



## THE IMPACT OF BANK DEPOSIT ON BANK LENDING FOR ECONOMIC GROWTH IN NIGERIA

**\*OHIONAH SIMEON SULEMAN; & \*\*UMORU ABDULJELIL IZUAGIE**

*\*Humanities and Social Sciences Department, Auchi Polytechnic, Auch, Edo State. \*\*Department of Business Administration and Management, Auchi Polytechnic, Auch, Edo State.*

### **Abstract**

*The banking sector as short term financial intermediaries, receive deposit from customers and extend credit to the private sector and government to the extent that the level of their excess reserves permits. Through an efficient intermediation process, financial markets improve productivity of investment by channeling funds to the most profitable investment projects, which translate into economic growth. This study examines the impact of bank deposit on bank lending for economic growth in Nigeria from 1986 – 2018. The choice of this period was to enable us focus strictly on the era of liberalization and consolidation of the banking sector. The study employed the error correction technique to estimate the lending equations in order to suitably place the impact of the bank deposit on bank lending for economic growth. The results of the study revealed a positive and significant relationship between bank deposit and total bank lending for economic growth. It also shows that there is no positive autocorrelation in the model. Based on the findings of the study, it is recommended that; the government should ensure efficient allocation of credit to the private sector to enhanced and sustained economic growth. Also, the apex bank (CBN) should be more committed to policy implementation so that business environment can attract investors, by way of promoting capital flow into the economy.*

**Keywords:** *capitalization, unit root, bank liquidity, excess reserves, volatility*

### **Introduction**

The banking sector is the central nervous system of every economy, especially a market driven economy. As short term financial intermediaries, they receive deposit from customers and extend credit to the private sector and government to the extent that the level of their excess reserves permits. Through an efficient

intermediation process, financial markets improve productivity of investment by channeling funds to the most profitable investment projects, which translate into economic growth. In other words, Harrod and Domar has postulated in their theory that for a country to achieve economic growth, such a country must save a proportion of her income (output) which the deposit money banks are doing. Banks, as rational transactors, avoid large levels of excess reserves which could be given out as loans to investors in the production sectors. However, to ensure that bank liquidity and solvency is protected, the desire to earn income is constrained by guidelines put in place by the regulatory authorities. This requires a high level of discipline in risk management and corporate governance. However, if banks becomes too risk averse, they become reluctant in granting loans to potentially profitable business, in the process compromising their profit levels as well as growth in national income and employment.

Kama (2006) opined that the ability of the financial sector to play its role has been periodically punctuated by its vulnerability to systemic distress and macroeconomic volatility, and policy fine tuning inevitable. The financial sector reforms is focus on liberalizing the banking sector and ensuring competition and safety of the system by proactively positioning the sector to perform the role of intermediation thereby playing a catalytic role in economic development.

In many emerging markets, including Indonesia, Brazil and Korea, bank reforms has also become prominent as bank strive to be more competitive and resilient to shocks and reposition their operations to cope with the challenges of the increasing globalised banking system. The collapse of Helstatt bank in Germany and New York where depositors funds were lost resulted to the Basel agreement which make rules in the instrument of prudential regulations in banking operations. Lending which may be short, medium or long term basis is one of the functions of the commercial banks rendered to their customers. In other words, bank grant loan to individual, private business and the government in order for them to be able to embark upon investment and development activities as a means of aiding their growth or contributing to the economic growth of the country in general. Commercial banks are important institution in saving mobilization and financial resource allocation. Consequently, this role makes them an important phenomenon in economic growth and development. Olokoyo (2011), posit that no matter the sources of the generation of income or the economic policies of the country, commercial banks will be interested in giving out loan and advances to their

customers bearing in mind the principles guiding their operations which are; profitability, liquidity and solvency. However, commercial bank loan decisions are influenced by such factors as the prevailing lending/interest rate, the volume of deposits, and bank liquidity ratio to mention but a few.

The objective of this paper is to examine the impact of bank deposit on bank lending for economic growth in Nigeria from 1986 to 2018. The paper used the error correction techniques to estimate the lending equation and the paper is divided into the introduction followed by review of literature and empirical review. This is followed by model specification, unit root analysis, co integration result, analysis of result, policy recommendation and conclusion.

### **Review of literature**

The Nigerian banking industry plays a leading role in the development of the economy. Banks mobilize and disburse tremendous volumes of fund to the government and private sector investors to finance production, consumption and commerce which in turn stimulates the process of economic growth with its multiplier effect across all sectors of the economy.

Financial repression leads to large differential between deposit and lending rates of interest (Shaw, 1973). There is also tendency for the monetary authorities to set high reserve requirements in less developed countries. These manifestations of financial repression mean that not only is the quantity of savings (and investment) low, or at the very least irregular, it also means that the level of activity which does occur is of poor quality. This is really what the term financial repression entails. If the real interest rate is not allowed to clear the money and credit markets, both overall as well as the quality of savings and investment will be repressed. It is in this view of efficient financial system argument that the McKinnon-Shaw hypothesis of financial deregulation was popularized.

Apart from the informal sources of generating finance, SMEs in Nigeria depend on banks for funding. The dependence on banks makes SMEs vulnerable to all the, reforms, developments and changes in the banking system. Reform or change of any kind will make some people or institutions better off and others will be worse off. In Nigeria, Duru and Kehinde(2012) noted that research efforts in the area of financial sector reforms and its impact on SMEs are minimal. Here, Ango (2011) on the Impact of Banking Sector Reforms on

Growth and Development of Entrepreneurs; Lawal (2010) on SMEs Access to Commercial Banks Credit and their Contribution to GDP in Nigeria; and finally Aruwa (2009) on Assessment of Small and Medium Industries Equity Investment Scheme (SMIEIS) Implementation Guideline. The studies are unanimous in their conclusion that the negative impacts of banking sector reforms on SMEs have outweigh the positive own. The reasons for this include instability in the exchange rate of the Naira, high interest rates, inflation, and ignorance of special funding schemes for SMEs by vast majority of entrepreneurs.

It must be noted that Deposit Money Banks (DMBs) play financial intermediary roles in the mobilization of available resources from surplus economic units to satisfy the requirements of the deficit unit of the economy. The financial intermediary act being performed by DMBs, allows banking sub-sector to easily influence the direction of available resources, thereby greatly affecting the rate of economic growth. Though, Banks mediate between demand for credit and supply of deposit globally, but for these to work effectively and efficiently, there should be a platform for fair and healthy competition, that must be tolerated in the sector, which would impliedly require reform in the financial sector and creating a perfect competitive situations, which would help to harmonize: numerous suppliers / buyers of roughly equal size, free flow of information and homogenous products and services etc., hence, in such situations, either government or banks are permitted to interfere in the market. The liberalization of interest rate was designed to have a favorable impact on the economy by stimulating keen competition among banks for deposits with savings mobilization to be fostered by higher interest rate. Effective bank lending rates had been diverged considerably from the market, which is determined by Monetary Policy Rate -MPR (Adekanye, 1991). Olokoyo (2011), in an attempt to analyze the determinants of commercial bank lending behavior in Nigeria using the multiple regression analysis of the ordinary least square found that interest rate, minimum cash requirement ratio and liquidity ratio have a positive relationship with commercial bank loans and advances. The regression coefficient show that every 1% increase in lending rate, cash reserve requirement and liquidity ratio for commercial bank will cause their loans and advances to change by 0.9%, 0.12% and 0.04% respectively. It was also found that four of the explanatory variables namely, volume of deposit, investment portfolio, foreign exchange and gross

domestic product have significant influence on the lending behavior of banks as they are positively correlated with bank lending. This implies that the explanatory variables tend to move in the same direction with bank loan and advances. From the result, the volume of deposit has the highest coefficient value of 6.8004 which implies that this explanatory variable has the highest impact and influence on the lending behavior of commercial banks and a change in it will yield the highest change in banks loan and advances.

### **Empirical Literature**

Quite a number of empirical studies have been carried out by different scholars, Laurenceson (2003) drawing on a panel data of 101 countries between 1994 and 2001 examined the relationship between bank franchise values and deposit mobilization. Results showed a negative relationship between franchise value and a decrease in deposits; suggesting that increased competition leads to improvements in service quality which tempts households to raise their holdings of savings deposits. In this regard it can be argued that high interest rate on deposits leads to higher deposits (*ceteris paribus*). The proponents of demand-following hypothesis argued that economic growth is a causal factor for bank lending, not the reverse. Robinson (1952) maintains that economic growth propels banks to finance enterprises. Gurley & Shaw (1967) also argued that as the economy expands and grows, the increasing demand for financial services stimulates banks to provide more credit. Similarly, Oluitan (2004) is of the opinion that policy makers should focus less on measures leading to increase in bank lending and concentrate more on legal, regulatory and policy reforms that boost the functioning of markets and banks. Muhsin & Eric (2000) in their study on Turkey concluded that economic growth lead to financial sector development. However, the proponents of supply-leading hypothesis are of the belief that bank lending is a veritable tool for attainment of economic growth and development. The hypothesis was originally credited to the works of Schumpeter (1934). Schumpeter strongly believed that efficient allocation of savings by means of identification and funding of entrepreneurs who invest such funds in innovation and production of goods and services lead to economic growth. This view was supported by other scholars like McKinnon (1973), Shaw (1973), Fry (1988), and Greenwood & Jovanic (1990). Bank credits in developing countries especially in Nigeria remains largely unexplored. Anthony (2012) investigated the determinants of bank savings in

Nigeria as well as examined the impact of bank savings and bank credits on Nigeria's economic growth from 1970-2006. The study adopted two impact models; Distributed Lag-Error Correction Model (DL-ECM) and Distributed Model. The empirical results showed a positive influence of GDP per capita (PCY), Financial Deepening (FSD), Interest Rate Spread (IRS) and negative influence of Real Interest Rate (RIR) and Inflation Rate (INFR) on the size of private domestic savings. Also a positive relationship exists between the lagged values of total private savings, private sector credit, public sector credit, interest rate spread, exchange rates and economic growth. The study therefore recommend that government's effort should be geared towards improving per capita income, reducing the unemployment rate in the country to accelerate growth through enhanced savings.

### **Research Methodology**

The method of analysis used for this study is the ordinary least squares (regression analysis). Ordinary least squares were used because of the kind of data to be used, and analysis to be done. Time series data from 1986-2018 was used to conduct the impact analysis of bank deposit on bank lending for economic growth in Nigeria. The data used are source from the various Central bank of Nigeria statistical reports.

### **Model Specification**

This study is designed to examine the impact of bank deposit on bank lending for economic growth in Nigeria. To examine this, a simple linear model is adopted. However, the model used Total bank lending as the dependent variable while Bank deposit and bank lending rate as the independent variables. The relationship to be estimated is specified as:

$$\text{LogTBLend} = \theta_0 + \theta_1 \log(\text{Bdep}) + \theta_2 \log(\text{Blr}) + U_{3t}$$

Where TBLend is total bank lending, Bdep is bank deposit, Blr is bank lending rate,  $U_t$  is the error term.

Our apriori expectation is that the coefficients of the independent or explanatory variables such as bank deposit to have a positive impact on lending as the increase in this suppose to encourage bank to lend out credit to investors. Lending rate is suppose to have an inverse influence on bank lending as increase in bank lending rate will make investors to borrow as cost of fund is now expensive.

### Analysis of Unit Root Results

The study uses the Augmented Dickey-Fuller (ADF), to test the order of integration of the variables. The variables are tested in both level and first difference and, with constant and trend in the equation. The result is as shown in the table below. The result shows that total bank lending, total bank deposits and bank lending rate could gain stationarity at level. This is seen by comparing the absolute values of the ADF test statistics at 1%, 5% and 10% levels of significance. Thus, Box and Jenkins (1978) argued that non stationary time series in level may be made stationary by taking their first differences. Thus, we differenced the variables before subjecting the variables to unit root test. The results are stationary at first difference hence the variables were found to be integrated of order one.

### Augmented Dickey Fuller Test Results table

Variables	First Difference ADF	Order of Integration
Ln(TBLend)	-5.938* (-3.26)	I(1)
Ln(Bdep)	-8.942* (-3.265)	I(1)
Ln(Blr)	-8.942* (-3.265)	I(1)

*ADF critical value @ 95% is reported below each ADF value*

Since the variables were made stationary by their first differences, it therefore implies that the mean and the variance of the variables are independent of time and have the tendency to constantly return to their mean values.

### Co-integration Results

The Johansen Maximum likelihood (JML) approaches was used in the co-integration tests. Given the presence of linear trend the co-integration tests were done. The co integrating test starts with the null hypothesis that there are no co-integrating vectors ( $r = 0$ ) as against the alternative that there exists a co-integrating vector.

**Johansen's Co-integration Test Results (Trace statistics) table**

Null Hypothesis	Trace statistic	5% Critical value	Eigen Value
<b>r = 0</b>	165.67	142.32	0.639
<b>r = 1</b>	128.58	123.57	0.659
<b>r = 2</b>	114.39	122.38	0.948
<b>r = 3</b>	39.72	65.35	0.694
<b>r = 4</b>	14.66	25.96	0.686
<b>r = 5</b>	3.64	5.27	0.692

The result showed that there exist at most one co integrating relation as both the trace and maximum statistics are larger than their respective critical values. The null hypothesis of no co-integrating relationship at 5 percent level of significance was rejected in favour of the alternative hypothesis with the conclusion that the variables are co integrated towards a stable long-run relationship.

**Johansen's Co-integration Test Results (Max-eigen value) table**

Null Hypothesis	Max-statistic	5% Critical value	Eigen Value
<b>r = 0</b>	169.09	155.23	0.599
<b>r = 1</b>	135.39	153.25	0.698
<b>r = 2</b>	113.68	113.27	0.694
<b>r = 3</b>	36.04	36.52	0.386
<b>r = 4</b>	23.27	25.25	0.679
<b>r = 5</b>	2.70	5.34	0.663

The co-integrating relationship indicates that total bank lending, total bank deposits and bank lending rate share a common trend and long-run equilibrium as suggested by economic theory. Thus, we cannot reject the hypothesis of co-integration among the variables in the analysis. Since co-integration exists within the relationships the error correction technique can be used to estimate the relationship between total bank lending, total bank deposits and bank lending rate within a short run dynamic adjustment mechanism towards the long-run equilibrium.

**Analysis of Results**

**Regression Results of Total Bank Lending**



The regression results of total bank lending are presented in the table below. The results show that the coefficient of total bank deposits impacted positively on total bank lending. Accordingly, given a coefficient of 1.159, a ten percent increase in total bank deposits of the commercial banking system in Nigeria is capable of boosting lending to both the public and private sectors of the Nigerian economy for economic growth by 11.59%. The impact is significant to induce the performance of the Nigerian economy by making deposit available to the bank to lend. The coefficient of the bank lending rate which is -1.962 passes the significance test. The sign of the coefficient conforms to our apriori expectation. Hence, a ten percent increase in the bank lending rate reduces lending to both the public and private sectors of the Nigerian economy by 19.62%.

The co-efficient of determination adjusted for degrees of freedom shows that the variation in the independent variables jointly explained about 85% of the total variation in bank lending to both the public and private sectors of the Nigerian economy. The F-statistic (26.378) of the estimated equation of total bank lending is statistically significant. In effect, there exists linear and proportionate relationship between total bank lending to total bank deposits and bank lending rate. The absence of positive autocorrelation is indicated by a Durbin-Watson statistic of 2.094. This goes to show that the regression results can be relied upon to drive policy in the services sector.

The coefficient of the error correction term (-0.992) for the estimated equation of total bank lending is statistically significant and negative. Thus, it will rightly act to correct deviation of total bank lending from long-run equilibrium. If the actual equilibrium value is too high, the error correction term will bring it down, while if it is too low, the error correction term will raise it. In effect, the value of the coefficient however implies that when total bank lending is out of its long run trend, 99.2% of the error is corrected at each level to restore equilibrium with a stronger effect.

### **Regression Results of Total Bank lending table**

Variable	Coefficient	Prob.
C	-4.573 (-6.935)	0.000
Ln(Bdep)	1.159 (5.386)	0.000
Ln(Blr)	-1.962 (-6.579)	0.000
Ecm(t-1)	-0.992 (-3.653)	0.000

$R^2 = 0.892$ ,  $\text{Adj. } R^2 = 0.850$   
 $F, (3, 27) = 26.378$ ,  $DW = 2.094$

### **Policy Recommendations**

Based on the findings of the study, we recommend that:

- The government should implement special policies that will increase credit availability to the economy to enhanced and sustained growth.
- The government should ensure efficient allocation of credit to the private sector. Also, the apex bank (CBN) should be more committed to policy implementation.
- Government need to maintain a stable macroeconomic policy especially in the area of stable inflation, realizable exchange rate policies and fiscal balance.
- Also, there is need for institutions and political economy to remain stable, so that business environment can attract investors, by way of promoting capital flow into the economy.

### **Conclusion**

This study empirically examined the effect of bank deposit on bank lending for growth in Nigeria. The empirical evidence from the study suggests that higher bank lending rate discourages loan procurement to the different sectors of the economy which can hampered economic growth. It is also evidence from the study that bank deposit enhanced lending to the economy. In addition, the Central Bank of Nigeria (CBN) should ensure the stabilization of financial markets and banks so that public confidence is guaranteed. Moreover, the CBN should adopt economic policies that could strengthen and promote allocation of efficient resources to achieve efficient bank performance in Nigeria.

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