International Journal of Economics and Financial Research
ISSN(e): 2411-9407, ISSN(p): 2413-8533
Vol. 2, No. 4, pp: 65-73, 2016
URL: http://arpgweb.com/?ic=journal&journal=5&info=aims

Loans Default and Return on Assets (Roa) In the Nigerian Banking System

Olawunmi Omitogun Department of Economics, Olabisi Onabanjo University, Ago-Iwoye, Ogun, Nigeria

Deji Olanrewaju School of Law and Security Studies, Babcock University, Ilishan Remo, Ogun State, Nigeria

Yimka S. A. Alalade* Department of Banking and Finance School of Management Sciences College of Management and Social Sciences Babcock University, Ilishan Remo, Ogun State, Nigeria

Abstract: This study investigated loans default (problems loans) and returns on assets in Nigeria banks, employing the data of five banks for a period of five years (2010-2014), using the ordinary least squares (OLS) regression techniques to check the relationship between problem loans and returns on assets (ROA). The findings shows that a positive and significant relationship at 5% level of significance exist between problem loans and returns on assets, and a negative and significant relationship at 10% level of significance exists between loans and advances and returns on assets in Nigerian banks. A major suggestion is that banks in Nigeria should enhance their capacity in credit analysis and loan administration, while the regulatory authority should pay more attention to banks' compliance to relevant provisions of Bank and other Financial Institutions Act (1991) and prudential guidelines.

Keywords: Loans Default; Problem Loans; Asset Management; Credit Analysis; Financial Intermediation.

1. Introduction

The issue of loans default or problem loans has gained rising attentions over the last several years. The immediate consequence of large amount of problem loans in the banking system is bank failure. Many researches on the cause of bank failures found that asset quality is a statistically significant predictor of insolvency (Barr and Siems, 1994; Demirguc-Kunt and Huzinga, 1999), and that failing banking institutions always have high level of non-performing loans prior to failure. The important of problem loan management to banks cannot be overemphasis and it also form an integral part of the loan process. Generally, loans that get into trouble bring both direct and indirect losses to the banks.

The traditional role of commercial banks is lending which make up the bulk of its assets. Loans dominate asset holding and generate the largest share of operating income (Arunkumar and Kotreshwar, 2005). Mavhiki and Mapetere (2012) claimed that banks raise funds by collecting deposits from businesses and individual depositors and make out loans to individuals, businesses and the government through buying bonds. Thus, the primary assets of banks are loans and bonds while primary liabilities are deposits. A bank's balance sheet has loans representing the majority of a bank's assets, but the loans come with risk; if the bank makes bad loans to firms or consumers for example, the bank will be in a crisis if those loans are not repaid.

Credit creation is the main income generating activity of banks (Kargi, 2011), however, it exposes the banks to numerous risks. To be able to manage the different types of risk one has to define them before one can manage them. Credit risk, interest rate risk, liquidity risk, market risk, foreign exchange risk and solvency risk are the most applicable risk to the banks. It is argued that the problem loans are one of the major causes of economic stagnation in an economy. Each problem loans in the financial sector is viewed as an obverse mirror image of an ailing unprofitable enterprise. From this point of view, the eradication of problem loans is a necessary condition to improve the economic status of the nation. If the problem loans are kept existing and continuously rolled over, the resources are locked up in unprofitable sectors; thus, hindering the economic growth and impairing economic efficiency.

To minimize the negative impact of problem loans, lenders must be able to spot early warning signs of deteriorating credit and proactively work to reduce exposure to undue risk. Therefore, this paper will focus on the impacts of problem loans on returns on assets in Nigeria, with the main aim of this paper is to investigate loans default (problems loans) and returns on assets in Nigeria. The paper therefore seeks to provide platform for engaging discussion on the relevance of the efficient credit control, due to its influence on firm's returns.

*Corresponding Author

2. Review of Related Literature

In the banking industry, a problem loan is one of two things; it can be a commercial loan that is at least 90 days due, or a consumer loan that it at least 180 days due, and this type of loan is also referred to as a non-performing asset. A problem loan is a loan that is in default or close to being in default. Many loans become problem after being in default for 90 days. A problem loan can also be said to be a loan that is no longer returning principal and interest payments, making it a "problem" for a financial institution in the sense that it is no longer collecting money on the loan. Banks attempt to keep their inventories of problem loans low as they can lead to cash flow problems and other issues, including a potential bank closure if the bank is no longer able to balance its loan portfolio. Problem loans require action on the part of the bank to collect the balance of the loan (Wikipedia Website, 2014a).

Mc-Gavern (1993) supported by Golden and Walker (1993) explained that contingencies are important for bankers in order to reduce incidence of bad loans. Bankers are supposed to look at everything that can happen thereafter deciding the likelihood of having bad loans, since the major concern of a lender is to get back both the principal and the interest. Banks manage problem loans through loan workouts. Loan workouts can take a number of forms: simple renewal or extension of the loan terms; extension of additional credit; formal restructuring of the loan terms with or without concessions; or, in some cases, foreclosure on underlying collateral. Banks should choose the alternative that will optimize the recovery and minimize the risk of troubled loans.

Once the borrower starts to be late with payments, the financial institution will send notices alerting the borrower and requesting that the borrower take action to get the loan current or face legal consequences. If the borrower does not respond, the bank can take actions such as seizing assets to sell them and recover the balance of the loan. Banks want to keep their problem loan ratio as low as possible, because such loans require greater efforts to retrieve back, and put the bank at risk. When people and businesses apply for loans, they are carefully screened by the bank to assess their ability to repay. The bank determines a maximum loan ceiling on the basis of stated income and projected financial conditions, considering both interest and principal as part of the loan payment, and it will not lend more than this to the borrower (Central Bank of Nigeria, 2012;2014).

In a strong market, banks tend to give more credit, while in a weak market - banks may be hesitant to issue loans thereby developing strict loan requirements. As markets weaken, it is not uncommon for the problem loan inventory to increase as people struggle to make their payments. High rates of foreclosures, repossessions, and other legal actions can eat into a bank's bottom line. If borrowers want to negotiate on a problem loan to get the loan current, a bank representative can meet with them to discuss the outstanding balance and the options. It may be possible to get current with a large payment or with supplemented payments over the course of several months (Hawkins and Mihaljek, 2004; Van-der-Hoog and Dawid, 2015). Sometimes, financial institutions are willing to write down balances or change the interest to make the loan easier to repay.

According to Park (2003), during 1990s, there were three different methods of defining non-performing loans in Japan: the 1993 method based on banking laws; the "Bank's Self-Valuation" in March 1996; and the "Financial Revival Laws-Based Debt Disclosure" in 1999. These measurements have gradually broadened the scope and scales of the risk-management method. Similar to the trend in Japan, more countries, regulators, and banks are moving towards adopting and adapting better consensus practices. For example, in the U.S., Federal regulated banks are required to use the five-tier non-performing loan classification system according to Bank of International Settlements, such as Pass, Special Mention, Substandard, Doubtful, and Loss. Presently, the five-tier system is the most popular risk classification method, or, in some cases, a dual system of reporting according to their domestic policy guidelines as well as the five-tier system. The standard loan classifications are defined as follows:

(1) Passed: Solvent loans;

(2) Special Mention: Loans to enterprises which may pose some collection difficulties, for instance, because of continuing business losses;

(3) Substandard: Loans whose interest or principal payments are longer than three months in arrears of lending conditions are eased. The banks make 10% provision for the unsecured portion of the loans classified as substandard;

(4) Doubtful: Full liquidation of outstanding debts appears doubtful and the accounts suggest that there will be a loss, the exact amount of which cannot be determined yet. Banks make 50% provision for doubtful loans;

(5) Virtual Loss and Loss (Unrecoverable): Outstanding debts are regarded as not collectable, usually loans to firms which applied for legal resolution and protection under bankruptcy laws. Banks make 100% provision for loss loans.

Non-performing loans comprise of the loans in the latter three categories, and are further differentiated according to the degree of collection difficulties.

The credit creation process works smoothly when funds are transferred from ultimate savers to borrower (Bernanke, 1993). There are many potential sources of risk, including liquidity risk, credit risk, interest rate risk, market risk, foreign exchange risk and political risks (Campbell, 2007), however, credit risk is the biggest risk faced by banks and financial intermediaries (Gray *et al.*, 1997). The indicators of credit risk include the level of bad loans (Non- performing loans), problem loans or provision for loan losses (Jimenez and Saurina, 2006). Credit risk is the risk that a loan granted by a bank, will not be either partially or fully repaid on time (Campbell, 2007), and where there is a risk of customer or counterparty default (Gray *et al.*, 1997).

Non-performing loans can lead to efficiency problem for banking sector. It is found by a number of economists that failing banks tend to be located far from the most-efficient frontier (Barr and Siems, 1994; Berger and

Humphrey, 1992; De-Young and Whalen, 1994; Wheelock and Wilson, 1995), because banks do not optimize their portfolio decisions by lending less than demanded.

The phenomenon that banks are reluctant to take new risks and commit new loans is described as the "*credit crunch*" problem. According to the United States Council of Economic Advisors (1991), as cited in Beranke and Lown (1991), credit crunch is a situation in which the supply of credit is restricted below the range usually identified with prevailing market interest rates and the profitability of investment projects. A "credit crunch" is a disequilibrium phenomenon. It is present when banks are unwilling to lend, especially when a firm with profitable projects cannot obtain credit in spite of low interest rates (lower than the expected marginal products). Credit crunch results in excess demand for credit, hence result to credit rationing, where loans are allocated via non-price mechanism. Eventually, it imposes additional pressure on the performance of the monetary policy.

The idea of credit crunch has drawn attention when the traditional view failed to satisfactorily explain the economic state of those countries that suffered from the South-East Asian financial crisis in 1997. Under the traditional view, the link between the interest rate change and the real economic activity occurs through investment and consumer durable expenditure. In response to the currency crisis in 1997, the interest rate was raised. It was strongly believed by International Monetary Fund that the hike would help stabilize the foreign currency market and eventually induce banking reform by crowding out low-profit projects. However, the persistent fall in economic growth rate and the lasting economic recession cast doubt on the true benefits of the policy and the effectiveness of the traditional view of the transmission mechanism (Hou and Dickinson, 2007). The idea of credit crunch addresses an alternative explanation for the transmission mechanism.

During a crisis, in order to restore the credibility among creditors and depositors, failing financial institutions not only try to expand their equity bases, but also reduce their risky assets or change the composition of the assets portfolio. As a result of such defensive action, the corporate debtors are always targeted, thus stalling the overall economic growth. Specially, the reluctance of banks to lend can be caused by several reasons, such as the increased capital adequacy requirement imposed by Basel Accords; impaired debt-servicing capacity, especially small-to-medium enterprises (SMEs); risks of a further fall in collateral value, etc., which makes the interest rate not to serve as the main determinant by banks in credit approval. Non-performing loans (NPL) have been viewed to constitute one of the most important factors causing reluctance for the banks to provide credit. In a high NPL condition, banks increasingly tend to carry out internal consolidation to improve the asset quality rather than distributing credit. Also, the high level of NPLs requires banks to raise provision for loan loss that decreases the banks' revenue and reduces the funds for new lending (Dermine, 2013; Hou and Dickinson, 2007).

The cutbacks of loans impair the corporate sector as they have difficulties in expanding their working capital, blocking their chances of resuming normal operation or growing. Unavailability of credit to finance firm's working capitals and investments might trigger the second round business failure which in turn exacerbates the quality of bank loans, resulting in a re-emerging of banking or financial failure. In a worse case, it triggers an endless vicious liquidity spiral, as a result of poor economic condition and the depressed economic growth, the level of non-performing loans increases, the weaker corporate sector makes banks more reluctant to provide additional credits with insufficient capital, the production sector is further weakened, resulting in decrease in aggregate demand again, even worse borrowers' condition creates more non-performing loans (Al-Muharrami, 2015). No doubt, as long as lending continues, bad debt must rear its ugly head. However, Osayameh (1986) cautioned that while the banker cannot stop granting loans because some go bad, he should be alert to spot early danger signs to avoid disastrous accident.

2.1. Theoretical Framework

(a. Loan Pricing Theory

According to Olokoyo (2011) banks cannot always set high interest rates, in order to earn maximum interest income. Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship. Adverse selection problems may result from high interest rate settings by banks because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behavior since they are likely to take on highly risky projects or investments (Chodechai, 2004). From the reasoning of Olokoyo, it is usual that in some cases we may not find that the interest rate set by banks is commensurate with the risk of the borrowers (Olokoyo, 2011).

(b. Credit Market Theory

The neoclassical theory of credit market postulates that the terms of credits clear the market. If collateral and other restrictions (agreements) remain constant, the interest rate is the only price mechanism. Ewert *et al.* (2002) state that, with an increasing demand for credit and a given customer supply, the interest rate rises, and vice versa. It is thus believed that the higher the failure risks of the borrower, the higher the interest premium.

(c. Theory of Multiple-Lending

It is found in literature that banks should be less inclined to share lending (loan syndication) in the presence of well-developed equity markets and after a process consolidation. Both outside equity and mergers and acquisitions increase banks' lending capacities, thus reducing their need of greater diversification and monitoring through share

lending (Carletti *et al.*, 2006; Degryse *et al.*, 2004). This theory has a great implication for banks in Nigeria in the light of the recent 2005 consolidation exercise in the industry.

(d. Hold-up and Soft-Budget-Constraint Theories

Banks choice of multiple-bank lending is in terms of two inefficiencies affecting exclusive bank-firm relationships, namely the hold-up and the soft-budget-constraint problems. According to the hold-up literature, sharing lending avoids the expropriation of informational rents. This improves firms' incentives to make proper investment choices and in turn it increases banks' profits (Padilla and Pagano, 2000; Von-Thadden, 2004). As for the soft-budget-constraint problem, multiple-bank lending enables banks not to extend further inefficient credit, thus reducing firms' strategic defaults. Both of these theories consider multiple-bank lending as a way for banks to commit towards entrepreneurs and improve their incentives. None of them, however, addresses how multiple-bank lending affects banks' incentives to monitor, and thus can explain the apparent discrepancy between the widespread use of multiple-bank lending and the importance of bank monitoring.

(e. Monetary Circuit Theory

This theory is often associated with the post Keynesian school of thought by Milton Friedman, Pigou and others. The theory which could be referred to as circulation approach, depict that money is created endogenously by the banking sector, rather than exogenously by central bank lending. It is also referred to as a theory of endogenous money (Wikipedia Website, 2014b;2015).

(f. The Signaling Arguments

This argument states that good companies should provide more collateral to prove to the banks that they are low risky type borrowers and then they are charged lower interest rates. Chodechai (2004), the reverse signaling argument states that banks only require collateral or agreements for relatively risky firms that also pay higher interest rates.

(g. Money Creation Theory

According to this theory, credit money is created by a loan extension. Such loan needs to be backed by CBN Money, but it is created from the promise (Credit) embodied in the loan, not from the lending or relending of central bank money. When both the capital and interest are paid, the credit money of the loan is destroyed but reserves (equal to the interest) are created from the loan. Practically, commercial banks extend time of credit to Companies-a promise to make a loan. These promises are not for regulatory purposes, nor holding a reserve against it, but when the line is tapped (and a loan extended), then strong credit money is created, and reserves must be found to match it, in this case, credit money increases reserves (Werner, 2014).

2.2. Empirical Review

Kargi (2011) found in a study of Nigeria banks from 2004 to 2008 that there is a significant relationship between banks performance and credit risk management. He found that loans and advances and non performing loans are major variables that determine asset quality of a bank. Kwan and Eisenbeis (1994), supported by Resti (1995) asserted that even among banks that did not fail, there is a negative relationship between the non-performing loans and performance efficiency.

Berger and De-Young (1997) examined intersection between the problem loan literature and the bank efficiency literature, employing Granger-causality techniques to test four hypotheses regarding the relationships among loan quality, cost efficiency, and bank capital. The data suggest that problem loans precede reductions in measured cost efficiency; that measured cost efficiency precede reductions in problem loans; and that reductions in capital at thinly capitalized banks precede increases in problem loans. Hence, cost efficiency may be an important indicator of future problem loans and problem banks.

Anolue (2010) in his study on the causative factors for non-performing loans of deposit money banks in Nigeria using descriptive statistics, he found that there is a positive relationship between the size of loans advanced by banks and non-performing loans. In other words, the size of non-performing loans of banks increased as the size of the loan portfolio increased. At the end of 2007 the ratio of non-performing loans to total loans and advances was 22.4%. This implies that almost 23% of total loans granted were not performing. This is not encouraging by all standards.

Odufuye (2007) was even more conservative in his assessment of what should be the optimal level of non-performing loans. According to him, non-performing loans must surely arise in the business of banking no matter how prudent a banker is, but this should hover between 1% and 12%. A situation where the ratio of non-performing loans to total loans is more than 12% is not acceptable. The study also revealed an upward trend of non-performing loans. It grows at an annual rate of 23.7%. It was deduced from the analysis that poor credit administration of banks contributed to a large extent to the incidence of non-performing loans.

Vatansever and Hepsen (2013) in a study to determine the impact on non-performing loan ratio in Turkey using ordinary least square method of data analysis found that debt ratio, loan to asset ratio, confidence index-real sector, consumer price index, EURO/Turkish lira rate, USD/ Turkish lira rate, money supply change, interest rate, GDP growth, the Euro Zone's GDP growth and volatility of the stock market index (Standard & Poor's 500) does not have significant effect to explain non-performing loans ratio on multivariate perspective. On the other hand,

Industrial Production Index (IPI), Istanbul Stock Exchange 100 Index (ISE), Inefficiency ratio of all banks (INEF) negatively, Unemployment Rate (UR), Return on Equity (ROE), Capital Adequacy Ratio (CAR) positively affect non-performing loans ratio.

In a study carried out by Chikoko *et al.* (2012) on the Insights of Non-Performing Loans: Evidence from Zimbabwean Commercial Banks in a Dollarized Environment, it was found that 73% of the banks had problems of non-performing loans whilst the 23% which adopted the values driven credit culture did not have a problem of non-performing assets leading to these banks having good loan books.

Also, Agu and Okoli (2013) in a study titled - credit management and bad debt in Nigeria commercial banks – implication for development, using variance analysis found that the causes of bad and doubtful debts in Nigeria Commercial Banks are the following;

a. Inadequate close monitoring of the borrowers to ensure proper utilization of fund (i.e. on site visit to factory or project site).
b. Incessant increase in interest rate (lending rate)
c. Lack of adequate knowledge of the loan seeker
d. Failure by Commercial Banks to give their loan immediate follow-up to avoid diversion.
e. Poor credit policy administration.

The study also reveals inefficient credit management, which results in high bad debts portfolio, which is the principal cause that drives banks to their untimely grave.

Ali and Iva (2013) conducted study on "the impact of bank specific factors on non-performing loans in Albanian banking system" considered Interest rate in total loan, credit growth, inflation rate, real exchange rate and GDP growth rate as determinant factors. They utilized OLS regression model for panel data from 2002 to 2012 period. The finding reveals a positive association of loan growth and real exchange rate, and negative association of GDP growth rate with non-performing loans. However, the association between interest rate and non-performing loan is negative but week. And also inflation rate has insignificant effect on non-performing loans (NPLs).

In an empirical study made on Commercial Banks in Pakistan by Badar and Yasmin (2013) titled "Impact of Macroeconomic Forces on Nonperforming Loans" the long and short run dynamics between non-performing loans and macroeconomic variables covering the period from 2002 -2011 of 36 commercial banks in Pakistan were assessed. In the study, inflation, exchange rate, interest rate, gross domestic product and money supply were included as macroeconomic variables. They applied vector error correction model. The study found that as there is strong negative long run relationship existing on inflation, exchange rate, interest rate, gross domestic product and money supply with NPLs.

Ranjan and Chandra (2003) analyze the determinants of NPLs of commercial banks' in Indian in 2002. The objective of the study was to evaluate how NPLs influenced by financial and economic factors and macroeconomic shocks. In the study, they utilized panel regression model and found that lending rate also have positive impact on the NPLs justifying that the expectation of higher interest rate induced the changes in cost conditions to fuel and further increase in NPLs. Besides, loan to deposit ratio had negative significant effect on NPLs justifying that relatively more customer friendly bank is most likely face lower defaults as the borrower will have the expectation of turning to bank for the financial requirements.

Daniel and Wandera (2013) conducted the study on the effect of credit information sharing on the non-performing loan of commercial banks in Kenya. The objectives of the study was to assess the impact of credit information sharing on non-performing loans, to identify the factors that account for bad loans and to determine the economic sector that record higher bad loans and the efforts taken to reduce the risk in this sector The study found that lending rates has positive significant effect on NPLs. Thus, justify why many borrowers defaulted and resulted to bad loans.

3. Methodology

The study employed descriptive survey research design to determine the relationship between poor loan management and return on assets, regarding banking industries in Nigeria. Data employed are sourced from published data from authoritative channel, belonging to five banks for a period of five years, between 2010 and 2014. The research employed the single equation techniques of econometric simulation; specifically Ordinary Least Square (OLS) regression analysis was used. The merit of using OLS lies in the facts that the method poses a blue property which is best linear unbiased estimator (Koutsoyiannus, 1997).

Data was analyzed with E-view Statistical Package, version 16. The variables involved in the study are loan default (problems loans) as independent variable and returns on assets as dependent variable. Simple regression analysis was carried out to show the impact of independent variable on dependent variable as earmarked in the study.

3.1. Model Specification

The model adopted for this study is underpinned to the model of Kargi (2011) in his study "Credit Risk and the Performance of Nigerian Banks" which measured profitability with Return on Asset (ROA) as a function of the ratio of Non-performing loan to loan & Advances (NPL/LA) and ratio of Total loan & Advances to Total deposit (LA/TD) used as indicators of credit risk. The basic model is as follows:

$$ROA = f(NPL/LA)$$
$$ROA = f(LA/TD)$$

$$ROA = \alpha_0 + \alpha_1 NPL/LA + \alpha_2 LA/TD + e$$

Where;

ROA = Ratio of profit after tax to total assets.

α_0 - α_2 = Coefficients

NPL/LA = Ratio of Non-performing assets to loan & Advances).

LA/TD = Ratio of Loan & Advances to Total deposit), and e = error term

4. Results and Interpretation

Table-4.1

Dependent Variable: @LOG(ROA)

Method: Panel Least Squares

Cross-sections included: 5 YEARS 5 BANKS

Total panel (balanced) observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	32.66886	9.798530	3.334057	0.0030
@LOG(PL)	0.349223	0.138920	2.513846	0.0198
@LOG(LAD)	-0.904929	0.462358	-1.957205	0.0631
R-squared	0.285836	Mean dependent var		18.17697
Adjusted R-squared	0.220912	S.D. dependent var		2.189099
S.E. of regression	1.932229	Akaike info criterion		4.267392
Sum squared resid	82.13720	Schwarz criterion		4.413657
Log likelihood	-50.34240	Hannan-Quinn criter.		4.307960
F-statistic	4.402626	Durbin-Watson stat		1.401323
Prob(F-statistic)	0.024648			

From the Ordinary Least Square (OLS) regression result, it was shown that a positive and significant relationship at 5% level of significance exist between Problem Loans (PL) and Return on Assets (ROA). The result shows that a negative and significant relationship at 10% level of significance exist between Loan and Advances (LAD) and Return on Assets (ROA). From the result, it was revealed that 28% of variations or changes in the dependent variable (ROA) can be explained by the independent variables.

The F- statistics (4.402626) which is greater than its Prob(F-statistics) 0.024648 at 5% level of significance indicates that the linear relationship between the independent and dependent variable are statistically significant (i.e. the overall model). The Durbin-Watson stat which is used to test the presence of autocorrelation among the variables is 1.401323, indicate that there is a positive autocorrelation in the model. The result implies that a unit increase in Problem Loan (PL) will bring about 0.349323 unit increase in Returns on Asset (ROA). Also, a unit increase in Loan and Advances will bring about 0.904929 unit decrease in Returns on Asset (ROA).

5. Conclusion and Recommendations

From the study, it was revealed that problem loans (PL) has a positive and significant impact on Return on Asset (ROA). This is because Problem Loans (PL) forms the major source of revenue to Deposit Money Banks (DMBs) and it is an asset to the Bank. It also revealed that problem loan management improves commercial banks performance and the higher the credits given out by commercial banks, the higher the rate of returns, because interests on credit forms huge part of the banks revenue.

In other words, the increasing amount of non-performing loans in the credit portfolio is inimical to banks achieving their objectives. Through the effective management of problem loan, banks not only support the viability and profitability of their own business, they also contribute to systemic stability and to an efficient allocation of capital in the economy. It is evident that the efficient and effective performance of banking industry over time guarantees financial stability of any nation. More so, findings also show that a sound problem loan management is critical for the survival and growth of commercial banks.

From this, the following policies can be recommended;

i) It is recommended that banks in Nigeria should enhance their capacity in credit analysis and loan administration while the regulatory authority should pay more attention to banks' compliance to relevant provisions of the Bank and other Financial Institutions Act (1991) and prudential guidelines

ii) It is also recommended that bank need to enhance lending criteria, portfolio grading and credit mitigation techniques to reduce chance of default. Meanwhile the adoption of sound management practices and corporate governance will reduce credit risk.

iii) The administrative procedure for giving loans requires continuous revision to minimize the time lag for processing loans. Due diligent should be imbibed in credit allocation and prompt discharge of funds should be adhered to, to prevent business failures due to delay in financing.

iv) It is important for bankers to regard credits to customers as money coming out of their own pockets. In this case, use of loans would be monitored to prevent misuse or misappropriation or misapplication and consequently prevent some bad loans due to negligence. The vital roles of a central credit bureau cannot be gainsaid. The lack of adequate co-operation between the banks and the general paucity of credit information in the economy make the establishment of a credit bureau an urgent one.

References

Agu, O. C. and Okoli, B. C. (2013). Credit management and bad debt in Nigeria commercial banks –implication for development. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 12(3): 47-56.

Al-Muharrami, S. (2015). Arab Banks during Tranquil and Turbulent Times: A reflection of Arab economies. *Mediterranean Journal of Social Sciences*, 6(4): 200-09.

Ali, S. and Iva, S. (2013). Impact of Bank specific variables on the nonperforming loans ratio in Albanian banking system. *Journal of Finance and Accounting*, 4(7): 148-52.

Anolue, J. O. (2010). Causative factors for non-performing loans of deposit money banks in Nigeria: A critical examination.

Arunkumar, R. I. and Kotreshwar, G. M. (2005).'Risk management in commercial banks: A case study of public and private sector banks'.Submitted to review committee ninth capital market conference Indian institute of capital market-mumbai.

Badar, M. and Yasmin, A. (2013). Impact of macroeconomic forces on nonperforming loans: An empirical study of commercial banks in Pakistan. *Journal of Transactions on Business and Economics*, 10(1): 40.

Barr, R. and Siems, T. (1994). Predicting Bank failure using DEA to quantify management quality, federal reserve bank of Dallas. Financial Industry Studies Working Paper No 1-94.

Beranke, B. S. and Lown, C. S. (1991). The credit crunch, brooking papers on economic activity. *Brookings Institution*, 2: 205-47.

Berger, A. N. and Humphrey, D. B. (1992). *Measurement and efficiency issues in commercial banking," in Z. Griliches, ed., Output Measurement in the Service Sectors, National Bureau of Economic Research, Studies in Income and Wealth.* University of Chicago Press: Chicago. 56: 245-79.

Berger, A. N. and De-Young, R. (1997). Problem loans and cost efficiency in commercial banks. Forthcoming,. *Journal of Banking and Finance*, 21: 1-29.

Bernanke, B. (1993). *The credit in the macro-economy.* Quarterly Review - Federal Reserve Bank of New York: 18: 50-50.

Campbell, A. (2007). Bank Insolvency and the problem of non-performing loans. *Journal of Banking Regulation*, 9(1): 25-45.

Carletti, E., Cerasi, V. and Daltung, S. (2006). Multiple-bank lending: Diversification and free-riding in monitoring, working paper of the department of statistics. Universita degli Studi di Milano Bicocca.

Central Bank of Nigeria (2012). Revised regulatory and supervisory guidelines for microfinance banks in Nigeria. Available: http://www.cenbank.org/out/2013/ccd/amended%20regulatory%20and%20supervisory%20guidelines%20for%20mfb.pdf

Central Bank of Nigeria (2014). Revised guidelines for finance companies in Nigeria. Available: http://www.cenbank.org/out/2014/ccd/revised%20guidelines%20for%20finance%20companies%20in%20nigeria.pdf

Chikoko, L., Mutambanadzo, T. and Vhimisai, T. (2012). Insights on NPLs: Evidence from Zimbabwean Commercial Banks in a Dollarized Environment (2009-2012). *Journal of Emerging Trends in Economics and Management Sciences*, 3(6): 882-86.

Chodechai, S. (2004). Determinants of bank lending in Thailand: An Empirical Examination for the years 1992 – 1996.

Daniel, K. and Wandera, M. (2013). Effects of credit information sharing on non-performing loans. *European Scientific Journal*, 9(13): 168-93.

De-Young, R. and Whalen, G. (1994).'Banking industry consolidation: Efficiency issues, Working Paper No. 110'.*A Conference of the Jerome Levy Economics Institute, Office of the Comptroller of the Currency.*Washington, DC.

Degryse, H., Masschelein, N. and Mitchell, J. (2004). SMEs and bank lending relationships: The impact of mergers. National Bank of Belgium Working Paper No. 46.

Demirguc-Kunt, A. and Huzinga, H. (1999). Determinants of commercial bank interest margins and profitability: Some international evidence. *The World Bank Economic Review*, 13(2): 379-440.

Dermine, J. (2013). Bank regulations after the global financial crisis: Good intentions and unintended evil. *European Financial Management*, 19(4): 658–74.

Ewert, R., Szczesmy, A. and Schenk, G. (2002). Determinants of bank lending performance in Germany. *Schmalenbach Business Review*, 52(Oct): 344–62.

Golden, S. and Walker, H. M. (1993). The ten commandments of commercial credit: The c's of good and bad loans. *The Journal of Commercial Lending*: 6–17. Available: https://www.questia.com/magazine/1G1-18440782/the-ten-commandments-of-commercial-credit-the-cs

Gray, B., Cassidy, C. and RBA (1997).'Credit risk in banking: proceedings of a conference at H.C. Coombs Centre for Financial Studies 1-2 May 1997. [Melbourne?]'.Reserve Bank of Australia, Bank Supervision Dept.

Hawkins, J. and Mihaljek, D. (2004). The banking industry in the emerging market economies: competition, consolidation and systemic stability - an overview. Available: http://www.bis.org/publ/bppdf/bispap04a.pdf

Hou, Y. and Dickinson, D. (2007).'The Non-performing Loans: Some Bank-level Evidences'.Research Conference on Safety and Efficiency of the Financial System - Paper Presented.

Jimenez, G. and Saurina, J. (2006). Credit cycles, credit risk, and prudential regulation. *International Journal of Central Banking*, 2(2): 65-98.

Kargi, H. S. (2011). Credit risk and the performance of Nigerian Banks Ahmadu Bello University, Zaria.

Koutsoyiannus, A. (1997). *The theory of econometrics.* Basingtoke: Macmillan Press Limited: London.

Kwan, S. and Eisenbeis, R. (1994). An analysis of inefficiencies in banking: A stochastic cost frontier approach, Working Paper.

Mavhiki, S. and Mapetere, D. (2012). An analysis of the challenges faced by banks in managing credit in Zimbabwe. *European Journal of Business and Management*, 4(1): 38-46.

Mc-Gavern, J. (1993). Why bad loans happen to good banks. *The Journal of Commercial Lending*: 5–8. Available: https://www.questia.com/magazine/1G1-14174195/why-bad-loans-happen-to-good-banks

Odufuye, B. M. (2007). Imperative for effective and efficient credit administration in the banking sector. *The Nigerian Banker*: 28.

Olokoyo, F. O. (2011). Determinants of commercial banks' lending behavior in Nigeria. *International Journal of Financial Research*, 2(2): 61-72.

Osayameh, R. K. O. (1986). *Practice of Banking.* Lagos; F & A Publisher: 2:

Padilla, A. J. and Pagano, M. (2000). Endogenous communication among lenders and entrepreneurial incentives. *Review of Financial Studies*, 10(1): 205-36.

Park, S. (2003). Bad loans and their impacts on the japanese economy: Conceptual and practical issues, and policy options. Discussion Paper series A No. 439. The Institute of Economic Research, Hitotsubashi University.

Ranjan, R. and Chandra, D. S. (2003). Non-performing loans and terms of credit of public sector banks in india: An empirical assessment; India. *Reserve Bank of India Occasional Papers*, 24(3): Available: https://www.rbi.org.in/scripts/PublicationsView.aspx?id=7206

Resti, A. (1995). Linear programming and econometric methods for bank efficiency evaluation: An empirical comparison based on a panel of italian banks. working paper.

Van-der-Hoog, S. and Dawid, H. (2015). Bubbles, crashes and the financial cycle: Insights from a stock-flow consistent agent-based macroeconomic model. The European Union Horizon 2020 Research and Innovation action under grant agreement 649186.

Vatansever, M. and Hepsen, A. (2013). Determining impacts on non-performing loan ratio in Turkey. *Journal of Finance and Investment Analysis*, 2(4): 119-29.

Von-Thadden, E. L. (2004). Asymmetric information, bank lending and implicit contracts: The Winner's Course. *Finance Research Letters*, 1: 11-23. Available: http://dx.doi.org/10.1016/S1544-6123(03)00006-0

Werner, R. A. (2014). Can banks individually create money out of nothing? — The theories and the empirical evidence. Centre for Banking, Finance and Sustainable Development, University of Southampton, United Kingdom. *International Review of Financial Analysis*, 36: 1–19. Available: http://www.sciencedirect.com/science/article/pii/S1057521914001070

Wheelock, D. C. and Wilson, P. W. (1995). Explaining bank failures: Deposit insurance, regulation and efficiency. *Review of Economics and Statistics*, 77(4): 689-700.

Wikipedia Website (2014a). Non-Performing Loan. Available: https://en.wikipedia.org/wiki/Non-performing_loan

Wikipedia Website (2014b). History of macroeconomic thought. Available: https://en.wikipedia.org/wiki/History_of_macroeconomic_thought

Wikipedia Website (2015). Monetary circuit theory. Available: https://en.wikipedia.org/wiki/Monetary_circuit_theory

Appendix

The appendix displays the data employed, belonging to five banks for a period of five years (2010-2014) which have been investigated.

BANKS	YR	ROA	PL	LAD
UBA	2010	4766194	431410	9200000000
UBA	2011	5264184	606610	8670000000
UBA	2012	7359940	628811	9920000000
UBA	2013	4521578	605627	1540000000
UBA	2014	3267126	658922	1460000000
FIRSTBANK	2010	236844499	446096	1121000000
FIRSTBANK	2011	323531060	550414	1234000000
FIRSTBANK	2012	315101376	1017411	1250000000
FIRSTBANK	2013	357798798	1128851	1310000000
FIRSTBANK	2014	321456623	731393	1260000000
UNION	2010	78035834	258959	9450000000
UNION	2011	100641020	202381	1121000000
UNION	2012	159734616	166172	1012000000
UNION	2013	16353953	164931	1321000000
UNION	2014	345189091	252412	1246000000
DIAMOND	2010	307859084	248488808	1100000000
DIAMOND	2011	339580034	285344944	9200000000
DIAMOND	2012	552401605	302486935	8000000000
DIAMOND	2013	604073399	294227900	1120000000
DIAMOND	2014	451858901	345568100	1100000000
FIDELITY	2010	684107000	229560	1210000000
FIDELITY	2011	456925120	160297	1320000000
FIDELITY	2012	1144461	159560	1650000000
FIDELITY	2013	1316407	67935	1540000000
FIDELITY	2014	567271689	74243	1467000000