the most popular one is Return on Assets is a key ratio that indicates the profitability of banks. For instance, how efficient the management is in producing the net profit is determined by ROA. This means an improved ROA signifies efficiency in the utilization of resources by management (Wen, 2010). Therefore, ROA will be used for measurement of profitability in this study.

Empirical Framework

Flola, C. and Ratnawati, K. (2016) examined Impact of Financial Ratios, Operational Efficiency and Non-Performing Loans on Profitability of banks listed in Indonesia Stock Exchange from 2012 to 2014. They employ Return on Assets as observed variable and Capital Adequacy Ratio, Loan to Deposit Ratio, Operational Efficiency

and Non-Performing Loans as independent variables. The econometric analysis was done on the secondary data sourced from the Audited Accounts of 27 commercial banks selected using purposive sampling technique and classified information from BB library using SPSS 20. The findings revealed existence of strong negative relationship between the dependent and independent variables used for the study. They recommended banks should be diligent in lending to ensure they operate below the statutory benchmark to boost profitability and public confidence. Rozina, A. and Jewel, K.R. (2017) worried with the huge amount of Non-Performing Loans in the banking industry of Bangladesh, conducted an empirical study to test the relationship between dependent variable (Net Profit Margin) and independent variables; Classified Loan to total loan, Bad Debt, Net Interest Margin and Loan Deposit Ratio for the period 2008-2013. Using some accounting ratios and multiple linear regression technique to anlayse the secondary data obtained from survey, classified information from BB library and annual reports of sampled 30 commercial banks listed in Dhaka Stock Exchange(DSE), they found significant negative relationship exists between Non-performing Loans and Profitability of commercial banks in DSE. They concluded in addition to management taking proactive actions to curtail Non-Performing Loans, the regulatory authority should create an enabling environment for the banking sector to operate.

Nwosu, C.P., Okedigba, D.O. &Anih, D.O. (2020), investigated the relationship between Non-Performing Loans and Profitability of Commercial Banks in Nigeria using secondary data obtained from 1st quarter 2014 to fourth quarter 2018 and multiple linear regression econometrics model. Non-Performing Loans (independent variables) were measured by Non-Performing Loan Ratio, Liquidity Ratio, Capital Adequacy ratio, bank size and inflation while Profitability (dependent variable) was proxied by Return on Assets. The findings revealed existence of a significant negative relationship between Non-performing Loans Ratio and Return on Assets and other independent variables except Bank Size and Capital Adequacy Ratio. They recommended Commercial Banks to consider providing expert advice to the loanees on the best possible way to invest the borrowed funds to earn the required return on investment. Bishnu, P.B. (2020) sought to know the nature and extent of relationship between Non-Performing Loans and Profitability of Commercial Banks in Nepal for five years (2013-2018) employing multiply regression technique. Using Return on Equity (ROE) as dependent variable and Non-Performing Loans(NPL), Bank Size(BS), Capital Adequacy Ratio(CAR), Inflation(INF) and Loan to Deposit Ratio(LDR) to represent Non-Performing Loans, and the secondary data sourced from Audited Reports of twelve Commercial Banks in Nepal in the analysis, findings showed a significant negative relationship between NPL, CAR, LDR and ROE while a strong positive relationship existed between BS, INF and ROE. Ayrton, P., Jonathan, S. & Simon, G. (2019) investigated whether increase or decrease in Non-Performing Loans level of Commercial Banks listed on the Euro-Mediterranean Area positively or negatively influences Profitability of 35 selected banks from 2013 to 2017. Using descriptive statistics, multiple linear regression approach and secondary data obtained from the selected banks for analysis, the results showed all the independent variables (Non-Performing Loans and Solvency Ratio) impact on the dependent variable (Return on Assets) negatively.

Theoritical Framework

Information Asymmetric Theory

The first work on Information Asymmetric Theory was done by Akerlof in the 70s. The concept described possession of information by parties as a determining factor for success or failure of an economic transaction. The two parties (buyer and seller) to a transaction are expected to have balance information relating to it before they consummate, otherwise, the activities of the party who has greater material knowledge may lead to adverse selection problems. Adverse selection explains the negative implication of poor management decisions on loan administration and cost management (Bad Management hypothesis). Moreover, Information Failure arises where one party engages in risky decisions since is not affected by the outcome.

Stakeholders Theory

Stakeholders Theory came to light in 1984 by Freeman as a decision-making tool. This has metamorphosed overtime into a valuable model used to analyze organizational performance. The thrust of the theory is to establish a balance of interests of parties affected by the actions of an establishment in order to achieve the set objectives. The first consideration of Risk

management was to examine why joblessness and firings is preferred to price modifications/salaries reduction during economic downturns (Implicit Contract Theory). However, Stakeholders' Theory has successfully broadened the Implicit Contract Theory by the incorporation of other contracts such as revenue and funding. There are companies most especially the ones with frontier technology and services that maximize their values significantly as a result of their customers' confidence in their capability to render unceasingly quality services in future. Nevertheless, the benefits derivable from implicit assertions could lead to insolvency problems but managing a company's risk reduces the anticipated costs and consequently increase the corporate value (klimczak, 2005). The introduction of Stakeholders' Theory therefore gives a fresh perspective in the study of risk management of organizations even though the theory has not be tried directly.

Agency Theory

Ross (1973) and Mitnick (1973) were the notable researchers who worked on Agency Theory. Ross (1973) concentrated on economics theory while Mitcnick (1973) worked on institutional theory. Although, the main idea behind the two techniques is the same. Agency Theory is concerned with matters relating to principal and agent relationship. Basically, agency entails the engagement of one party called the agent by another party known as the principal to carry out certain tasks in his absence. To this end, the principal relinquishes decision making power to the agent. In most cases, the shareholders are the principals while the bank managers are the agents. The administrators of banks are seen as agents employed to maximize the value of the owners through effective decision-making process. To achieve this objective, managers are expected to avoid conflict of interest and increase profitability of the organization (Macharia, 2012). Nevertheless, the theory points out that since a number of issues involving the resources of the principal's business are delegated to the agents, conflict of interest and information asymmetry may occur (principal-agent dilemma). Principal-agent problem happens where the agent decides to act in his interests instead of that of his principal (moral hazard). Consequently, the principal incurs agency costs such as the costs suffered; where the agent engages in insider dealing and control measures put in place by the principal to dissuade the agent from pursuing personal interest. Agency costs are necessary evils since they are cheaper than the attendant consequences of allowing management to pursue their personal agenda at the expense of the principal. Hence, Agency Theory underpins this study because the bank managers who are agents in this context could engage in self-satisfying-dealings capable of jeopardizing stockholders' interest.

METHODOLOGY

This study is a Quantitative Research and the sample was selected by using Purposive Sampling Method. The standard employed in this research is that samples must come from listed commercial banks in The Nigerian Exchange Group Plc for the period of 2011 – 2020. These samples must also be publishedin their audited financial statements as of December 31,using the Naira currency. In total there are 10 samples selected through a 10 year observation period hence, the total is 100 observations. The data used for analysis is thus based on secondary data comprising financial statements published by the banks.As a result, a popular model (Ordinary Least Square) applied in most literature will be used. The regression model is expressed by the mathematical function below.

$Y_{it} = \beta o + \beta X_{it} + \varepsilon_{it}$

Where: - Y_{it} is the dependent variable for firm 'i' in year 't', β_0 is the constant term, β is the coefficient of the independent variables of the study, X it is the independent variable for firm 'i' in year 't' and ε_{it} the normal error term.

Dependent variable: Return on Assets (ROA)

Independent Variable: Non-Performing Loans (NPL)

The formulae are as follow:

ROA =Profit After Tax/Total Assets

NPL= Non-Performing Loans/Total Loans

Thus, this study is based on the conceptual model adopted from (Amah, 2017). Accordingly, the estimated models used in this study are modified and presented as follows;

$ROA = B_o + B_1 NPLR + e$

Where,

B_0 = constant
B_1= Beta coefficient
ROA =Return on Assets
NPLR=Non-Performing Loan Ratio
e = error term

RESULT AND DISCUSSION

Table A: Descriptive Statistics

	ROA	NPLR
Mean	1.799800	5.949700
Median	1.300000	4.295000
Maximum	18.00000	52.97000
Minimum	-7.900000	0.047000
Std. Dev.	2.340425	6.589230
Skewness	2.720374	4.446820
Kurtosis	26.86621	28.60115
Jarque-Bera	2496.656	3060.482
Probability	0.000000	0.000000
Sum	179.9800	594.9700
Sum Sq. Dev.	542.2814	4298.378
Observations	100	100

Source: E View

The above table shows Return on Assets(ROA) has a mean of 1.8% and a range of -7.9% to 18%. On the average, this explains that for every N100 invested in total assets, N1.8 profit after tax is generated by the sampled banks. The minimum value indicates that Union Bank loss 7.9% in terms of ROA in the period. On the contrary, Access Bank recorded the highest Return on Assets of 18%. The standard deviation 2.3% indicates volatility in ROA and how far it is from the mean value. Moreover, the results also reveal an average of Non-Performing Loans Ratio (NPLR) 5.9%, standard deviation of 6.6% and minimum and maximum value of 0.05% and 52.97% respectively. This shows some banks on the average, are carrying 5.9% NPLR in the period.

Hausman Test

Table B: Hausman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.770597	1	0.1833

Source:E-View
H_o: Accept Radom Effects
H_1: Accept Fixed Effects

From the table above, P value of 0.1833 at confidence level of 95% is significant. Therefore, we accept the null hypothesis (Random effects would be used for the regression).

Random Effect Model

Table C: Regression Analysis

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 03/24/22 Time: 15:08
Sample: 2011 2020
Periods included: 10
Cross-sections included: 10
Total panel (balanced) observations: 100
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPLR	-0.020943	0.033850	-0.618690	0.5376
C	1.924402	0.466007	4.129555	0.0001

	Effects Specification	
	S.D.	Rho
Cross-section random	1.164940	0.2492
Idiosyncratic random	2.022218	0.7508

	Weighted Statistics		
R-squared	0.003860	Mean dependent var	0.866072
Adjusted R-squared	-0.006304	S.D. dependent var	2.023784
S.E. of regression	2.030153	Sum squared resid	403.9090
F-statistic	0.379791	Durbin-Watson stat	1.835067
Prob(F-statistic)	0.539144		

	Unweighted Statistics		
R-squared	0.013382	Mean dependent var	1.799800
Sum squared resid	535.0246	Durbin-Watson stat	1.385357

Source: E-view

From the above table, t-value of NPLR is -0.2669122 and a coefficient of -0.009404 with a P value of 0.7885. This implies NPLR has a significant negative impact on profitability of quoted commercial banks in Nigeria at 0.05 level of significance. The coefficient signifies a N1 increase in NPLR will reduce profitability by N0.009404. The implication of this is that growing Non-Performing Loans level (NPLR) would continue to reduce the profitability of commercial banks in Nigeria. Therefore, this gives ground to reject the alternative hypothesis set earlier that NPLR has significant relationship with ROA of listed commercial banks in Nigeria for the period, 2011 to 2022. The findings is in agreement with the studies conducted by Flola, C. &Ratnawati, K. (2016); Rozina, A. & Jewel, K.R. (2017); Nwosu, C.P., et al (2020);Bishnu, P.B. (2020); Ayrton, P. et al. (2019).

CONCLUSION AND RECOMMENDATIONS

Sustainable economic growth is one of the cardinal macroeconomic objectives of nations and that cannot be achieved without the activities of financial institutions. Through financial intermediation, bank obtain short term funds from surplus section of the economy and lend out in form of medium and long term toloans to the deficit side

to boost economic activities. This means improper management of loans could lead to banking crisis and consequently crumble the entire economy. This study is on impact of Non-Performing Loans on Profitability of Commercial Banks in Nigeria. The findings show clearly the more Non-Performing Loans the banks are carrying in their books, the more losses they would incur. To keep Non-Performing Loans level within the threshold, we recommend as follows;

(i) The banks should evolve a mechanism of detecting Non-Performing Loans early.
(ii) The banks should periodically test collaterised assets against impairments and upgrade accordingly.
(iii) The banks should monitor loans granted from disbursement to the end; this will ensure the facility given is used for the purpose for which it was collected.
(iv) The regulatory authority should develop an incentive system whereby any bank that meets its Non-Performing Loan Ratio and Loan to Deposit ratio standard at the same period is rewarded.

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