CREDIT RISK AND THE PERFORMANCE OF NIGERIAN BANKS

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ABSTRACT

Recently banks witnessed rising non-performing credit portfolios and these significantly contributed to financial distress in the banking sector. Banks collect deposits and lends to customers but when customers fail to meet their obligations problems such as non-performing loans arise. This study evaluates the impact of credit risk on the profitability of Nigerian banks. Financial ratios as measures of bank performance and credit risk were the data collected from secondary sources mainly the annual reports and accounts of sampled banks from 2004 - 2008. Descriptive, correlation and regression techniques were used in the analysis. The findings revealed that credit risk management has a significant impact on the profitability of Nigeria banks. Therefore, management need to be cautious in setting up a credit policy that might not negatively affects profitability and also they need to know how credit policy affects the operation of their banks to ensure judicious utilization of deposits.

Keywords: Credit Risk, Profitability, Loan and Advances, Non-performing Loan and Total Deposits

BACKGROUND TO THE STUDY

The banking industry has achieved great prominence in the Nigerian economic environment and it influence play predominant role in granting credit facilities. The probability of incurring losses resulting from non-payment of loans or other forms of credit by debtors known as credit risks are mostly encountered in the financial sector particularly by institutions such as banks. The biggest credit risk facing banking and financial intermediaries is the risk of customers or counter party default. During the 1990s, as the number of players in banking sector increased substantially in the Nigerian economy and banks witnessed rising non-performing credit portfolios. This significantly contributed to financial distress in the banking sector. Also identified was the existence of predatory debtor in the banking system whose modus operandi involve the abandonment of their debt obligations in some banks only to contract new debts in other banks.

Credit creation is the main income generating activity for the banks. But this activity involves huge risks to both the lender and the borrower. The risk of a trading partner not fulfilling his or her obligation as per the contract

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on due date or anytime thereafter can greatly jeopardize the smooth functioning of bank's business. On the other hand, a bank with high credit risk has high bankruptcy risk that puts the depositors in jeopardy. In a bid to survive and maintain adequate profit level in this highly competitive environment, banks have tended to take excessive risks. But then the increasing tendency for greater risk taking has resulted in insolvency and failure of a large number of the banks.

The major cause of serious banking problems continues to be directly related to low credit standards for borrowers and counterparties, poor portfolio management, and lack of attention to changes in economic or other circumstances that can lead to deterioration in the credit standing of bank's counter parties. And it is clear that banks use high leverage to generate an acceptable level of profit. Credit risk management comes to maximize a bank's risk adjusted rate of return by maintaining credit risk exposure within acceptable limit in order to provide a framework of the understanding the impact of credit risk management on banks profitability.

The excessively high level of non-performing loans in the banks can also be attributed to poor corporate governance practices, lax credit administration processes and the absence or non- adherence to credit risk management practices. The question is what is the impact of credit risk management on the profitability of Nigerian banks? How does Loan and advances affect banks profitability? What is the relationship between non-performing loans and profitability in Nigerian banks?

The study considers the extent of relationship that exists between the core variables constituting Nigerian Bank default risk and the profitability. It therefore seek to examine the impact of credit risk on the profitability of Nigerian banking system and identifies the relationships between the non-performing loans and banks profitability and evaluate the effect of loan and advance on banks profitability on Nigerian banks. To achieve the study's objectives it is postulated that there is no significant relationship between non-performing loan and banks profitability while loan and advances does not have a significant influence on banks profitability.

The second section of the paper provides an overview of related literature and the third section presents an exposition of the methodology used in the study. The fourth section provides the results and its discussion. The last section provides a conclusion and recommendations.

LITERATURE REVIEW

Credit risk is the current and prospective risk to earnings or capital arising from an obligor's failure to meet the terms of any contract with the bank or otherwise to perform as agreed. Credit risk is found in all activities in

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which success depends on counterparty, issuers, or borrower performance. It arises any time bank funds are extended, committed, invested, or otherwise exposed through actual or implied contractual agreements, whether reflected on or off the balance sheet. Thus risk is determined by factor extraneous to the bank such as general unemployment levels, changing socio-economic conditions, debtors' attitudes and political issues.

Credit risk according to Basel Committee of Banking Supervision BCBS (2001) and Gostineau (1992) is the possibility of losing the outstanding loan partially or totally, due to credit events (default risk). Credit events usually include events such as bankruptcy, failure to pay a due obligation, repudiation/moratorium or credit rating change and restructure. Basel Committee on Banking Supervision- BCBS (1999) defined credit risk as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Heffernan (1996) observe that credit risk as the risk that an asset or a loan becomes irrecoverable in the case of outright default, or the risk of delay in the servicing of the loan. In either case, the present value of the asset declines, thereby undermining the solvency of a bank. Credit risk is critical since the default of a small number of important customers can generate large losses, which can lead to insolvency (Bessis, 2002).

BCBS (1999) observed that banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transaction. Anthony (1997) asserts that credit risk arises from non-performance by a borrower. It may arise from either an inability or an unwillingness to perform in the pre-committed contracted manner. Brownbridge (1998) claimed that the single biggest contributor to the bad loans of many of the failed local banks was insider lending. He further observed that the second major factor contributing to bank failure were the high interest rates charged to borrowers operating in the high-risk. The most profound impact of high non-performing loans in banks portfolio is reduction in the bank profitability especially when it comes to disposals.

BCBS (1982) stated that lending involves a number of risks. In addition to risk related to the creditworthiness of the borrower, there are others including funding risk, interest rate risk, clearing risk and foreign exchange risk. International lending also involves country risk. BCBS (2006) observed that historical experience shows that concentration of credit risk in asset portfolios has been one of the major causes of bank distress. This is true both for individual institutions as well as banking systems at large.

Robert and Gary (1994) state that the most obvious characteristics of failed banks is not poor operating efficiency, however, but an increased volume of non-performing loans. Non-performing loans in failed banks have

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typically been associated with regional macroeconomic problems. DeYoung and Whalen (1994) observed that the US Office of the Comptroller of the Currency found the difference between the failed banks and those that remained healthy or recovered from problems was the caliber of management. Superior mangers not only run their banks in a cost efficient fashion, and thus generate large profits relative to their peers, but also impose better loan underwriting and monitoring standards than their peers which result to better credit quality.

Koehn and Santomero (1980), Kim and Santomero (1988) and Athanasoglou et al. (2005), suggest that bank risk taking has pervasive effects on bank profits and safety. Bobakovia (2003) asserts that the profitability of a bank depends on its ability to foresee, avoid and monitor risks, possible to cover losses brought about by risk arisen. This has the net effect of increasing the ratio of substandard credits in the bank's credit portfolio and decreasing the bank's profitability (Mamman and Oluyemi, 1994). The banks supervisors are well aware of this problem, it is however very difficult to persuade bank mangers to follow more prudent credit policies during an economic upturn, especially in a highly competitive environment. They claim that even conservative mangers might find market pressure for higher profits very difficult to overcome.

The deregulation of the financial system in Nigeria embarked upon from 1986 allowed the influx of banks into the banking industry. As a result of alternative interest rate on deposits and loans, credits were given out indiscrimately without proper credit appraisal (Philip, 1994). The resultant effects were that many of these loans turn out to be bad. It is therefore not surprising to find banks to have non-performing loans that exceed 50 per cent of the bank's loan portfolio. The increased number of banks over-stretched their existing human resources capacity which resulted into many problems such as poor credit appraisal system, financial crimes, accumulation of poor asset quality among others (Sanusi, 2002). The consequence was increased in the number of distressed banks.

However, bank management, adverse ownership influences and other forms of insider abuses coupled with political considerations and prolonged court process especially as regards debts recovery created difficulties to reducing distress in the financial system (Sanusi, 2002). Since the banking crisis started, the Central Bank of Nigeria (CBN) has had to revoke the licenses of many distressed bank particularly in the 1990's and recently some banks has to be bailout. This calls for efficient management of risk involving loan and other advances to prevent reoccurrences.

A high level of financial leverage is usually associated with high risk. This can easily be seen in a situation where adverse rumours, whether founded or precipitated financial panic and by extension a run on a bank. According to Umoh (2002) and Ferguson (2003) few banks are able to withstand a persistent run, even in the

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presence of a good lender of last resort. As depositors take out their funds, the bank hemorrhages and in the absence of liquidity support, the bank is forced eventually to close its doors. Thus, the risks faced by banks are endogenous, associated with the nature of banking business itself, whilst others are exogenous to the banking system.

Owojori et al (2011) highlighted that available statistics from the liquidated banks clearly showed that inability to collect loans and advances extended to customers and directors or companies related to directors/managers was a major contributor to the distress of the liquidated banks. At the height of the distress in 1995, when 60 out of the 115 operating banks were distressed, the ratio of the distressed banks' non-performing loans and leases to their total loans and leases was 67%. The ratio deteriorated to 79% in 1996; to 82% in 1997; and by December 2002, the licences of 35 of the distressed banks had been revoked. In 2003, only one bank (Peak Merchant Bank) was closed. No bank was closed in the year 2004. Therefore, the number of banking licences revoked by the CBN since 1994 remained at 36 until January 2006, when licences of 14 more banks were revoked, following their failure to meet the minimum re-capitalization directive of the CBN. At the time, the banking licences were revoked, some of the banks had ratios of performing credits that were less than 10% of loan portfolios. In 2000 for instance, the ratio of non-performing loans to total loans of the industry had improved to 21.5% and as at the end of 2001, the ratio stood at 16.9%. In 2002, it deteriorated to 21.27%, 21.59% in 2003, and in 2004, the ratio was 23.08% (NDIC Annual Reports- various years).

In a collaborative study by the CBN and the Nigeria Deposit Insurance Corporation {NDIC} in 1995, operators of financial institutions confirmed that bad loans and advances contributed most to the distress. In their assessment of factors responsible for the distress, the operators ranked bad loans and advances first, with a contribution of 19.5%.

In 1990, the CBN issued the circular on capital adequacy which relate bank's capital requirements to risk-weighted assets. It directed the banks to maintain a minimum of 7.25 percent of risk-weighted assets as capital; to hold at least 50 percent of total components of capital and reserves; and to maintain the ratio of capital to total risk-weighted assets as a minimum of 8 percent from January, 1992. Despite these measure and reforms embodied in such legal documents as CBN Act No. 24 of 1991 and Banks and other financial institutions (BOFI) Act No.25 of 1991 as amended, the number of technically insolvent banks increased significantly during the 1990s.

The role of bank remains central in financing economic activity and its effectiveness could exert positive impact on overall economy as a sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system (Athanasoglou et al, 2005). Therefore, the determinants of bank

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performance have attracted the interest of academic research as well as of bank management. Studies dealing with internal determinants employ variables such as size, capital, credit risk management and expenses management. The need for risk management in the banking sector is inherent in the nature of the banking business. Poor asset quality and low levels of liquidity are the two major causes of bank failures and represented as the key risk sources in terms of credit and liquidity risk and attracted great attention from researchers to examine the their impact on bank profitability.

Credit risk is by far the most significant risk faced by banks and the success of their business depends on accurate measurement and efficient management of this risk to a greater extent than any other risk (Giesecke, 2004). Increases in credit risk will raise the marginal cost of debt and equity, which in turn increases the cost of funds for the bank (Basel Committee, 1999).

To measure credit risk, there are a number of ratios employed by researchers. The ratio of Loan Loss Reserves to Gross Loans (LOSRES) is a measure of bank's asset quality that indicates how much of the total portfolio has been provided for but not charged off. Indicator shows that the higher the ratio the poorer the quality and therefore the higher the risk of the loan portfolio will be. In addition, Loan loss provisioning as a share of net interest income (LOSRENI) is another measure of credit quality, which indicates high credit quality by showing low figures. In the studies of cross countries analysis, it also could reflect the difference in provisioning regulations (Demirgiic-Kunt, 1999).

Assessing the impact of loan activities on bank risk, Brewer (1989) uses the ratio of bank loans to assets (LTA). The reason to do so is because bank loans are relatively illiquid and subject to higher default risk than other bank assets, implying a positive relationship between LTA and the risk measures. In contrast, relative improvements in credit risk management strategies might suggest that LTA is negatively related to bank risk measures (Altunbas, 2005). Bourke (1989) reports the effect of credit risk on profitability appears clearly negative This result may be explained by taking into account the fact that the more financial institutions are exposed to high risk loans, the higher is the accumulation of unpaid loans, implying that these loan losses have produced lower returns to many commercial banks (Miller and Noulas, 1997). The findings of Felix and Claudine (2008) also shows that return on equity ROE and return on asset ROA all indicating profitability were negatively related to the ratio of non-performing loan to total loan NPL/TL of financial institutions therefore decreases profitability.

The Basel Committee on Banking Supervision (1999) asserts that loans are the largest and most obvious source of credit risk, while others are found on the various activities that the bank involved itself with. Therefore, it

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is a requirement for every bank worldwide to be aware of the need to identify measure, monitor and control credit risk while also determining how credit risks could be lowered. This means that a bank should hold adequate capital against these risks and that they are adequately compensated for risks incurred. This is stipulated in Basel II, which regulates banks about how much capital they need to put aside to guide against these types of financial and operational risks they face.

In response to this, commercial banks have almost universally embarked upon an upgrading of their risk management and control systems. Also, it is in the realization of the consequence of deteriorating loan quality on profitability of the banking sector and the economy at larger that this research work is motivated.

METHODOLOGY

The study is both historical and descriptive as it seeks to describe the pattern of credit risk of Nigerian banks in the past. A non- probability method in the form of judgmental sampling technique was employed in selecting banks into the sample.

The sample size is based on the following criteria;

a) The availability of consistent data-set over the period.

b) The banks were not involved in any merger during the study period and were not involved in any merger during the study period with at least a branch in all states of the federation.

c) The banks are listed and quoted on the Nigeria Stock Exchange.

Considering the above criteria, six out of twenty four banks in Nigeria were selected (Appendix I) and data collected are for the periods of 2004 – 2008 from the Annual Reports and Accounts of the chosen banks. The data include time series and cross section on Loans and Advances, Non-performing Loan, total deposits, Profit after Tax and total assets of the sampled banks. In this study the ratio of Non-performing loan to loan & Advances and ratio of Total loan & Advances to Total deposit were used as indicators of credit risk while the ratio of Profit after Tax to total asset known as return on asset (ROA) indicates performance. The pooled data was analysed using correlation and multiple regression models which adopt Ordinary Least Square (OLS) method in estimating the parameter of the model and is expressed as;

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

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Where;

ROA = Ratio of profit after tax to total assets.

α_0 - α_2 = Coefficients

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

LA/TD = Ratio of Loan & Advances to Total deposit).

e = error term

Regression was employed in the study to forecast relationship between variables and estimate the influence of each explanatory variable to the dependent variable.

RESULTS AND DISCUSSION

The mean of the data (appendix IIA) are ROA (0.226389), NPL/LA (0.231668) and LA/TD (0.511200) while the standard deviations of the data are ROA (1.370585), NPL/LA (0.334481) and LA/TD (0.209873). This shows that the ratio of loan and advances 51.12% is higher with little deviation from the mean at 20.99%. Jarque-Bera test reject the normality of ROA and NPL/LA at 1% level (2863.298 and 327.3264) being higher than the X^2-value of 5.99 and 9.21 at 5% and 1% respectively while LA/TD (0.083856) suggest normality. The result is as depicted by skewness and kurtosis of the data.

Correlation output (appendix IIB) shows negative relationship between credit risk indicators and profitability. The correlation coefficients are -0.114341(NPL/LA) and -0.382068(LA/TD) indicating fall in profitability with every rise in the risk factors – ratio of non-performing loan to loan and advances and the ratio of loan and advances to total deposits.

The regression result of the study's model (appendix IIC) suggests that all the independent variables have negative impact on profitability. The model is thus;

ROA = 1.634046 - 0.515976 NPL/LA – *2.519801* LA/TD + *e*

(3.008073) (-0.869481) (-2.664284)

(0.0045) (0.3898) (0.0111)

The result show that the ratio Non-performing loan to loan & Advances negatively relate to profitability though not significant The parameters shows that increase in non-performing loans decreases profitability (ROA) by 51.60%, however, increase in the level of loan & advances to total deposit significantly decrease profitability of the banks by 251.98%, this expose them to higher risk level. The study shows that there is a direct but inverse

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relationship between profitability (ROA) and the ratio of non-performing loan to loan & Advances and the ratio of loan & advances to total deposit.This is consistent with the findings of Brewer (1989), Bourke (1989), Miller and Noulas (1997), Altunbas (2005) and Felix and Claudine (2008)

In terms of the fitness of the study model, the coefficient of multiple determinations R^2 indicates that about 16.1818% (adjusted R – 11.99%) of the variations in ROA are explained by the combined influence of credit risk indicators (NPL/LA and LA/TD) in the model. The Durbin Watson statistic measures the serial correlation of the variables. The result of the Durbin Watson test shows 2.323. Since the value is approximately 2, it is accepted that there is no autocorrelation among the successive values of the variables in the model.

The test of overall significance of regression implies testing the null hypotheses. The overall significance of the regression is tested using Fisher's statistics. In this study the calculated F* value of 3.861162 is significant at 5%. It is therefore, concluded that linear relationship exist between the dependent and the independent variables of the model. Base on this findings, the postulations which respectively state that there is no significant relationship between non-performing loan and banks profitability while loan and advances does not have a significant influence on banks profitability were rejected. The evidence established that the independent explanatory variables (credit risk indicators) have individual and combine impact on the return of asset of banks in Nigeria.

This study shows that there is a significant relationship between bank performance (in terms of profitability) and credit risk management (in terms of loan performance). Loans and advances and non performing loans are major variables in determining asset quality of a bank. These risk items are important in determining the profitability of banks in Nigeria. Where a bank does not effectively manage its risk, its profit will be unstable. This means that the profit after tax has been responsive to the credit policy of Nigerian banks. The deposit structure also affects profit performance. Many highly profitability banks hold a large volume of core deposits. The growth of loan has been relatively fast for the past few years and which is not fully covered by the deposit base. Banks become more concerned because loans are usually among the riskiest of all assets and therefore may threatened their liquidity position and lead to distress. Better credit risk management results in better bank performance. Thus, it is of crucial importance for banks to practice prudent credit risk management to safeguard their assets and protect the investors' interests.

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CONCLUSION AND RECOMMENDATIONS

The study investigated the impact of credit risk on the profitability of Nigerian banks. From the findings it is concluded that banks profitability is inversely influenced by the levels of loans and advances, non-performing loans and deposits thereby exposing them to great risk of illiquidity and distress. Therefore, management need to be cautious in setting up a credit policy that will not negatively affects profitability and also they need to know how credit policy affects the operation of their banks to ensure judicious utilization of deposits and maximization of profit. Improper credit risk management reduce the bank profitability, affects the quality of its assets and increase loan losses and non-performing loan which may eventually lead to financial distress. CBN for policy purposes should regularly assess the lending attitudes of financial institutions. One direct way is to assess the degree of credit crunch by isolating the impact of supply side of loan from the demand side taking into account the opinion of the firms about banks' lending attitude. Finally, strengthening the securities market will have a positive impact on the overall development of the banking sector by increasing competitiveness in the financial sector. When the range of portfolio selection is wide people can compare the return and security of their investment among the banks and the securities market operators. As a result banks remain under some pressure to improve their financial soundness.

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APPENDIX I

LIST OF SAMPLED BANKS

1. ACCESS BANK PLC
2. AFRIBANK NIGERIA PLC
3. ECOBANK NIGERIA PLC
4. FIRST BANK NIGERIA PLC
5. GUARANTY TRUST BANK PLC
6. UNION BANK OF NIGERIA PLC

APPENDIX II

EMPIRICAL REUSLTS

A. DESCRIPTIVE STATISTICS

	ROA	NPL/LA	LA/TD
Mean	0.226389	0.231668	0.511200
Median	0.023750	0.133469	0.488018
Maximum	9.000000	1.872425	0.970000
Minimum	-0.242415	0.000000	0.000000
Std. Dev.	1.370585	0.334481	0.209872
Skewness	6.315171	3.179862	-0.013665
Kurtosis	40.93249	14.92677	3.214608
Jarque-Bera	2863.798	327.3264	0.083856
Probability	0.000000	0.000000	0.958939
Sum	9.734737	9.961720	21.98159
Sum Sq. Dev.	78.89715	4.698856	1.849948
Observations	43	43	43

Source: Eviews Regression Output

B. CORRELATION RESULT

	ROA	NPL/LA	LA/TD
ROA	1.000000	-0.114341	-0.382068
NPL/LA	-0.114341	1.000000	-0.030009
LA/TD	-0.382068	-0.030009	1.000000

Source: Eviews Regression Output

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C. REGRESSION RESULT

Dependent Variable: ROA
Method: Least Squares

Included observations: 43 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.634046	0.543220	3.008073	0.0045
NPL/LA	-0.515976	0.593430	-0.869481	0.3898
LA/TD	-2.519801	0.945770	-2.664284	0.0111

R-squared	0.161818	Mean dependent var	0.226389
Adjusted R-squared	0.119909	S.D. dependent var	1.370585
S.E. of regression	1.285790	Akaike info criterion	3.407837
Sum squared resid	66.13019	Schwarz criterion	3.530712
Log likelihood	-70.26850	F-statistic	3.861162
Durbin-Watson stat	2.323712	Prob(F-statistic)	0.029293

Source: Eviews Regression Output

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