

Effect of Non-Performing Loans on the Financial Performance of Commercial Banks in Nigeria

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Abstract

The study examined the effect of Non-Performing Loans on the financial performance of commercial banks in Nigeria between the periods of 1985 to 2016. The study employed the multiple regression techniques to analyze data collated from the Central Bank of Nigeria (CBN) statistical bulletin and Nigeria Deposit Insurance Corporation (NDIC) publications for various years. The result of the study shows that Non-Performing Loans to Total Loans ratio (NPL/TLR) and Cash Reserve Ratio (CRR) had statistically negative significant effect on Return on Asset (ROA). These result shows that a high level of non-performing loans would reduce the financial performance of commercial banks in Nigeria. Consequently, the study recommends that the regulatory authorities in Nigeria should create and support an environment where commercial banks in Nigeria can have a strong risk management practices.

Keywords: Non-Performing Loans, Return on Asset, Bank Financial Performance.

JEL classification: G21, G29

1. Introduction

The efficiency of the bank's performance is a function of how they are able to satisfy their customers at a minimum risk level and maximize profit as well. Commercial banks are the dominant financial institutions in most developing and emerging economies and well-functioning commercial banks accelerate the rate of economic growth while poorly functioning commercial banks are an impediment to economic progress (Richard, 2014). Loans are part of the assets of a commercial institution since they are meant to earn interest in the course of time (Waweru & Kalani, 2016). This, however, is not always the case. Some loans do not perform as expected and are termed non-performing loans (NPLs).

Obviously, credit creation is the main income generating activity of banks (Kargi, 2011). However, it exposes the banks to credit risk. The Basel Committee on Banking Supervision (2001) defined credit risk as the possibility of losing the outstanding loan partially or totally, due to credit risks (default risk). Credit risk is an external determinant of bank performance. The higher the exposure of a bank to credit risk, the higher the tendency of the bank to experience financial crisis and vice-versa. According to Ahmad & Ariff (2013), most banks in Nigeria and other economies such as Thailand, Indonesia, Malaysia, Japan and Mexico experienced high Non-Performing Loans (NPLs) and significant increase in credit risk during financial and banking crises, which resulted in the closing down of several banks in Indonesia and Thailand. The negative effect of credit risk and non-performing loans on banks performance and the economy in general has made the issue of NPLs a global one and of great importance in the last

decades. According to Hou & Dickinson (2007), many researches on the causes of bank failures found that asset quality is a statistically significant predictor of insolvency, and that failing bank institutions always have high level of Non-performing loans prior to failure. Hence, this study seeks to investigate the effect of Nonperforming loan on the financial performance of commercial banks in Nigeria.

2. Problem Statement

In Nigeria, due to the rising increase of non-performing loans, the CBN (2010) through its prudential guideline, required licensed banks to periodically review their credit portfolios continuously, at least once in a quarter with a view to recognizing any deterioration in credit quality and that a credit facility should be deemed to be non-performing once any of the following conditions exists; where Interest or principal is due and unpaid for 90 days or more and interest payments equal to 90 days, interest or more have been capitalized rescheduled or rolled over into a new loan. Thus they classified non-performing credit facilities into three categories namely, substandard, doubtful or lost (CBN, 2010).

The Nigeria banking industry, according to NDIC (2013) annual statement and account show that the total loans and advances stood at ₦10.043 trillion in 2013, showing an increase of 23.22 percent over ₦8.150 trillion granted in 2012, and that the non-performing loans to total loans ratio improved from 3.51 percent in 2012 to 3.23 percent in 2013, this according to the report was within the regulatory threshold of 5 percent. However, in spite of this improvement, the volume of non-performing loans increased by 13.30 percent from 281.09 billion in 2012 to 324.14 billion in 2013 (NDIC, 2013). As a proactive measure to avert the menace of resurgence of non-performing loan and to ensure safe and sound financial system the CBN in June 2014 directed that no financial institutions shall without the prior written approval of the CBN grant a credit facility to a potential borrower who is in default of the any existing credit facility to the tune of N500Million and above in the case of deposit banks and N250Million and above in the case of development banks and banks in liquidation.

But in 2016, the NDIC report shows that, the commercial banks total loans to the domestic economy stood at ₦16.29 trillion as at 31st December, 2016, out of which the sum of ₦2.08 trillion was non-performing. The sharp rise in the quantum of non-performing loans (NPLs) by 220% from ₦0.65 trillion as at 31st December, 2015 to ₦2.08 trillion as at 31st December, 2016 and the NPL to Total loans ratio (NPL ratio) which increased from 4.88% as at 31st December 2015 to 12.80% as at 31st December 2016, compared unfavorably with the maximum prudential threshold of 5%.

The NDIC report 2016 indicated on a negative note that the commercial banks profitability indices declined in 2016. The commercial banks unaudited profit fell by 30.16% from ₦ 0.63 trillion as at 31st December, 2015 to ₦ 0.44 trillion as at 31st December, 2016. Also, Non-interest income decreased by 32.60% to ₦ 0.17 trillion as at 31st December 2016 from ₦ 0.25 as at 31st December, 2015. Net-interest income also decreased to ₦ 0.28 trillion as at 31st December, 2016 from ₦ 1.44 trillion in 2015. The commercial banks Return on Assets (ROA) decreased from 2.34% in 2015 to 1.48% in 2016 while Return on Equity (ROE) fell from 19.78% in 2015 to 12.65% in 2016. Yield on Earning Assets also depreciated from 13.40% in 2015 to 3.51% in 2016. The declining profit trend necessitated this study, to investigate the effect of non-performing loan on the financial performance of commercial banks in Nigeria.

3. Research Questions

The following research questions were raised:

- Does Non-Performing Loan affect the financial performance of commercial banks in Nigeria?
- Does Cash Reserve Ratio affect the financial performance of commercial banks in Nigeria?
- Does inflation rate affect the financial performance of commercial banks in Nigeria?

4. Objectives of the Study

The main objective of this study is to investigate the effect of non-performing loans on the financial performance of commercial banks in Nigeria. Specifically, the following objectives were designed to:

- Identify the effect of Non-Performing loan to total loans ratio on the financial performance of commercial banks in Nigeria.
- Examine the effect of Cash Reserve ratio on the financial performance of commercial banks in Nigeria.
- Identify the effect of Inflation rate on the financial performance of commercial banks in Nigeria.

5. Research Hypothesis

The following hypotheses were considered for the study:

HO₁: Non-Performing loan to Total Loan ratio has no significant effect on the financial performance of commercial banks in Nigeria.

HO₂: Cash Reserve ratio has no significant effect on the financial performance of commercial banks in Nigeria.

HO₃: Inflation Rate has no significant effect on the financial performance of commercial banks in Nigeria.

6. Literature Review

6.1 Non-Performing Loans and Bank Performance

In Nigeria, the rising trend in NPLs between 1981 and 2013 accounts for over 10% of the total loans granted and significantly resulted in bank distress. Bank defaulting debtors were in many cases found to abandon their debt obligations and went to other unsuspecting banks to contract new debts which again most likely to degenerate into nonperforming loans. The use of status reports on bilateral basis was not effectively utilized to detect such dubious multiple loan defaulters. Thus, the need for a central information data-base from which the required consolidated credit information on borrowers has become inevitable. This prompted the Central Bank of Nigeria to establishment of the Credit Risk Management System (Ojo and Somoye; 2013).

Mohd Karim and Sallahundin (2010), maintain that the management of non-performing loans is often associated with high operational costs leading to dwindling capital growths in the affected banks. Non-Performing Loans (NPLs) reduces the liquidity of banks, distorts credit expansion, and slows down the growth of the real sector with direct consequences to the performance of banks.

Somoye, (2010) said that NPLs also bring down investors' confidence in the banking system, thereby discouraging them from making reasonable investments. As far as the Nigeria banking sector is concern, something has to be done seriously and urgently to bring back the confidence of bank customers in the sector. Confidence is one of the factors banks must offer in order to get the patronage of customers.

The performance of commercial banks can be measured by return on assets (ROA) which reflects the ability of bank management to generate profits from the available assets. Athanoglou, Brissimis and Delis (2008) argued that ROA is considered to be a core performance indicator used in the majority of empirical studies. Studies by Golin (2001) and Rose and Hudgins (2008) confirm the view that ROA is one of the most important measures of profitability in banking literature. Therefore, in this study ROA will be used to measure the financial performance of commercial banks in Nigeria.

6.2 Empirical Review

There are a number of studies that investigated the effect of non-performing loan on the financial performance of commercial banks. While the debate on the usefulness of these non-performing loan factors in explaining financial performance of commercial banks is still rampant and inconclusive, extant empirical evidence can be sifted to identify some of these non-performing loans factors that have been frequently established by studies as important factors determining banks performance. This section presents empirical review of previous studies on the non-performing loans and financial performance in developed and emerging markets.

Lyndon, Peter and Ebitare (2016) investigated the relationship between non-performing loans and bank performance in Nigeria for the period of 1994-2014. The multiple regression technique was used to analyze the data. The result of the study shows that Bad loans (BAL) and Doubtful Loans (DOL) had statistically negative significant influence on Return on Capital Employed (ROCE), while Substandard Loan (SUL) had statistically negative insignificant impact on ROCE. The result further shows that high level of non-performing loans would reduce the performance of banks in the long-run in Nigeria.

Similarly, Joseph and Okike (2015) investigated the impact of Non-performing loans on firm profitability: A focus on the Nigerian Banking industry for a period of (7) year (2006-2012). Data were analyzed using the regression statistical tools and the result revealed that there is no relationship between the Non-performing Loans (NPL) and Return on Asset (ROA) of Nigeria Banks. This means that the assets values of the firms are not affected by the level

of NPL. The shareholders wealth maximization is affected as the second result showed that there is a relationship between the non-performing loan (NPL) and Return on Equity (ROE) of Nigerian -Bank.

Ekanayake and Azeez (2015) investigated the determinants of non-performing loans in licensed commercial banks in Sri Lanka for the period 1999- 2012 and found that the level of non-performing loans can be attributed to both macro-economic conditions and banks specific factors. Their study results reveal that non-performing loans tends to increase with deteriorating banks efficiency and there was a positive correlation between loan to asset ratio and non-performing loans. They also observed that banks with high level of credit growth is associated with a reduced level of non-performing loans, while larger banks incur lesser loan defaults compared to smaller banks. However the study found with regards to the macro economic variables, that non-performing loans vary negatively with growth rate of GDP, while inflation was positively related to the prime lending rate.

Mwangi, (2014) carried out a study on the effect of nonperforming loans on the financial performance of commercial banks in Kenya. The study aimed at establishing how nonperforming loans portfolio impacted on the financial profitability of commercial banks in Kenya. The study focused on all the 46 commercial banks in Kenya for the period 2005 – 2011. Secondary data was obtained from the banks relating to two variables; Return on assets (ROA) which were the dependent variable and NPL which was the independent variable. The study adopted simple linear regression model of the form $Y = a+bx$ to establish the effect of nonperforming loans on commercial banks financial performance. The results obtained from the study confirm that during the earlier years of the study, there was a high amount of NPLs resulting to a very low ROA. Later years however showed a different trend where ROA was higher and NPLs were low.

Nir Klein (2013) in An International Monetary Fund (IMF) Working Paper investigates the non-performing loans (NPLs) in Central, Eastern and South-Eastern Europe (CESEE) covering 1998–2011. The study reveals that the NPLs level can be ascribed to both macroeconomic conditions and banks' specific factors, even though the banks' specific factors was found to have a relatively low explanatory effect on NPLs. It further reveal that NPLs were found to respond to macroeconomic conditions, such as GDP growth, unemployment, and inflation which means it affects the economic recovery of the region.

Mohammad, Ammara, Abrar and Fareeha (2012) examined economic determinants of non-performing loans using correlation and regression analysis to analyze the impact of selected independent variables and the result reveals that interest rate, energy crisis, unemployment, inflation and exchange rate has a significant positive relationship with the non-performing loans of Pakistan banking sector, while GDP growth rate has a significant negative relationship with the non-performing loans of Pakistan banking sector.

6.3 Theoretical Framework

This section explains the related theories on which the study is based. There are a number of theoretical perspectives which are used in explaining the relationship between non-performing loan and profitability Such as Moral Hazard theory is used to underpin the study

6.3.1 The Moral Hazard Theory

Moral hazards refers to a condition leading to risk that results when a banks customer provides information that is misleading about its financial statements or his or her credit capacity, or has a hidden incentive to take risks that are unusual in an attempt to earn a profit before the contract settles. The bank customer who is the borrower may not enter into the contract with the bank in good faith, hence gives misleading information about his or financial status or credit capacity. The theory postulates that, the problem of moral hazard may result from information asymmetric between banks customer and the bank which makes it almost impossible to distinguish bad from good prospective borrowers (Richard (2011). Researchers have noted that moral hazard problem has led to overtime pilling up of NPLs (Bofondi & Gobbi, 2003). This theory underpins this study because efficient financial systems and financial intermediation requires accurate information about borrowers and the venture the credit are used for. More so, the moral hazard theory stated that the higher the nonperforming loan's the lower the financial performance and the higher the assets quality the higher the financial performance of banks and vice versa.

7. Methodology

The study examined the effect of non-performing loans on the financial performance of commercial banks in Nigeria. The study adopted ex-post facto research design as there was the existence of variables and secondary time series data at the time of the study. Secondary data for 32 years period covering 1985 to 2016 was collated for the commercial banks in Nigeria. Data was collated from the Central Bank of Nigeria (CBN) statistical bulletin and the Nigerian Deposit Insurance Corporation (NDIC) annual reports for various years.

7.1 Variables Measurement

Table 1 Variable Measurement and Description

S/N	Variable Name	Description/Measure	Variable Type	Source	Apriori Expectation
1	ROA	Measured as net profit before interest and tax divided by Total assets of commercial banks.	Dependent	Kakanda et al, (2016)	Positive sign
2	NPL	To measure the non-performing loans, the study used the NPL ratio computed as a percentage of non-performing loans to total loans	Independent	Achou and Tenguh (2008)	Negative sign
3	CRR	CRR is the specified minimum fraction of the total deposits of customers, which commercial banks have to hold as reserves either in cash or as deposits with the central bank.	Independent	Montoro and Moreno (2011)	Negative sign
4	IFR	Inflation is the persistent increase in the general price level of goods and services in the economy. Measured as inflation rate in Nigeria for the period under study.	Independent	Farhan (2012)	Negative sign

Source: Researchers' Compilation, 2019

7.2 Model Specification

A multiple regression model in the order below was formulated to capture the relationship between NPLR, CRR and IFR.

$$ROA = f(NPLR, CRR, IFR.)$$

Translating the above into it explicit form we have:

$$ROA = \alpha + \beta_1 NPLR + \beta_2 CRR + \beta_3 IFR + \mu$$

Where;

ROA = Return on Asset

NPLR = Non-performing Loans to Total loans ratio

CRR = Cash Reserve Ratio

IFR = Inflation rate

α = the intercept or constant term

β_1, β_2 = Coefficients of the independent variables to be estimated

μ = the error term of the regression equation.

8. Result and Discussions

Table 2: Diagnostics test results (Pre-regression Test)

	PROBABILITY	CENTERED VIF	CHI-SQUARE
VIF		1.162,1.496,1.66	
JARQUE	0.67		775.97
Breusch-Pagan Godfrey Test	0.67		

Source: Author’s Computation Using E-View 10.0 Version.

The multicollinearity tests was carried out using the Variance Inflation Factor (VIF) which quantifies the severity of multicollinearity. From the result above in (Table 2) it can be concluded that there is no multicollinearity because the VIF value of 1.162, 1.496, 1.66 lies between the range of 1-10. As a VIF greater than 10 would be a cause of concern Eston (2016).

8.1 Unit Root Test

The test of stationarity of the variables was conducted using the Augmented Dickey-Fuller (ADF) and the Phillip-Perron (PP) tests. The results of the ADF and PP tests with trend and intercept are presented in Table 3 below:

Table 3: Unit Root Test of ADF and PP

Variables	ADF Individual Intercept					PP Individual Intercept				
	T-Statistic	Critical Value 5%	P-Value	Order of Integration	Remark	T-Statistic	Critical Value 5%	P-Value	Order of Integration	Remark
ROA	(6.512642)	(2.967767)	0.0000	1(1)	Stationary	(31.78560)	(2.963972)	0.0001	1(1)	Stationary
NPL/TL	(4.299634)	(2.967767)	0.0022	1(1)	Stationary	(3.810861)	(2.963972)	0.0071	1(1)	Stationary
CRR	(4.916469)	(2.963972)	0.0004	1(1)	Stationary	(5.002036)	(2.963972)	0.0003	1(1)	Stationary
IFR	(3.641647)	2.981038	0.0118	1(1)	Stationary	(6.094187)	(2.963972)	0.0000	1(1)	Stationary

Source: Author’s Computation Using E-View 10.0 Version.

The results of the unit root tests indicate that all the variables are integrated of order one, that is 1(1), which implies they are non-stationary at level but become stationary after first differencing. Both the ADF and PP test statistic result values were greater than the critical values 5%. Moving on to the co-integration as presented below, since all the variable are stationary at the same level.

Table 4: Co-integration Test

Hypothesized No:	Trace Statistics	0.05 Critical Value	Probability	Max-Eigen Statistics	0.05 Critical Value	Probability
None	24.67132	29.79707	0.1735	17.82000	21.13162	0.1367
At most 1	6.851323	15.49471	0.5950	6.770532	14.26460	0.5166
At most 2	0.080791	3.841466	0.7762	0.080791	3.841466	0.7762

Source: Author’s Computation Using E-View 10.0 Version.

The result presented above (in table 4) shows that no co-integration exist among the variables, that is no long run relationship exist among the variables. Hence, the alternate hypothesis that there is no Co-integrating vector is rejected as a result of the fact that both the Trace statistics and the Max-Eigen statistics is less than the critical value at 5% significance level respectively.

Table 5: Multiple Regression Analysis

Variable	Co-efficient	Std-Error	T-Statistics	Probability
C	7.566539	6.374114	1.187073	0.2452
NPL/TL	(0.293620)	0.186558	(1.573880)	0.1267
CRR	(0.396248)	0.424607	(0.933212)	0.3587
IFR	(0.067998)	0.145315	(0.467938)	0.6435
R-Square	0.571284			
Adjusted R-Square	0.535614			
F-Statistics	4.32146			
Prob(F-Statistics)	0.00004			

Source: Author’s Computation Using E-View 10.0 Version.

The result presented above shows that the coefficient for all the variables, NPL/TL, CRR and IFR had negative signs, meaning that to every one percent decrease in NPL/TL, CRR and IFR will on average, lead to 0.29, 0.39 and 0.06 percent reduction in ROA.

The result further indicates that NPL/TL & CRR had negative relationship with ROA at 5 percent significant level suggesting that an increase in NPL/TL & CRR will result to a reduction in ROA which means a reduction in Return on Asset (ROA) used as proxy for the commercial Banks Financial performance. This result is in line with previous studies conducted by Joseph & Okike (2015) and Lydon, Peter & Ebitare (2016) using ROA and Return on Capital Employed (ROCE) respectively. As proxy for bank performance, meaning that there is a negative effect of non-performing loan on the financial performance of commercial banks in Nigeria.

Moreso, the R² value reveals that the explanatory variable in the model i.e NPL/TL, CRR and IFR accounted for about 57 percent of the variation in the dependent variable ROA, while the 43 percent that is unaccounted for is due to other factors. The result shows that the independent variables are good predictors of ROA. For the F-statistic, which apart from the adjusted R² also tells about the overall significance of the model, the value obtained through estimation 4.32146 shows how the model is highly fit for the analysis.

9. Conclusion and Recommendation

The study examined the effect of Non-performing loans on the financial performance of commercial banks in Nigeria for the period 1985-2016. Secondary aggregate data (figures) were collated from the annual reports and publications of the Nigerian Deposit Insurance Corporation (NDIC) and the Central Bank of Nigeria (CBN) statistical bulletin for various years. ROA was employed as proxy for the financial performance of commercial banks which is the dependent variable, and on the other hand NPL/TL, CRR and IFR were used as proxy for Non-Performing Loans (the independent variables). A multiple regression model was formulated to examine the effect of the variables; the diagnostic test was carried out to check the severity of the multicollinearity, followed by the ADF and the PP unit root test, the co-integration test which shows that there is no co-integration among the variables and the multiple regression analysis.

The unit root tests (i.e both the ADF & PP) shows that all the variables of interest were integrated of order 1(1) and were stationary at first differencing. The multiple regression results show that NPL/TL, & CRR had statistically significant negative influence on ROA, while IFR had statistically insignificant negative influence on ROA. It proved that non-performing loan had a negative effect on the financial performance of commercial banks in Nigeria. The effect of the above is that any increase in the volume of non-performing loan would reduce the financial performance of commercial banks in Nigeria.

Consequently, upon the findings of the study, the following recommendations were made: that the regulatory authorities in Nigeria should (through the Asset Management Corporation of Nigeria AMCON) create and support an environment where commercial banks in Nigeria can have a strong risk management practices, by strengthening the bank's internal risk management process of identification, measurement and monitoring of risk. Considering the negative correlation that CRR had on performance, the study therefore, recommends that commercial banks should come up with innovative ways of boosting their internal financial capacity to be able to handle any possible policy movement (changes) in CRR and inflation rate.

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