

## **The Influence of Lending Rate on the Performance of Deposit Money banks in Nigeria**

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### **1. Introduction**

In a developing economy like Nigeria, the principal reason why banks are licensed is to aid financial intermediation. Banks are expected to support their local environment with adequate supply of credit for all legitimate businesses and consumer financial needs and to ensure that credit is reasonably in line with competitively determined lending rates. Indeed, granting of credit is one of the principal economic functions of banks. Therefore; banks make credits available for consumption and investment spending by business, individual and units of government. They mobilize funds from surplus economic units and then convert such funds as credit facilities to the deficit units. How well a bank performs its lending function has a great deal to do with the economic health of its region, because bank credits support the growth of new businesses and jobs within the banks trading territory and promote economic viability. (Onoh, 2002).

The process of lending begins from when the credit is granted and managed to make sure that it is judiciously used and within the frame work of the agreement so that it can be repaid back and with interest. Therefore, a bank cannot be too meticulous in taking all the necessary steps to ensure that the loan and advances are given out to worthy Customers. Most banks have failed as a result of non-performing loans which drastically reduces the capital of the banks. This is confirmed with the most recent crisis that took place in the banking sector of Nigeria in 2009. (Rose, 1996).

The most widely acknowledged tool for effective credit management is a well articulated and credible loan and credit policy which serves as a guide to all those that handle the management of loans and advances provided to the customers. If good credit management is not instituted, the good loans can turn bad i.e. non-performing credits (Adewumi, 1983). Lending practice depend on a number of varying factors such as the economic environment, the experience, and expertise of the banker, the "tradition" and culture of the bank and the personality involved (Rose, 1996). Despite all these a well formulated lending policy should have a general objective and modalities for lending and guideline for credit analysis.

Reed, Rose, and Pierson (1980), view these factors as the ingredient that determines the lending officer's faith in the debtor's ability and willingness to pay the obligation in accordance with the terms of the loan agreement. Many authors call these factors the "six (6) C's of lending" which are; character, capacity, cash, collateral, conditions, and control. Apart from these principles, there are some other factors and principles which also affect the way banks carry out their lending practices.

Lending which may be on short, medium or long term basis is one of the services that deposit money banks do render to their customers. In other words, banks do grant loans and advances to individuals, business organizations as well as government in order to enable them embark on investment and development activities as a means of aiding their growth in particular or contributing toward the economic development of a nation in general (Felicia, 2011). Furthermore non performing loans have been a hindrance to economic stability and growth of economies. In Nigeria, non performing loans continued to improve, underpinned by higher reclassification of non-performing loans to performing status and recoveries, as well as efforts to achieve healthier balance sheets via loan write offs.

The rising of non-performing loans has effect on the Deposit money bank; they tightened their lending and switched their attentions to rehabilitating the non performing loans in their books, thus preventing viable businesses from obtainable funds to generate economic activities. Many studies has been carried out on the area of banking operations but none is relatively done on lending as it affect deposit money banks in Nigeria.

Without prejudice to the requirements of the statement of Accounting standard on Accounting by banks and non bank financial Institutions to be issued by the Nigerian Accounting standards Board in the near future, all licensed banks shall be required to adhere to the prudential guidelines enunciated in this circular for reviewing and reporting their performance. These prudential guidelines should be regarded as minimum requirements and licensed banks which already have more stringent policies and practices are encouraged to continue with them. It is against this backdrop that the study seeks to observe the influence of lending rate on the performance of deposit money banks in Nigeria.

## 2. Literature Review And Theoretical Framework

### 2.1 Loan pricing theory

Banks cannot always set high interest rates. 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 (Stiglitz & Weiss, 1981). If banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behaviour or so called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodecai, 2004). From the reasoning of Stiglitz and Weiss (1981), 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.

### 2.2 Credit market theory

A model of the neoclassical credit market postulates that the terms of credits clear the market. If collateral and other restrictions (covenants) remain constant, the interest rate is the only price mechanism. 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 (Ewert, Szczesmy, & Schenk, 2000).

### 2.3 Principles of Lending

Olusemore (2004), refers to the following five (5) P's of lending. They include; personal factor analysis; purpose analysis; payment analysis; protection analysis; perspective analysis. According, these principles are important and if lenders follow them, the incidence of bad debt could be reduced to the barest minimum. Moreover, the principles are applicable to every type of lending, from the personal borrowing to buy aircraft and ship

- a. **Personal factor analysis:** Here, the borrower's attention should shift to the human resources, who are to co-ordinate the various factors of production in achieving the desired purpose of the loan. Unfortunately, bankers do not give much attention to this, perhaps because human beings are the most difficult factors to predict. Moreover, information about individuals is the most difficult thing to come by in Nigeria.
- b. **Purpose analysis:** A loan purpose which is not consistent with the borrowers funding needs should not be granted no matter the attraction of profitability of the proposal. Company's funding needs should fall in any of the categories: support or acquire asset replacement of liabilities.
- c. **Payment analysis:** This is the core of the credit analysis because it is the essence of any other analysis specifically here; we would talk about the payment source, the direction, volume and timing this can only be done if the bankers understand the dynamics of the customer's transaction flow. The lender should familiarize himself with the customers operating cycles. It requires the examination of the past cash flows as a basis for projecting future cash flows. If there were any significant changes in the cash flows, it would be because there is significant development such as merger, acquisitions or dividend.
- d. **Protective analysis:** A good lender would need to protect him against unforeseen events. He could not be the only one to take all risks. He should ask for and receive good collateral to support his lending. Collateral should be analyzed as to its ownership, control, location and market ability. The four factors can affect the reliability or usefulness of the collateral as a source of protection.
- e. **Perspective analysis:** Here, the borrower should be concerned about the future outlook of the transaction to be financed. The lending bank should evaluate the risks that have been identified and what can be done to migrate them. According to Ahiejeor, (2004), certain individuals are meant to carry out the loan policy. Therefore, for proper execution, it is necessary to delegate authority to the loans several factors determine the actual machinery a bank adopts. Ahiejeor gave these factors as the authority of the board of directors towards the extent of the authority to be delegated: the character and quality of the lending officer; the size of the bank and the loan portfolio and the type of loan to be made

Ahiejeor (2004), further says that while the legal responsibility and authority resides in the board, some boards play more important role than the others. In general, however large banks do delegate lending for an important checks and balances features of lending organization, there is need to have a loan department and credit department reporting directly to the board of directors through appropriate directors committee (Nwankwo, 2004).

### 2.4 The impact of lending on banks' performance

Nwankwo (2004), feels that like other items in the balance sheet-capital, reserves, investments etc, the importance of loan portfolio derives from the functions lending performs for banks. It is for instance the highest earning asset in the banks' balance sheet. It contributes materially to the banks achievement and fulfillment of the objectives of profitability by providing a higher return than other financial assets. It helps banks management to satisfy the legal and other regulatory objectives of the monetary authorities. The importance of lending in banking cannot be over emphasized. All the technical training a banker receives is heavily geared towards lending. When it is said that one is a good or an astute banker, what in fact is meant is that one is a shrewd lender-one who lends money safely and profitably.

### 2.5 Lending rate-risk management

Lending rate risk is the exposure of an institutional financial condition to adverse moments in lending rates. Accepting this risk is a normal part of banking and can be an important source of profitability and shareholder's value. However, excessive levels of lending rate can pose a significant threat to an institution's earnings and capital base. Accordingly, effective risk management that maintains lending rate at prudent levels is essential to the safety and soundness of banking institution.

Evaluating an institutions exposure to changes in lending rate is an important element of any full-space examination and for some institutions, may be the targeted examination such as evaluation which includes assessing both the adequacy of the management process, to control lending rate and the quantitative level of exposure when assessing the lending rate management process, examiners should ensure that appropriate policies procedures, management information systems and internal controls are in place to maintain lending rate at prudent levels with consistency and continuity. Evaluating the quantitative level of lending rate requires examiners to assess the existing and potential future effects of changes in interest rates on an institutions financial condition, including its capital adequacy, earnings liquidity and where appropriate asset quality. To ensure that these assessments are both effective and efficient resources must be appropriately targeted at those elements of lending rate that pose the greatest threat to the financial condition of any institution. The primary source of lending rate is differentiated with the timing of the reprising of bank assets liabilities, and off-balance sheet instruments. Another important source of lending rate commonly referred to as basis risk, occurs when the adjustment of the rate earned are paid on different instruments.

### **3.0 Research methodology**

#### **3.1 Research design**

Ayara (2005) sees research design to be conceptual framework within which an investigation is conducted. In this study, the research would employ an exploratory design. Exploratory design according to Etuk (2010), is where the investigation either studies secondary sources of information for needed information. In view of this, the exploratory design was adopted as a step to expose so many literature on the subject under study and how well to improve them if need be.

#### **3.2 The study area**

The study area of this study was the banking sector of the Nigeria economy. To be precise the bank lending and how it affects the deposit money bank performance was the main focus of this study. All current successful deposit money banks in Nigeria were considered for this study. The period considered in the study ranged from 1986 to 2012.

#### **3.3 Population of the study**

The population of the study is the total numbers of deposit money bank in Nigeria which is 24.

#### **3.4 Sampling procedure and sample size determination**

The non probability sampling method was used for the study. Specifically, the convenience or judgemental sampling technique was adopted.

The sample size was purposefully detgermined. At present the total number of active deposit money Bank in Nigeria is twenty four (24). This form the population for the study.

#### **3.5 Sources of data and data collection method**

This study employed the secondary source of data. For this reason, literature on related topics journals and internet materials were documented. In addition the CBN statistical bulletin served as a tool for gathering vital variables for empirical generalization of the study.

#### **3.6 Research instrument**

However, the major instrument of the study was multiple regression extracted from the CBN Statistical Bulletin (1986-2012). Data regarding lending and deposit money banks performance where extracted from the bulletin.

#### **3.7 Validity and reliability of instrument**

The validation of the mentioned variable for this study is based on the fact that the information or data as related to the variable as been properly examined by an expert. The banks aggregate loan and advances aggregate, Banks total assets and aggregates banks in Nigeria could serve as variables or yardstick for measuring the effects of bank lending on deposit money performance in Nigeria. These data although are unlimited, could form a basis for empirical generalization for this study, thus make for consistency at any point in time when such study of this nature is carried out. This is the need to rely on the CBN Bulletin for the selected variables.

#### **3.9 Model specification**

Based on the objectives of the study, the following variables are incorporated using economic growth model;

Model 1

$$ROE = f(PL, NPL,)$$

Model 2

$$ROE = f(LR, LA, LMS, WS)$$

Where;

ROE = Return on equity

PL = Performing loan

NPL = Non performing Loan

MS = Money supply

LR = Lending rate

LA = Loans and advances

Therefore, it is linearised into ordinary least square model

$$ROE = b_0 + b_1PL + b_2NPL + e \dots \dots \dots (1)$$

$$ROE = b_0 + b_1LR + b_2LA + b_3MS + b_4WS + e \dots \dots \dots (2)$$

Dependent variable = RDE

Independent variable = PL, NPL, LR, LA, MS, WS

Regression constant =  $b_0$

Regression parameters =  $b_1 - b_4$

Stochastic error term =  $e$

#### 4.0 Data Presentation, Analysis And Discussion Of Findings

##### 4.1 Presentation of data

The presentation of data on the influence of lending on the performance of deposit money banks in Nigeria between 1986 to 2012.

##### 4.2 Data analysis

The regression results of the impact of lending on the performance of deposit money banks in Nigeria (1986 - 2012).

$$R^2 = 0.950342$$

$$R^2 (\text{adj}) = 0.946204$$

$$\text{SER} = 0.831714$$

$$\text{F-statistic} = 229.6522$$

$$\text{DW} = 1.794550$$

\*Significant at 1% level, \*\*Significant at 5% level

The coefficient of multiple determination ( $R^2$ ) is 0.950342 and adjusted  $R^2$  of 0.946204. The later indicates that 95% of variations in the observed behavior of ROE is jointly explained by the independent variables namely: PL & NPL.

TABLE 4.1

(Nigeria's macro indicators)

YEAR	ROE	PL	NPL
1986	23.6	15701.6	0
1987	624.8	17531.9	0
1988	27.9	19561.2	0
1989	66.9	22008	0
1990	143.4	26000.1	0
1991	400	31306.2	7964.6
1992	456.2	42736.8	0
1993	793.6	65665.3	3967
1994	1788	94183.9	6663.6
1995	6916.8	144569.6	4882.6
1996	10222.6	169437.1	4952.4
1997	13555.3	385550.5	2197.7
1998	14071.2	272895.5	2644.9
1999	28145	322764.9	1736.1
2000	57648.2	508302.2	45004.2
2001	59404.1	796164.8	47476.2
2002	113882.5	954628.8	41254.3
2003	223772.5	1210033	61998.7
2004	254683.1	1519243	64153.1
2005	468588.4	1976711	14036.6
2006	1074884	2524298	28757.7
2007	1675614	4813489	32436.8
2008	685304.4	7799400	93086.2
2009	799896.8	8912143	42773.2
2010	638908.6	7706430	95324.7
2011	808425.2	7312726	101121.2
2012	932114.1	8150030	112131.1

Source: Central Bank Statistical Bulletin, 2012

TABLE 4.2

(Nigeria's macroeconomic indicators)

YEAR	ROE	LR	LA	LMS	LWS
1986	23.6	10.5	1830.3	4475.2	208
1987	624.8	17.5	2427.1	4961.2	246.3
1988	27.9	16.5	3066.7	6078	227.3
1989	66.9	28.8	3470.5	6671.7	271.6
1990	143.4	25.5	4221.4	7883.7	362.4
1991	400	20.01	5012.7	10911.3	541.8
1992	456.2	29.8	6978.9	15403.9	759.7
1993	793.6	18.32	10753	23110.6	1424.1
1994	1788	21	17757.7	34823.2	NA
1995	6916.8	20.18	25278.7	58090.7	12071.6
1996	10222.6	19.74	33264.1	72238.1	15049.5
1997	13555.3	13.54	27939.3	82823.1	20611
1998	14071.2	18.29	27180.7	96732.7	22848.2
1999	28145	21.32	31045.7	115759.9	24683.6
2000	57648.2	17.98	41028.9	141294.8	32288.6
2001	59404.1	18.29	55864.1	206889	70477.1
2002	113882.5	24.85	59849.7	233474.7	70170
2003	223772.5	20.71	62102.8	294309.6	95976.4
2004	254683.1	19.18	67738.6	332113.7	131055.6
2005	468588.4	17.95	48561.5	352038.3	172532.1
2006	1074884	17.26	49393.4	445792.6	251477.1
2007	1675614	16.94	149578.9	487576	490712.9
2008	685304.4	15.14	106353.8	932799.5	846942.8

2009	799896.8	18.99	135701.3	993457	1190732
2010	638908.6	17.59	128406	987641	1178099
2011	808425.2	16.69	255205.3	1053213	1295299
2012	932114.1	16.51	316364	1068342	1771496

Source: Central Bank Statistical Bulletin, 2012

TABLE 4.3

(Regression results)

Dependent variable: LRDE

Variable	Coefficient	Std error	t-stat	Prob
C	13.05867	1.470481	8.880546*	0.0000
LPL	1.809455	0.127735	14.16568*	0.0000
NPL	-1.683205	7.752106	2.163435**	0.0407

This shows that the model fits the data well and it has a tight fit. Also, the f-statistic is used to test for the significance of such good or tight fit. The model reports on effectively high f-statistic value of 229.652 which when compared with the table value. This indicates that the high-adjusted  $R^2$  value is better than would have occurred by chance; therefore, the model is statistically robust.

Using this criterion, therefore, LPL is significant at 1 percent level. Specifically, a 1 percent increase in LPL (1.80%) and NPL (1.68%) will prop up the performance of banks (ROE) more than proportionate percentage point. The constant term indicates that if all variables held constant, the performance will be improved by 13.058. The DW statistic (1.794) is used to test for the serial correlation in the residuals of the model. The calculated DW is 1.74. The  $du = 1.66$ ,  $4 - du = 2.34$ ,  $dL = 1.12$ ,  $4 - dL = 2.88$  at 5 percent level. The decision rule is that if the calculated DW falls inside  $du$  and  $4 - du$  (1.66 and 2.34) then there is a serial correlation in the residuals. This shows that the model is econometrically consistent. The goodness of fit of the model as indicated by the adjusted R-squared shows a good fit of the model that the model fits the data well.

The test for the individual statistical significant of the parameters, the t-statistic of the respective variables were considered. The a priori expectations about the signs of the parameter estimates are confirmation to economic theory.

#### 4.2.2 Data analysis

The regression result showing the relationship between LR, LLA, LLMS, LWS and ROE.

$$R^2 = 0.962080$$

$$R^2 (\text{adj}) = 0.954857$$

$$\text{SER} = 0.770804$$

$$\text{F-statistic} = 133.1999$$

$$\text{DW} = 2.449135$$

\*Significant at 1% level, \*\*Significant at 5% level

The coefficient of determination ( $R^2$ ) is 0.962080 and an adjusted  $R^2$  of 0.954857. Thus it is a good fit and the f-statistic as shown that the whole model is jointly significant at 5 per cent level. The Durbin – Watson (DW) statistic of 2.449135 reveals that it is difficult to establish whether there is autocorrelation or not as the value lies between 4 – du and 4 – dl. Thus, it is in the inconclusive region and within the acceptable bounds. Hence, it is good for policy analysis.

TABLE 4.4

(Regression results)

Dependent variable: LRDE

Variable	Coefficient	Std error	t-stat	Prob
C	13.29323	1.665970	7.970274*	0.0000
LR	0.007251	0.038629	0.187716	0.8529
LLA	0.014051	0.567335	0.024767	0.9805
LLMS	2.060323	0.443855	4.641885*	0.0001
LWS	8.982407	4.345107	2.067356**	0.0512

### 4.3 Test of hypotheses

In order to test the already stated hypotheses in chapter one, the following decision rule is stated.

#### Decision rule

The decision rule is to reject the null hypothesis if the t-calculated is  $> t - \text{table}$  and accept the null hypothesis if the t – calculated  $< t - \text{table}$

#### Hypothesis I

Results

t-calculated for LPL = 14.16568

t-critical at 27 df 0.01 = 2.01

Based on these results and our decision rule the null hypothesis is rejected and alternate hypothesis is upheld and concluded that performing loans had significant relationship between Return on Equity.

#### Hypothesis II

Results

t-calculated for NPL = 2.163435

t-critical at 27 df 0.01 = 2.01

Based on these results, null hypothesis is rejected and concluded that Non Performing Loans had significant relationship on Return on Equity.

### Hypothesis III

#### Results

t-calculated for MS = 4.641885

t-critical at 27 df 0.01 = 2.01

Based on these results and our decision rule the null hypothesis is rejected and alternate hypothesis is upheld. It is concluded that money supply had a significant relationship on Return on Equity.

#### 4.4 Discussion of findings

The study portrays the impact of lending on the performance of deposit money banks in Nigeria (1986 - 2012).

From the results of our hypotheses as stated above, performing loan had a significant impact on the performance of deposit money bank (ROA). This means that the effectiveness of loans is depended on the ability of the banks to use this as a way of improving the performance of banks in Nigeria. Performing loan affected the growth of the banking industry and it contributed positively to the development of banks.

The result shows that non performing loan had a negative impact on banks performance using Return on Equity (ROE) as a proxy. As an addendum all the variables had a positive effect on banks performance while non performing loan had a negative impact on banks performance. 1 percent increase on each variable contributed positively to the growth of banks while 1 percent decrease on non performing loan leads to banks performance

Given the empirical results of the model, the study revealed that all variables were statistically significant.

### 5.0 Summary Of Findings, Conclusion And Recommendations

#### 5.1 Summary of findings

The findings of the study include;

1. There is a significant relationship between performing loans and Return on Equity.
2. There is a significant relationship between non performing loans and Return on Equity.
3. There is a significant relationship between LR and return on equity.
4. There is no significant relationship between LA and return on equity.
5. There is a significant relationship between LMS and return on equity.
6. There is a significant relationship between WS and return on equity.

#### 5.2 Conclusion

Lending is the most profitable activity of a bank. They mobilize funds from surplus economic units and then convert such funds as credit facilities to the deficit units. Banks total loans and advances are major component of total credits to the various sectors in spite of the major constraints posted by the government regulations, institutional constraints and other macro economic factors. Deposit money banks should note that they need to do a lot in order to ensure good lending behavior even where a good measure of macroeconomic stability is achieved. This is because of the positive and significant relationship found between performing loans and bank performance.

#### 5.3 Recommendations

Based on the findings in this study, the following suggestions are recommended:

1. Government should adopt monetary and fiscal policies that will help Nigerian deposit money banks to improve on their performance.
2. There is need to strengthen bank lending rate policy through effective and efficient regulation and supervisory framework.
3. Banks should try as much as possible to strike a balance which will help them to cover cost associated with lending and at the same time, maintain good banking relationship with their borrowers.
4. Deposit money banks should develop credit procedures, policies and analytical capabilities and these efforts should be expended into full credit management.



5. Deposit money banks should strategize on how to attract and retain more deposits so as to further improve on their lending performance.
6. Deposit money banks should avoid giving out loans that will lead to bad debt

## REFERENCES

- Adegunmi, S. (1983). *The Nigerian financial system*. Lagos: Macmillan Press Limited.
- Ahiejor, B. (2004). *Banking lending in developed countries*. London: Macmillan publishes
- Anyanwu, H. (1996). *Practice of banking*. Enugu: Collins Academic and Professional texts.
- Anyawaokoro, C. (1996). *Issue in banking*: Lagos: Nelgra fix publishers.
- Asika, N. (1991). *Research methodology in the behavioural sciences*. Lagos: Longman.
- Carletti, E., Cerasi, V. & Daltung, S. (2006). Multiple-bank lending: diversification and free riding in monitoring, *working paper*, department of statistics: Universita degli Studi di Milano- Bicocca. *International Journal of Financial Research*, 2(2):34-54.
- CBN (2012). Central bank of Nigeria statistical bulletin.
- Chodechai, S. (2004). Determinants of bank lending in Thailand: An empirical examination for the years 1992-1996, *Unpublished Thesis*.
- Etuk, E. J. (2010). *Business research methods: Concepts, processes and applications*. Calabar: University of Calabar Press.
- Ewert, R., Szczesmy, A. & Schenk, G. (2000). Determinants of bank lending performance in Germany. *Schmalenbach Business Review (SBR)*, 52, 344 -362.
- Felicia, A. (2011). Lending rate pattern in Nigeria. *Journal of Economics*, 2(3), 71-82.
- Godlewski, C. J. & Ziane, Y. (2008). How many banks does it take to lend? Empirical evidence from Europe, *Working Paper*. World Bank series.
- Ndiyo, A. N. (2005). *Fundamentals of research in behavioural sciences and humanities*. Calabar: Wusen Publishers.
- Nwankwo, G.O. (2000). Organizing for financial risk management; *The Credit Administrator*, 2(2), 32-39.
- Olusemore, K. (2004). *Principles of finance*. Owerri: Nelgar fix Nigeria limited.
- Olusemore, O. (2004). *Nigerian banking and economic management. A collection of essays*. Ibadan: Ibadan press book
- Onoh, J. K. (2002). *Dynamics of money banking and finance in Nigeria*. Aba: Astra Meridian publishers
- Reed, M., Rose, P. & Pierson, H. (1980). *Commercial banking*. New Jersey: Prentice Hall Inc.
- Rose, P. S. (1996). *Commercial bank management*. Texas: McGraw-Hill Inc.
- Stiglitz, K. & Weiss, U. (1981). *Financial asset of economic development*. Washington Dc Brooking Institution.

The CIBN in its distance learning package (2008).