

Impact of Interest Rate on Lending Operations in Nigerian Banking Sector

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ABSTRACT

This study examined the impact of interest rate on lending operations in the banking sector of Nigeria. The main objectives of this study is to determine the impact of interest rate on lending operation in the banking sector of Nigeria, while the specific objective is to examine the impact of interest rate on Gross Domestic Product (GDP) and to assess the impact of interest rate on investment performance in the effectiveness of Nigerian economy. The Study examined the impact of interest rate on lending operation of Nigeria from 2006 to 2015. The study utilized both primary and secondary data. Data were analyzed using ordinary least square regression (OLS). Results indicate that: Interest rate is negatively related with GDP. The study concluded that the interest rate has a slight impact on growth; however the growth can be improved by lower the interest rate which will increase the investment. It was recommended that regulatory authorities and government should employ policies that are in favour of decreasing the percentage of interest rates, which will therefore lead to increase in borrowing and automatically improve the gross domestic product and strictly organize funds for investment purpose.

Keywords: Lending operation, Interest Rate, Gross domestic product and Economic growth.

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1. INTRODUCTION

Interest rate is the price paid for the use of money. It is the opportunity cost of borrowing money from a lender to finance invest project. It can also be seen as the return being paid to the financial resources for growing of fund for future consumption. Consequently, the Nigerian economy faced numerous challenges which impacted the overall economic activity has witnessed crises with devastating consequences on the world commodity prices as a result of global economic recession (Obansa, Okoroafor, Aluko, Millicent and Eze, 2013). This subsequently created structural imbalances occasioned by the collapse of oil prices which adversely affected the nation's revenue (Obansa et al., 2013). Even recently, the global economic and financial meltdown that started from USA and spread to other parts of the world is already catching up with the Nigerian economy and particularly her financial system (Obansa et al., 2013).

The response of policy makers in Nigeria in an attempt to contain these spates of external shocks has always been occasioned by the introduction of one economic reform or the other. By the mid 1986, Nigerian authorities launched policy programmers" contained in the Structural Adjustment. The interest rate policy in Nigeria for example, has changed within the time frame of regulated and deregulated regimes. However, the impacts of this variable in the economic growth of Nigeria have remained controversial (Acha and Acha, 2011).

Nigerians still remain expectant for brighter days ahead that improvements in the exchange rate and interest rate management could make a difference to the economic growth efforts (Jelilov, Gylych; Kachallah Ibrahim, Fatima; Onder, Evren, 2016). However, the observed facts of exchange rate and interest rate management on macroeconomic variables that would culminate into economic growth are sluggish and not impressive let alone being sustainable (Obansa et al., 2013). Even though many expansionary monetary policies have been implemented, the inflationary pressure increased and forced the CBN to raise interest rate (CBN, 2013). As a result, the interest rate raised became controversial; in this study, we will try to figure the effects of the raised interest rate on lending operations in banking sector of Nigeria.

1.1 Statement of the Problem

The financial intermediation function of the banking sector presupposes the needs to satisfy the ultimate goals of the sector. The macroeconomic policy and the economic growth regard to interest rate, exchange rate and inflation rates have been the central attention of the policy makers and that of development partners. Economy is essentially bedeviled by large size and inefficient public sector, low rates of savings and investment, persistent large budget deficits and inconsistent macroeconomic environment, all these have hampered the growth of the economy and Nigerian still remain expectant for brighter days ahead that improvements in the exchange rate and interest rate management could make a difference to economic growth efforts.

Banks do not operate in a vacuum; they operate within the framework of the monetary and banking policies provided by the economy. Nigeria has over the years employed these policies at one time or the other to regulate and control the cost, volume, availability and direction of money credit in order to influence the broader objectives which include price stability, high level of employment, sustainable economic growth development and balance of payments. This raises a number of fundamental questions- what are the precise channels through which monetary policy affects the performance of commercial banks in Nigeria? To what extent has the application of monetary policy in Nigeria brought about sanity in the operation of commercial bank. Therefore, the study seeks to examine the impact of interest rate on lending operation in banking sector in Nigeria.

1.2 Research Objectives

The broad objective of the study is to examine the impact of interest rate on lending operations in banking sector in Nigeria, other specific objective is to:
examine the impact of interest rate on gross domestic product (GDP) in Nigeria.

1.3 Research Hypothesis

Ho: Interest rate has no significant impact on gross domestic product (GDP) in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Review

According to Keynes, the interest rate is the rate for hoarding, but parting with liquidity for a specific period of time. Keynes' definition of interest rate focuses more on the lending rate. Adebisi (2002) defined interest rate as the return or yield on equity or the opportunity cost of deferring current consumption in the future. Some examples of interest rate include the saving rate, lending rate and the discount rate. Professor Lesser, in Jhingan (2003), defines interest as the price which equates the supply 'credit' or savings plus the net increase in the amount of the money in the periods.

In outlining the role of interest rate, (Baumal and Blinder, 1979) asserted that as interest rate rise; business executives will find investment less attractive. They went further and contended that higher interest rate lead to lower investment spending. But investment is a component of aggregate demand, therefore when interest rate rises, total spending falls. A higher interest rate lead to a lower aggregate demand schedule conversely, a lower interest rate leads to a higher aggregate demand schedule.

2.2 Real and Nominal Interest Rate

Someone who lends money wants to be compensated for the time value of money i.e. not being able to use his money for consumption. Furthermore, the lender wants to be compensated for the risk that the purchasing power has decreased at the time of payment of the loan. The risk described above is systematic, regulatory and inflationary risk systematic risk is the risk that the borrower will not be able to make interest and amortization payments and repay the loan at maturity. It also includes the possibility that the collateral of the loan is worth less than required in order to cover the loan. Regulatory risk includes changes in the law and in the taxation that makes it more difficult for the creditor to collect a loan or that result in higher taxes on the repayment amount. The nominal interest rate is the one that is quoted in example, Newspapers, deducting the premium for the inflation risk results in the real interest rate.

2.3 Determination of Long Term and Short Term Interest Rates

Short term interest rates are determined by the central bank of the country. The primary goal of the Swedish Central Bank is to keep inflation at a level around 2 percent. Other Central Banks have similar goals. Long term interest rate consists of the expected real interest rate inflation and a risk premium. Long term interest rates tend to follow the business cycle. When a boom is expected, the expectations of higher inflation lead to higher long term interest rates. At the top of a boom when the market begins to weaken, the long interest rates are adjusted downwards. An exception of this trend is during periods of very unstable inflation short term interest rates on the other hand are more volatile and do not follow the business circle strictly.

The central banks tend to keep their key interest rate at a high level even after a top of a boom, since the threat of higher inflation can persist. After a recession the interest rate of the central bank tends to stay low levels. The reason is that the timing is very hard for the central bank. If the central bank lowers the interest rate too early, it might cause an interruption in the recovery of the economy.

2.4 Interest Rates and the Economic Mechanism

Interest rates are part of the economic mechanism. When interest rates increase, investment, net exports and consumption tend to go down. The case is the opposite when it comes to decreasing interest rates. An increase in interest rate means that the consumer i.e households have to pay more to finance their consumption. Many households buy durable goods on credit such as cars and expensive goods. Higher required payments discourage the customers from buying such goods, which reduces consumption. The same goes for investments which can be seen as consumption by firms. High interest rates for financing of equipment and machinery discourage firms to do investments.

Increasing rates tend to strengthen the currency of the country, since it is more appealing for foreign investors to buy that currency and invest them in that country. Thus, if a country's interest rate is high compared to foreign interest rate, capital will flow from foreign countries to this country. Such flows could be enormous if all other factors stay the same. To prevent this, the exchange rate must be strengthened as a result of the higher demand of the currency. This is called Appreciation of the currency.

2.5 Interest Rates and the Monetary Policy

Monetary policy refers to regulating the interest rate and the supply of money and credit. The central bank is the one with the main responsibility for the monetary policy of a country. The central banks all have their own key interest rate; which they can use to signal their intentions to the market. It is one of the important tools for monetary policy. If the central bank has monopoly on issuing money in a country, it can decide on the interest rate and conditions on the claims against the banks that are in demand of notes and coins. The central bank thus has the possibility to regulate the interest rate by changing the condition under which it is willing to enter into with banks. In this way it signals its monetary policy to the market

2.6 Theoretical Background

The theory of interest rate is very controversial. This is indicated by the diverse attempts made by economists over the last one hundred years to develop an acceptable theory of interest rate. The various theories that have been developed are difficult to classify although it is possible to trace the chronological order of the development of these theories from pre-classical to the classical through the neo-classical (loanable funds). The Keynesian version and finally heading to the Hick general equilibrium approach and the monetarist view on interest rates.

2.7 The Classical Theory of Interest Rate

The supply of capital is governed by time preference and the demand for capital is determined by the expected productivity of capital. The time and preference are dependent on savings (Jelilov, Gylych; Abdulrahman, Samira; Isik, Abdulrahman, 2015). Capital is demanded by the investors because it is productive. But the productivity of capital is subject to the law of variable proportions (additional units of capital are not productive as their earlier units). However, the supply of capital according to Jhingan (2001) depends upon savings rather upon the will to save and the power to save of the community. Some people save irrespective of the rate. They would continue to save even if the rate of interest were zero. There are others who save because the current rate of interest induces them to save and reduce when the rates are low.

The higher the rate of interest, the larger the community savings and more will be the supply of funds. The supply curve of capital or the savings curve moves upward to the right.

2.9 The Neo-Classical or the Loan able Funds Theory of Interest Rate

The neo-classical or the loan-able funds theory of interest was first pro-founded by the Swedish economist and later developed and supported by several leading American and Swedish economists. According to the theory, the rate of interest is determined by the demand and supply of loanable. This theory is one of two general approaches that have been followed in developing the modern monetary theory of the rate of interest.

2.9 Keynes Liquidity Preference Theory of Interest Rate

As opposed to classical theory, which might be termed as the real theory of interest, Keynes after criticizing the classical theory propounded his own, theory of interest. This may also be called the monetary theory of interest because according to this theory, the rate of interest can be controlled through variations in the supply of money. According to Keynes, interest is purely a monetary phenomenon because the rate of interest is calculated in terms of money. It is also a monetary phenomenon in the scene that it is determined by the demand for and the supply of money.

2.10 Empirical Review

According to Ayanwu (1994), the effect of real deposit interest rate on savings rate and investment rate for Nigeria between 1986 and 1994. The regression result confirmed the effect of real interest rates on growth but there is no significant effect for savings and investment rates. The effect is negative for both, albeit insignificant. This is however surprising when the correlation between the GDP growth rate and savings and investments is examined.

Uden (1999) stated that interest is the payment for the use of capital, while capital can be defined as a form of wealth used in the production of more wealth. As stated that interest payable on capital, therefore determines how much people are prepared to obtain from spending in order to save. Also, apart from the payment for postponing consumption, gross interest rate also includes the cost of managing the money by the saver, a fee as an insurance against probable default in repayment and the money cost in inconvenience to the saver.

Khat-Khat (1988) used non-parametric methodology in his study on the relationship between interest rate and other macroeconomic variables include savings and investment. He grouped 64 developing countries (including Nigeria) into three, based on the level of their real interest rate. He found that the in fact of interest rate was not significant for the three groups.

Mckinnon Shaw (1973) argued that financial prices including interest rates reduces real rate of growth. One of the basic arguments of Mckinnon Shaw model is an investment function that response negatively to the effective real loan rate of interest and positively to the growth rate. Mckinnon shaw school expects financial liberalization to exert a positive effect on the rate of economic growth in both the short and medium runs.

Abu (2006) used two partial models to investigate the impact of investment on GDP growth rate and the relationship between interest rate and investment in the case of Romanian economy. He found that the behaviour of the national economic system and the interest rate investment economic growth relationships tend to converge to those demonstrated in a normal market economy.

Oosterbaan et al (2000) estimated the relationship between the annual rate of economic growth (YC) and the real rate of interest (RR) in equations of the basic form. The study shows that effect of a rising real interest rate on growth and claimed that growth is maximized.

Akintoye and Olowolaju (2008), examine optimizing macroeconomic investment decision in Nigeria. The study employed both the ordinary least square and vector. Auto regression framework to stimulate and project interest temporally private investment response to its principal shocks namely public investment domestic credit and output shocks. The study found low interest rate to have constrained investment growth. The study then resolved that only government policies produce sustainable output, steady public investment and encourage domestic credit to the private sector which would promote private investment.

Obamuyi (2009), studies the relationship between interest rate and economic growth in Nigeria. The study modeling techniques and revealed the lending rate has significant effect on economic growth. The study then postulated that investment friendly interest rate policies necessary for promoting economic growth needs to be formulated and properly implemented.

Albu (2006) studied trends in the interest rate, investment, GDP growth relationship. The study used two partial models to examine the impact of investment on GDP growth and the relationship between interest rate and investment in the case of the Romanian economy. The study found that the behaviour of the national economy system and interest rate investment relationship tend to converge to those demonstrated in the normal market economy.

Iyoha (2004), postulated based on the combination of all the theories of investment ranging from the classical to Keynesian and a study on sub-sahara African countries, identified macroeconomic factor such as income, interest rate, exchange rate and debt overhang provide by debt income ratio variable as his investment determination model.

Khat and Bathia (1993) used non parametric method in their study of the relationship between interest rate and other macroeconomic variable, including savings and investment. In their study they grouped (64) sixty four developing countries including Nigeria into three bases on the level of their real interest rate. They then computed economic rate among which were gross savings, income and investment for countries applying Mann Whitney test, they found that the impact of real interest was not significant for the three groups. However, their method of study was criticized by Balassa (1989), that a relationship has been established by the use of regression analysis.

Agu (1988) reviewed the determinants and structure of real interest rates in Nigeria between 1970 to 1985. He demonstrated the negative effect of low interest rate on savings and investment using the usual mark in non financial regression diagram. His main conclusion was that the relationship between real interest rate, savings and investment is inconclusive.

3. METHODOLOGY

The research design adopted descriptive survey method. The population for this study is the entire money deposit banks in Nigeria. Purposive and sample random sampling techniques were used to select five banks which are registered and licensed to carry out banking business in Nigeria for the study. Secondary data was employed as instrument for data collection. Data was obtained from statistical bulletin and annual report of the five selected banks. This study examined the impact of interest rate on lending operation in Banking sector in Nigeria from (2006-2015) in the following banks Access bank plc, Diamond bank plc, Guaranty

trust bank, United bank for Africa plc and Zenith international bank plc. Interest rate was proxies by real interest rate, while banking sector was proxies by fiscal balance, and national savings. The study adopted the statistical method of multiple regression approach. Ordinary least squares (OLS) were employed in the analysis to test the hypothesis.

3.1 Model Specification

The study examined the impact of interest rate on lending operations. As such, in specifying our model, our dependent variable shall be the ratio of commercial banks loans and advances to deposits which measures lending operations in banks (LOP), while our explanatory variables shall be the annual time series, data of interest rate and the gross domestic product (GDP).

Therefore, our multiple regressions model can be specified as thus;

$$LOP = b_0 + bx_1 + bx_2 + \mu \dots\dots\dots(1)$$

Where;

LOP = Loans and advances to deposits

X1 = Interest Rates

X2 = Gross Domestic Product (GDP)

μ = the stochastic error term

b0, b1 and b2 are parameters **Research and Discussion**

Table 1: Gross Domestic Product (GDP), Lending Operation (LOP) and Real Interest Rate (RIR) in Nigeria (2006-2015)

Year	GDP	RIR	LOP
2006	39293.72	8.35	2.07567
2007	42854.25	8.1	2.18713
2008	46288.73	11.84	2.77007
2009	50441.11	12.85	3.925552
2010	55469.35	5.67	3.548643
2011	58180.35	4.7	3.263516
2012	60670.05	7.18	2.744751
2013	63942.85	5.54	2.87705
2014	67977.46	9.16	3.398435
2015	69780.69	8.68	3.692518

Source: Excel Computation, 2018

Table 2: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.657665	3.101870	-2.791112	0.0269
LOG(GDP)	0.871275	0.279100	3.121733	0.0168
RIR	0.030363	0.020802	1.459611	0.1878
R-squared	0.588467	Mean dependent var		1.094470
Adjusted R-squared	0.470886	S.D. dependent var		0.215425
S.E. of regression	0.156701	Akaike info criterion		-0.625636
Sum squared resid	0.171885	Schwarz criterion		-0.534860
Log likelihood	6.128178	Hannan-Quinn criter.		-0.725216
F-statistic	5.004778	Durbin-Watson stat		0.943643
Prob(F-statistic)	0.044711			

Source: E-view 7 Computation

3.2 Interpretation of Regression Result of the Model

As shown in the table above, LOG (GDP) has a positive relationship with LOG(LOP); one unit increase in GDP will lead to 0.08 increases in LOG(LOP), holding other independent variables constant. RIR has a positive relationship with LOG(LOP), one unit increase in RIR, will lead to 0.03 unit increase in LOG(LOP), holding other independent variables constant. The result reveals that about 59% of variation in industrial output was explained by the changes in the explanatory variables of the estimated model. This shows that the model has a good fit. The adjusted coefficient of determination (R^2) also shows that the estimated model as a good fit of 47%. The test was carried out taking into consideration the T-probability for each of the explanatory variable at 1% (0.01) and 5% (0.05) level of significance.

3.3 Summary of T-Test

Variables	T-value	T-probability	Remark
GDP	3.121733	0.0168	Significant
RIR	1.459611	0.1878	Insignificant

Source: E-view 7 Computation

The p-value of GDP was found to be significant while the p-value of RIR was found to be statistically insignificant. The F-Statistics which is the joint test of significance of all parameter estimated in the model is statistically significant at 5 percent level as the p-value being (0.004471). With the result we reject the null hypothesis and conclude that the explanatory variables in the model are jointly significant in explaining the impact of interest rate on lending operation in banking sector of Nigeria. The Durbin-Watson test for autocorrelation shows the value of approximately 1 this implies that there is positive autocorrelation.

4. SUMMARY

The study has provided an insight on the Impact of interest rate on lending operation in Banking sector in Nigeria from 2006-2015 using ordinary least square method (OLS). The research model found that the major variable of interest rate which is LOP not only contribute positively to the banking sector in Nigeria, but the impacts are strong as well as statistically significant at 5%. Also the research model shows that the major variable of interest rate which is RIR not only contributes positively to banking sector in Nigeria, but the impacts are not firmly strong. Lending operations was represented by loan to deposit which signifies effective lending therefore it is discovered that interest rate has a positive impact on lending operations but, it is statistically insignificant, this implies that increase in interest rate also increases lending in banks but not significantly.

5. CONCLUSION AND RECOMMENDATION

Regression analysis discovered that national savings has significant impact on gross domestic product. The result concluded that interest rate has impact on gross domestic product but it is insignificant. It further showed that there is significant impact of Gross domestic product on lending operations in Nigeria and evidently showed that real interest rate has a positive impact on banks' lending operations. It was recommended that regulatory authorities and government should employ policies that are in favor of decreasing the percentage of interest rates, which will lead to increase in borrowing and automatically improve the gross domestic product. More awareness should be created to educate customers of the benefits that accrue from been conscious of the interest rates values. There is need to strengthen bank lending rate policy through effective and efficient regulation and supervisory framework.

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