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THE EFFECT OF FINANCIAL INTERMEDIATION ON VOLUME OF LOANS AND ADVANCES OF NIGERIA'S COMMERCIAL BANKS (1996 – 2016)

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Abstract

The study examined the effect of financial intermediation on volume of loans and advances of Nigeria's commercial banks, using data spanning (1996 – 2016). Secondary data were collected from Central Bank of Nigeria. Financial intermediation proxied as volume of Commercial Banks Deposits (VOC) and Average Interest on Deposits (AID) were independent variables of the study while volume of Loans and Advances (VOLA) was used as dependent variable. The variables achieved stationarity at the first difference. The OLS multiple regression result shows that there exist a positive relationship between total volume of deposits made by customers and volume of loans and advances made by commercial banks in Nigeria. The study reveals that total volume of deposits and interest on deposits have positive relationship with volume of loans and advances of commercial banks in Nigeria, with total volume of deposits having significant effect on volume of loans and advances of commercial banks in Nigeria. The study recommends that commercial banks in Nigeria should bring on board innovative packages that would attract more deposits from their customers in order to increase their ability to offer more loans and advances, among others.

Keywords: Financial Intermediation, Average Interest Rate on Deposits, Commercial Banks, Loans and Advances.

1.0 INTRODUCTION

In today's global financial dealings, commercial banks play key roles in the allocative efficiency and funds around the world. This is exemplified by high volume of debts and other settlements made by these banks, out of international trade and services' relationships and other financial obligations given the prevailing exchange rates and interests either earned and or expended on deposits.

The Nigerian financial system consists of various financial institutions, operators and instruments that operate in an orderly manner to ensure the smooth flow of funds and thus accord the system its character and uniqueness (Nzotta, 2004). Central Bank of Nigeria (1993) refers the Nigerian financial system as the set of rules and regulations and the aggregation of financial arrangements, institutions, agents, that interact with each other and the rest of the world to foster economic growth and development of a nation. This is achieved through intermediation process, which entails providing a medium of exchange necessary for specialization and the mobilization of savings from surplus to deficit economic units, Dabwor, (2009).

The institutional funds' mobilization and investments are the hallmark of the financial intermediation operation of the financial institutions, Ezirim (2006). Commercial banks in Nigeria have continued to play important roles in the financial system by mobilizing financial resources and making same available for growth and developmental projects. They accounted for about 93.2% of total institutionalized savings as at December 2016, Ogwuma, Avoaja and Garuba, (2017).

The mobilization of loanable funds in the developing countries such as Nigeria is hinged on some of the following factors:

- ✓ The prevailing interest rate – which in some varying occasions have been an induced factor to attracting idle funds from the general public and or discouraged same in commercial banks.
- ✓ Other factors – which are based on variables such as, the state of the economy, income level of the citizens, number of the employed, strengths of the financial institution (banks), negative information, political stability, inflationary trends, price stability, sound regulatory framework, etc.

Commercial banks in Nigeria attempt to solve the allocation problem by providing the economy with the financial market mechanism prevailing within the market framework and a kind of judgement criterion called interest rate. The interest rate constitutes the term of exchange between the deficit and the surplus units, Ezirim, (1996).

Given the periodic regulatory frameworks on liquidity position of commercial banks by Central Bank of Nigeria, the apex regulatory body, the availability of loanable funds of commercial banks in Nigeria, to a greater extent has been taken with economic mixed feelings by major international financial corporations, industrialists, policy makers and other major stakeholders in the funds flow activities, as being abysmal in an economy regarded as being robust, with viable investment potentials and untapped human and materials resources.

Consequently, the periodic upward swings of interest rate on deposits of commercial banks seem to have much more effects on deposit inflows, which give rise to higher liquidity position of banks and with attendant higher loanable funds for investment purposes, which also triggers growth and development of the Nigerian economy. Higher interest rate payment on deposit mobilized by implication solidifies the theories that illiquidity of the system places commercial banks on the risk of procuring high cost funds and compatibly could trigger bank run and eventual distress. A well intermediated commercial bank strikes a balance between interest payment on its deposits and volume of loans and advances to be apportioned, given the regulated liquidity position at that time and as could be dictated by the apex regulatory body, the CBN.

Nzotta (2004) highlighted the composition of commercial banks deposit as:

(a) **Demand Deposits:** Usually a checking deposit, withdrawn by the depositor or the person named in the instrument (cheque) without prior notice to the bank, provided of course that the account is well funded.

(b) **Time Deposits:** Usually a deposit with a definite tenure and specified interest rates which may be fixed or floating.

(c) **Savings Deposits:** Savings accounts are evidenced by a passbook and usually, banks allow withdrawals on them up to a maximum number, after which the account will no longer earn interest.

1.2 STATEMENT OF THE PROBLEM

Given numerous policy frameworks by Central Bank of Nigeria aimed at improving on the stability of bank deposits, interest rate payable on deposits and the attendant maintenance of the core roles of supporting the aggregate economy, commercial banks in Nigeria have not been having it rosy in their quest for having these active roles fully played.

Prior to 1986, the interest rates on deposits were highly regulated. The era of Structural Adjustment Programme (SAP) saw to the liberalization of interest rates and subsequent entrants of more financial institutions in Nigeria financial system. The Structural Adjustment Policy was to a great extent viewed to enhance the provision of sufficient funds for investment purposes and to increase the spread of bank branches so as to provide services to the unbanked public which constituted about 40%of the bankable population, mobilization of more deposits and make funds available in the form of loans and advances to the needed deficit unit of the economy.

The policy came to a brick wall as commercial banks were wittingly involved in placing of high interest rate on deposits, unwarranted approvals of loans and advances and other ill practices with the intention of either outsmarting and/or creating an impression of a competitive big bank approach, a syndrome that catapulted into bank distress of 1994. The overbearing activities of commercial banks under the guise of dealing on the established framework of interest rate and to help government achieve her financial inclusion policy, culminated to regulatory authorities making a policy reversal with a measure to regulating the interest rate management.

The challenges faced by commercial banks in Nigeria have been to come up with a mechanism that would foster relatively ease in stability of deposits, interest rate stability and accurate volume of loans and advances needed in any given point in time to supporting the real sector of the economy. These challenges have gone beyond commercial banks immediate environmental forecast needs, as the bank's periodic publications on the volume of bad and doubtful loans have been a debilitating factor for the attainment of the overall objective of the financial system in Nigeria.

1.3 OBJECTIVES OF THE STUDY

The main objective of the study is to examine the effect of financial intermediation on volume of loans and advances of commercial banks in Nigeria from 1996-2016. The specific objectives include:

(1) To determine the effect of commercial banks deposits on the volume of loans and advances.

(2) To examine the effect of interest on deposits on volume of loan and advances of commercial banks in Nigeria.

(3) To determine if there is a positive and significant relationship between average interest on deposits and commercial banks' volume of deposits on volume of loans and advances within the period under review.

2.0 REVIEW OF RELATED LITERATURE

2.1 CONCEPTUAL REVIEW

Banking system has been a major determinant factor in the stimulation and lubrication of any given economy. Cardinal services such as provision of loans and advances, acceptance and payment of demand deposits and foreign operations services are too vital to be ignored. All these are carried out mainly under the ambit of commercial banks activities. A commercial bank therefore is a financial institution that deals in money by way of accepting deposits of money from the public to keep them in its custody for safety, Ondieke and Jagongo,(2010). A bank becomes a commercial bank when it deals in money and credit for profit, Makali, (2012). Commercial banks are part of the economic agents that facilitate the transfer of funds from surplus economic unit to deficit economic unit, known as financial intermediation process, Umoh, (2004).

These mobilized funds are made available in the form of loans and advances and apportioned to regenerative investment opportunities for an enhanced growth and development of the Nigerian economy. The link between savings and investment is no less important as the level of savings in an economy also plays a role in the determination of investment levels. This is why monetary authorities in their pursuit of monetary policies try to influence level of savings and availability of credit by directly, in the case of administratively fixed rates or indirectly during deregulated era, influencing the rate of interest, Ogwuma, (1996).

A loan is seen as a written or oral agreement for a temporary transfer of a property, usually cash in cash form, from its owner called the lender to a borrower who promises to return it according to the agreed terms. The terms mainly involve interest, time of repayment and the partern of repayment. If the loan is a term loan, it is repayable when the lender demands for its repayment. If it is an installment loan, the lender requires repayment in equal monthly repayments. In case the lender requires a lump sum to be made at the end of the time agreed, then, this type of loan is a time loan, Dhikhary,(2006).

Asamoah (2008) defines commercial bank credit as a process where a commercial bank provides loans or advance to a single borrower or group of individuals or client. It is believed that bank credit contributes significantly to banks' profitability, within its disparities explained by the difference in their lending rates, lending policies and unavoidable competition that may be between banks.

As opined by Aderibigbe (2007) commercial banks do not just apportion or make loanable funds available as they could which helps in their money creation mechanisms, commercial banks' ability to create money is however, limited by the statutory reserve requirement of the Central Bank of Nigeria (CBN).

It is expedient to note here that savings rate, on the other hand, when high, induces savings, which finally translates into availability of loanable funds, Acha and Acha (2011). The hurdle here is that, an increase in savings rate is also bound to drag lending rate high, with attendant negative effects on both investments and their ultimate returns, Chizea, (1993).

Increase in deposits rate, also, which liberalization engenders leads to increase in propensity to save, causes aggregate demand to decrease and precipitate a fall in output, profits and investments in the real economy, Tenant, (2006).

But given a brief summary on Nigeria's domestic economy, aggregate credit to the domestic economy (net) stood at N21,612.5 billion at the end of December 2015, representing 12.1 percent growth over the level at end – December, 2014, compared with the indicative benchmark of 29.3 percent for fiscal 2015. The growth in aggregate credit was attributed to significant increase in net claims on the Federal Government and credit to the private sector.

Consequently, the net domestic credit contributed 12.4 percent points to the growth rate of M2 (broad money) at end – December 2015, compared with 30.2 percent point of end-December 2014, CBN Annual Report, (2015). Following the need to support the real sector of the economy, the Monetary Policy Committee (MPC) increased the Monetary Policy Rate (MPR) from14 percent. This was to complement the adoption of flexible exchange rate policy framework in a bid to moderate inflation and provide for positive real returns on investment to attract investors. The tight monetary policy stance of the CBN brought about a reduction in the banking system liquidity, which impacted on money market rates, Financial Surveillance Report (2016).

2.2 THEORETICAL / EMPIRICAL REVIEW

Van (1982), reiterates that, the structural school of thought emphasizes structural difficulties such as market inefficiencies as the main reason for economic retrogression of emerging countries. They criticize the market clearing assumptions implicit in the financial liberalization school, especially the assumption that higher interest rates attract more savings into the formal financial sector.

Shaw (1973) in his Debt Intermediary Hypothesis states that expanded financial intermediation between the savers and investors resulting from financial liberalization (higher real interest rates) and development increase the incentive to save and invest, stimulates investments due to an increased supply of credit, and raises the average efficiency of investments.

Iwedi and Igbanibo (2015) modelled the relationship between financial intermediation functions of banks and economic growth in Nigeria using data spanning 1970 – 2014. Secondary data was used in their study. Augmented Dicky-Fuller was used to test the stationarity of the data. The study reveals the existence of a long-run relationship between bank financial intermediation indicators and gross domestic product in Nigeria. Also, study suggests that growth in the volume of deposits liabilities could boost banks financial intermediation function in the economy and exert a positive impact on level of productivity.

Greenwood and Jovanovic (1990) stressed that the international role of financial intermediation in an endogenous growth model, and argued that its role is crucially related to productivity growth of capital. Nicolas and Lindsay (2012) also examined the structural impediments to savings mobilization and financial intermediation as including imperfect information and risk.

The work reiterates that as policies are introduced to encourage capital markets in developing countries, the improvements in banking institutions' operation should be given due attention so that the economies could eventually benefit from the advantages of both bank based and non-bank based finance.

Hassan (2016) examined the effect of interest rate on commercial bank deposits in Nigeria within the period of 2000 – 2013. The study made use of secondary data sources from Central Bank of Nigeria. Ordinary Least Square of multiple regression technique was used with a study revelation that, there exist a negative relationship between the interest rates and commercial bank deposits, suggesting that interest rate has not been responsible for customers' deposits in commercial banks in Nigeria.

3.0 METHODOLOGY

3.1 Research Design

The study adopts a survey type of research design. There are two variables of the study, dependent and independent variables. The dependent variable is the volume of loans and advances in Nigeria, while the independent variables are interest on deposits, volume of commercial bank deposit.

3.2 Sources of Data

Based on the nature of the study, data were collected from the secondary sources. The sources are Central Bank of Nigeria (CBN), National Bureau of Statistics, Debt Management Office (DMO), Statistical Bulletins, Textbooks, cited works and journals.

3.3 Technique for Analysis

The analytical framework of this study includes stationarity test. This guides in revealing the behaviour of data variables under study. The stationarity will investigate the level of stationarity of the variables, Non-stationarity could lead to nonsensical or spurious regression results. Ordinary Least Square regression will reveal the predictive ability of the model. Johansen Co-Integration text will reveal the short and long run equilibrium relationships.

3.4 Model Specification/Description of the Variables

In order to examine the effect of financial intermediation on volume of loans and advances of commercial banks in Nigeria within the study period of 1996 – 2016. Multiple regression models was used to analyze the data gathered for this study.

$$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \mu_t \ldots\ldots\ldots\ldots\ldots(1)$$

Where Y = (estimated value of dependent variable) Volume of Loans and Advances.

β_o = Base Constant

$\beta_1 - \beta_3$ = Regression Co-efficients

X_1 = Financial Intermediation (proxied as Volume of Commercial Banks Deposits).

X_2 = Average Interest on Deposits

μ_t = error term

This is further denoted as:

VOLA = Volume of Loans and Advances

VOC = Volume of Commercial Bank Deposits

AID = Average Interest on Deposits

VOLA = $\beta_o + \beta_1$ VOC + β_2 AID + μ_t…………(2)

4.1 DATA ANALYSIS

Table 2: Unit Root Test

Variables	ADF Test	0.05 Critical Values	Order of Integration
Volume of Loans and Advances (VLAA)	-4.003961	-3.081002	I(1)
Total Volume of Deposits (TVD)	-3.946441	-3.081002	I(1)
Average Interest on Deposit (AVID)	-3.330907	-3.029970	I(1)

Source: Author's computation using E-views 9.0 software

Because time series data are non-stationary by their nature, there was a need to make them stationary in order not to obtain spurious results. To do this, the study carried out the unit root test adopting the augmented Dickey-Fully (ADF) unit root test. Result in table 2 shows that at level, none of the variables was stationary as their ADF values did not exceed the critical values at five percent level of significance. Based on this outcome, there was a need to difference the non-stationary time series one more time to see whether we will obtain overall stationarity.

At first difference, all the variables became stationary as their ADF values (4.003961), (3.946441) and (3.330907) in absolute terms for volume of loans and advances (VLAA), total volume of deposits (TVD) and average interest on deposits (AVID) became greater than their critical values (3.081002), (3.081002) and (3.029907) respectively. Because all the variables were now stationary, they can be used to carry out the regression analysis.

Table 3: Ordinary Least Squares (OLS) Result

Dependent Variable: LOG(VLAA)

Method: Least Squares

Date: 02/06/18 Time: 03:03

Sample: 1996 2016

Included observations: 21

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.466879	0.303192	-1.539882	0.1410
LOG(TVD)	1.023498	0.054092	18.92147	0.0000
LOG(AVID)	0.421004	0.245963	1.711657	0.1041

R-squared	0.969250	Mean dependent var	3.483468
Adjusted R-squared	0.965834	S.D. dependent var	0.742966
S.E. of regression	0.137331	Akaike info criterion	-1.001284
Sum squared resid	0.339476	Schwarz criterion	-0.852067
Log likelihood	13.51348	Hannan-Quinn criter.	-0.968900
F-statistic	283.6857	Durbin-Watson stat	2.623096
Prob(F-statistic)	0.000000		

Source: Author's computation using E-views 9.0 software

The result shows that there exists a positive relationship between total volume of deposits made by customers and volume of loans and advances made by commercial banks in Nigeria. This result conforms to economic theoretical expectation because an increase in volume of deposits made by bank customers is expected to increase the ability of the commercial banks to offer more loans and advances. From the result, one percent increase in volume of deposits made by the customers leads to 1.02 percent increase in volume of loans and advances offered by the commercial banks in Nigeria. The probability value of total volume of deposits (0.0000) is less than the test significant level (i.e. $P < 0.05$). Thus, we conclude that volume of deposits made by bank customers have significant effect on volume of loans and advances of Nigeria's commercial banks in Nigeria. This finding corroborates Olokoyo (2011) which argued that volume of deposits was the greatest determinant of lending behaviour of banks in Nigeria. This finding can be attributed to the aggressive financial intermediation efforts of commercial banks in Nigeria through the instrumentality of increasing the depositors' base. As the depositors' base increases, volume of deposits increases thereby increasing the ability of the banks to lend more.

The study also reveals that there is a positive relationship between interest on deposits offered by the commercial banks and volume of loans and advances available to bank customers in Nigeria. This result conforms to economic theoretical expectation because as the banks pay higher interest on deposits made by customers, the higher the volume of loans and advances available to commercial bank customers in Nigeria. From the result, one percent increase in interest on deposit leads to 0.42 percent increase in volume of loans and advances available to bank customers in Nigeria. The probability value of interest on deposits (0.1041) is greater than the test significant level (i.e. $P > 0.05$). Thus, we conclude that interest on deposits offered by bank customers have significant effect on volume of loans and advances of Nigeria's commercial banks in Nigeria. This finding corroborates Hassan (2016) which argued that high interest rate on deposits spur the bank customers to want to deposit their funds in the banks.

The coefficient of determination (adjusted R-squared) shows that 97 percent of the variations in volume of loans and advances of commercial banks in Nigeria are due to variations in total volume of deposits and interest on deposits. The probability F-statistic (0.000000) is less the test significant level (0.05) and this indicates that the model adopted in the study is reliable and significant. This is a clear indication that the outcome of the study can be relied upon for sound policymaking. The Durbin-Watson statistic (2.63) falls within the permissible region (the permissible region being $2 \leq DW < 4$) and suggests that there is no presence of autocorrelation.

5.1 CONCLUSION

This study investigated the effect of financial intermediation on volume of loans and advances of Nigeria's commercial banks in Nigeria. To achieve this broad objective, the study specifically investigated the effect of commercial banks' deposits on volume of loans and advances of commercial banks and effect of interest on deposits of commercial banks on volume of loans and advances of commercial banks in Nigeria. Hence, total volume of deposits made by bank customers and interest on deposits of commercial banks in Nigeria served as the independent variables while volume of loans and advances of commercial banks as the dependent variable. From empirical findings, there was evidence that suggested that total volume of deposits and interest on deposits have positive relationship with volume of loans and advances of commercial banks in Nigeria but it was total volume of deposits that have significant effect on volume of loans and advances of commercial banks in Nigeria.

5.2 RECOMMENDATIONS

The following recommendations are made in accordance with the findings of the study:

(i) Commercial banks in Nigeria should bring on board more innovative packages that would attract more deposits from their customers in order to increase their ability to offer more loans and advances.

(ii) Interest offered on deposits should be reviewed upwards by the commercial banks in Nigeria in order to attract more deposits thereby significantly increasing the volume of loans and advances offered by the commercial banks to their customers.

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