



**Monetary Policy Decisions, Control of Money and Assets of Deposit Money Banks in Nigeria, 1981-2021.
Auto-Regressive Distributed Lag Model Approach**

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ABSTRACT

The broad objective of the study is to investigate the impact of monetary policy decisions in stimulating the assets of deposit money banks in Nigerian from 1981-to 2021. While the specific objectives are to Measure the impact of interest rate spread on assets of deposit money banks in Nigeria. Determine the impact of the exchange rate on assets of deposit money banks in Nigeria. Investigate the impact of private sector credits on assets of deposit money banks in Nigeria. The model used in this study is Autoregressive distributed lag as a form of multiple regression models. It is a special type of regression called autoregressive distributed lag. Result reveals that the Interest rate had a negative and non-significant impact on assets of deposit money banks in Nigeria, Exchange rate had a positive and significant impact on assets of deposit money banks in Nigeria, the Inflation rate had a negative and non-significant impact on assets of deposit money banks in Nigeria. The implication of findings reveals that if the government fails in its monetary policy decisions, it will go a long way to affect deposit money banks and also the economy. The study concludes that monetary policy decisions play seriously significant effects on the assets of deposit money banks in Nigeria. It was recommended that government should create reasonable credit for the private sector and therefore regulates the interest rate to be charged. Exchange rate has a significant effect on Insurance profitability in Nigeria. This study recommends that public enlightenment campaigns should be done by the government directing people about the availability of money kept for agricultural loans and various credits to control the black market in the exchange rate. It was recommended that effective policies such as policies that will encourage manufacturers to have access to bank credits without democratic bottleneck will go a long way to provide efficiency in the system and hence improves or control inflation; however, gradual control of inflation through mopping up excess liquidity will be done by the monetary authorities to enhance the growth of deposit money bank assets.

Keywords: Monetary Policy Decisions, Deposit Money Banks, Autoregressive Distributed Lag

1. Introduction

Over the years, the government of Nigeria has adopted the use of direct monetary instruments such as credit ceilings, selective credit controls, administered interest, prescription of cash reserve requirements, and special deposits to maintain the desired macroeconomic objectives. Nevertheless, with the advent of the Structural Adjustment Policy (SAP) of 1986, the implementation of monetary policies was aimed at inducing the emergence of a market-oriented financial system for effective mobilization of financial savings and efficient resource allocation (Akomolafe, Danladi, Babalola, and Abah, 2015). Omarkhanlen, Okorie, and Taiwo, (2015) stated that the main instrument of the market-based framework is open market operations. This process was complemented by the several regime changes in reserve requirements and discount window operations. Also, in October 1996, the position of monetary policy objective was directed at the abolishment of mandatory credit allocation. The commercial and merchant banks were subjected to equal treatment since their operations were found to produce similar effects on the monetary policy process. In 2005 the minimum paid-up capital was further raised to 25 billion naira for all commercial banks in accordance with the recapitalization exercise.

Olokoyo (2012) stated that the Central Bank of Nigeria (CBN) introduced a new monetary policy implementation framework policy rate (MPR) to replace the Minimum Rediscounted Rate (MRR) in 2006. Specifically, this was done to dampen the volatility of interest rates in money markets and stimulate a transaction rate that would improve the transmission of monetary policy actions and ultimately achieve a stable value of the domestic currency. Onyeiwu (2012) observed that an important implication of the various policies initiated above was to bring about stability in the macroeconomic policies. The conduct of monetary policy was largely influenced by the global financial crisis which started in 2007 in the United States of America (USA) and spread to other regions and emerging markets including Nigeria. Consequently, in the wake of the global financial crisis, the bank largely adopted the policy of monetary easing to address the problem of liquidity shortages in the banking system from 2008 to September 2010.

Moreover, at independence in 1960, Nigeria had great potential of being a prosperous nation given its abundant human and natural resources. The outlook was further brightened by the oil boom in the 1970s. Consequently, the government had to implement a series of ambitious Development Plans aimed at ensuring rapid economic growth and development. Initially, at least up to the early 1970s, the overall economic performance was impressive: The rate of growth of THE GDP for instance averaged about 8.8 percent between 1970 and 1974 (Inam, 2005). The massive inflow of foreign exchange earnings mainly from improved petroleum prices as well as a high rate of domestic and foreign investments in industry, construction, and services helped to sustain the GDP growth rate at reasonably high levels (Inam, 2005). With the huge earnings from crude oil exports, the government became the prime mover of the economy through direct participation in the basic production of goods and services as well as in the provision of infrastructure. However, the fortune was not sufficiently capitalized upon to ensure an enduring economic performance. Thus, the Nigerian economy began to show signs of distress in the early 1980s. Since then, the performance of the economy has been quite epileptic.

Monetary policy is essential to achieve desired objectives which traditionally include full employment level, reduction in the level of inflation, maintenance of a healthy balance of payment, sustenance of growth in the economy, etc. Importantly, monetary policy plays an important role in boosting the economic growth of any country.

Mordi (2008), the term monetary policy refers to the mix of concerted designed tools by the apex monetary agency to regulate the value, supply, and cost of money consistent with the absorptive capacity of the economy or the expected level of economic activity without necessarily generating undue pressure on domestic prices and exchange rates. Also, monetary policy influences the level of the money stock and interest rate in line with the level of economic activity. Its role in ensuring overall macroeconomic stability cannot be overemphasized (George-Anokwuru, 2014).

Akomolafe, Danladi, Babalola, and Abah, (2015) expressed that the central bank is responsible for the conduct of monetary policy to pursue those objectives. Central banks in the world such as the Central Bank of Nigeria (CBN) often employ certain monetary policy instruments like Bank Rate, Open Market Operation, Changing Reserve Requirements, and other selective credit control instruments. The central bank also determines certain targets on monetary variables. Although, some objectives are consistent with each other, others are not, for example, the objectives of price stability often conflict with the objectives of interest rate stability and high short-run employment. The Central Bank of Nigeria (CBN) over the years has instituted various monetary policies to regulate and develop the financial system to achieve major macroeconomic objectives which often conflict and result in

distortion in the economy. Although, some monetary policies like cash reserve and capital requirements have been used to buffer the liquidity creation process of commercial banks through deposit base and credit facilities to the public, Hence, it is very important to examine empirically the impact of monetary policy on Assets of deposit money banks in Nigeria from the angle of control through interest rate, exchange rate, and inflation rate.

Despite the concerted global coordination in the operations of monetary policies, the global economic performance has remained disturbing. The global economic crisis has led to the global reduction in credit activity, causing a fall of the domestic product as well as the level of foreign direct investment and as well banking industry. In Nigeria its economy has never been insulated from global structural changes, the economy has been faced with complex macroeconomic challenges such as high domestic inflation, unstable financial system, and high jobless growth rate. Despite many, and frequently changing monetary and other macro-economic policies, Nigeria has not been able to harness its huge economic potential for rapid economic growth and development. The drop in foreign direct investment, fall in the price of crude oil at the international market and low investment in the country have made the economy more susceptible to international fluctuations. The debate on the effectiveness of monetary policy operations as a tool for promoting growth and development remains inconclusive, given the conflicting results of current studies. Over the last decade, the growth impact of monetary policy has generated a large volume of both theoretical and empirical literature. To put it differently, economists have developed lots of empirical studies on the effectiveness of monetary policy in achieving economic growth.

However, owing to the existing lack of consensus among economists in the operational validity of monetary policy on the banking industry and its ability to stimulate considerable macroeconomic stability in the short run, this study investigates the effectiveness of monetary policy decisions in stimulating the assets of deposit money banks in Nigerian.

The broad objective of the study is to investigate the impact of monetary policy decisions in stimulating the assets of deposit money banks in Nigerian from 1981-to 2021. While the specific objectives are to Measure the impact of interest rate spread on assets of deposit money banks in Nigeria. Determine the impact of exchange rate on assets of deposit money banks in Nigeria Investigate the impact of private sector credits on assets of deposit money banks in Nigeria

As a follow-up to these research questions raised above, the following Null hypotheses are formulated for this research.

- I. Interest rate spread does not impact positively and significantly on assets of deposit money banks in Nigeria.
- II. Exchange rate does not impact positively and significantly on the assets of deposit money banks in Nigeria.
- III. Private sector credit does not impact positively and significantly on assets of deposit money banks in Nigeria.

2. Review of Related Literature

2.1 Conceptual Review

Monetary policy

Monetary policy refers to the combination of measures designed to regulate the cost, value, and supply of money in consonance with the level of economic activities in a country (Okaro, 2014). Its broad objective in Nigeria is to 'ensure monetary and price stability (CBN ACT, 2007). Chang and Grabel (2004) defined monetary policy as government actions that influence the money supply and market interest rates. Governments control money supply and market interest rates through several instruments such as open market operations, discount rates, and reserve requirements. The money supply is made up of domestic credit and net foreign assets and domestic credit comprise central bank credit to the government and commercial bank credit to the public (Hossain and Chowdhury, 1998).

Indices of Monetary Policy as Used in this Study

Interest Rate

Jhingan, (2004) stated that the minimum rate of lending of the central bank at which it rediscounts first-class bills of exchange and government securities held by commercial banks is regarded as the interest rate or bank rate. This implies that in a situation whereby the central bank discovers that inflationary pressures have started mounting on the economy, it will increase interest rates accordingly to curtail the effect of inflation on the economy. Thus borrowing from banks becomes costly and commercial banks borrow less from it. Commercial banks, in turn, raise their lending rates to the business community and borrowers borrow less from commercial banks. There is a contraction of credit and prices are checked from rising further.

On the contrary, when prices are depressed, the central bank lowers the bank rate. It is then cheap to borrow from the central banks on the part of the commercial banks. The latter also lower their lending rates and businessmen are encouraged to borrow more; investment is encouraged. Value-added, employment, income/output and demand start rising and the downward movement of prices is checked (Jhingan, 2004). This study defines interest rate as the rate a bank or other financial institution charges to lend its money or the rate a bank pays its savers for keeping money in an account.

Exchange Rate

Generally, Mankiw, (2009). Sees the exchange rate as the value of one currency to that of another currency. However, economists distinguish between two types of exchange rates which include; the nominal exchange rate and the real exchange rate. The nominal exchange rate is the relative price of the currency of the two countries. In most cases when people consider "the exchange rate" between the two countries, they usually refer to the nominal exchange rate. The real exchange rate on the other hand is the relative price of the goods of the two countries. That is, the real exchange rate tells us the rate at which we can trade the goods of one country for the goods of another, which is also referred to as the terms of trade. In the short run, nominal and real exchange rates are assumed to be the same (Mankiw, 2009). This study will define the exchange rate as the value of one country's currency compared to another currency. For the sake of this work, this study will consider the exchange rate as the rate of naira against US dollars.

Inflation Rate

Adenekan and Nwanna (2004) express that Inflation has various definitions depending on how people see it. It is regarded as a rise in the general level of prices. The tendency of rising prices and a fall in the value of money is known as inflation. But inflation could be defined as a sustained rise in the general price level. This phenomenon occurs when the aggregate demand in normal value is greater than the real productive capacity of the economy.

This is a quantitative measure of the rate at which the average price level of a basket of selected goods and services in an economy increase over some time often expressed as a percentage; this inflation indicates a decrease in the purchasing power of a nation's currency. Bawa and Abdullahi (2012) see inflation as the steady increase in the price of goods and services over time. It devalues units of currency. Inflation is an increase in the price you pay for goods but that only tells part of the story. It could also be seen as a decline in the purchasing power of your money. But there is more to inflation than that. There are two sides to inflation, price inflation, and monetary inflation. Technically, price inflation is when the price gets higher or it takes more money to buy the same item and this is what people commonly think of when they hear the word inflation but monetary inflation exists when a few goods are being chased with much money. The extent to which these processes affect insurance profitability is subject to research.

2.2 Theoretical Framework

This section discusses briefly a basic theory on monetary policy variables and growth.

The Classical Theory of Interests

The classical theory of interest is championed by classical economists propounded by Ricardo in 1810, and supported by Marshall in 1887, and others. The theory opined that the determinant of the rate of interest is the supply and demand of capital. The supply of capital is influenced by time preference and the demand for capital, by the expected productivity of capital. Both the time preference and expected productivity of capital depend upon waiting

for saving or thrift. This theory is, therefore, also known as the supply and demand theory of savings. The demands for capital as stipulated by the classical economist consist of consumptive and productive demand purposes

Aslam and Awan (2018) examined the effect of the monetary policy of Pakistan on Pakistan's THE GDP. The time-series data comprising of 31 years between 1972 and 2013 was utilized for their study. For finding the relationship between macro-variables correlation technique was used and multiple regression techniques were used to find the results of data. Different macro-variables used in the study included real THE GDP as DV and IV included in the study were gross capital formation, foreign direct investments, employed labour force, broad money, exports, and THE GDP deflator. They analyzed and presented the link between Pakistan's monetary policy and macro-variables in the long term. The result reflected that this entire set of variables i.e., money supply, employment, inflation rate, foreign direct investments, saving, and other macro variables were expressively affected by monetary policy.

Ayodeji and Oluwole (2018) studied the effect of Nigerian monetary policy on Nigerian THE GDP. The time-series data for the duration between 1981 and 2016 was used for the study. Different methodologies including ADF, VECM, ADF, Johansen Co-Integration test, and Engle-Granger Co-Integration test were used in this paper. This paper was conducted on indicators such as exchange rate, rate of interest, supply of money, and liquidity ratio. The results of the study concluded a positive and inconsequent effect of the exchange rate (ER) and supply of money (MS) on the GDP of Nigeria. On the other hand, the GDP of Nigeria receives negative and consequent effects from interest rate (IR) and liquidity ratio (LR). The link between monetary policy and the GDP of Nigeria exists in the long term.

Nyorekwa and Odhiambo (2017) analyzed the effect of monetary policy on Tanzania's THE GDP. For the study, time-series data was used from 1975 to 2012. The autoregressive Distribution Lag model along with the Bound-testing approach was used for the study. MS and IR were used as independent variables. The findings concluded a relationship between THE GDP and monetary policy when the interest rate is used in the short-run while in the long run no link was found between monetary policy and THE GDP of Tanzania. While using money supply, there is a negative link between monetary policy and THE GDP.

Ahmad et al (2016) examined the effect of monetary policy on the GDP of Pakistan. The time-series data observed from 1973 to 2012 was collected for this purpose. The autoregressive Distributive Lag (ARDL) model was used in the study. Different economic variables including THE GDP, MS, INF, IR, and ER were used and were tested for the long-run and short-run link. A positive supply of money and exchange rate effect on THE GDP of Pakistan was found in the study, whereas inflation had a positive and inconsequent effect on THE GDP of Pakistan. The rate of interest had a negative effect on the GDP of Pakistan.

Inam and Ime (2017) studied the impact of monetary policy on Nigeria's economic growth from 1970 to 2012 using the Ordinary Least Squares (OLS) method and the Granger Causality test. The study found an insignificant positive relationship between money supply and economic growth.

Njimanted et al. (2016) used Vector Auto-regression (VAR) method to analyze the effect of monetary policy tools on economic growth in the Central African Economic and Monetary Community (CEMAC). CEMAC was set up by a Treaty signed in 1972 by six states which include Cameroon, Chad, Equatorial Guinea, Gabon, Central Africa, and the Republic of Congo. The treaty was based on monetary co-operation arrangements to achieve price stability. The independent variables which were the monetary policy include the money supply, interest, and inflation rates. The study found that monetary policy tools affected the economic growth of the CEMAC community in diverse areas.

Ayub and Shah (2015) studied the effect of the monetary policy of Pakistan on the economic growth of Pakistan. For the study purpose, time-series data was taken for the years 2005-2013. The relationship between the variables was identified using regression and correlation. The results indicated that the rate of interest, supply of money, and inflation has a strong effect on THE GDP of Pakistan. The study also revealed many unexplained factors which affect the GDP.

Akomolafe, Danladi, Babalola, and Abah (2015) examined the impact of monetary policy on commercial banks' performance in Nigeria in a micro-panel analysis. Interest rate and money supply were used as proxies for monetary policy, while profit before tax (PBT) was used to represent commercial banks' performance. Pooled regression, Fixed effect regression, and random effect regression were all carried out in the analysis. However, the Hausman test revealed that fixed effect regression is the most appropriate. The results showed that there is a positive relationship between banks' profits and monetary policies as proxied by money supply and interest rate. However, the interest rate was not statistically significant at 1% and 5% levels.

Omankhanlen, Okorie, and Taiwo (2015) investigated the effects Monetary Policy has on Loan Risk Exposure in Nigeria Commercial Banks. The data analysis of this study was carried out with the ordinary least square multivariate regression perspective within the confinement of a vector error correction model (VECM) framework. The result of this study reveals that the lending rate does not play a significant role in support of loans and advances. However, the monetary policy rate reveals the most significant effect on commercial banks' loans and advance confirmed by its efficient estimate. This means that the monetary policy rate is a competent parameter in measuring the performance of banks in the allocation of their credit facilities.

Lut and Moolio (2015) explored the effect of monetary policy on Cambodian THE GDP. Quarterly-based time-series data was used for the period from 2000 to 2012. The supply of money and rate of interest effect on THE GDP of Cambodia was analyzed using a multiple regression model. The findings of the study represent a positive but meager supply of money effect on THE GDP of Cambodia and interest rate didn't have any impact on THE GDP of Cambodia.

Havi and Enu (2014) examined the relative importance of monetary policy and fiscal policy on economic growth in Ghana from 1980-to 2012. The study utilized the Ordinary Least Squares (OLS) method which revealed that money supply had a significant positive impact on the economy of Ghana.

3. Methodology

Research Design

This study adopted the ex-post-factor research design. The ex-post-facto research design is described as after-the-fact research (Onwumere, 2009). This is suitable for the work given that it is based on an already completed event and the researcher is meant to analyze the outcomes of the already completed event and draw reasonable conclusions.

Nature and Sources of Data

All the data to be employed for this work were time-series, secondary, and purely quantitative. They are drawn from sources such as statistical bulletins of the Central Bank of Nigeria and the World Bank Development Indicator. They are annualized time-series data because they have a natural period of 41 years.

Model Specification

The model used in this study is Autoregressive distributed lag as a form of multiple regression models. It is a special type of regression called autoregressive distributed lag. The study follows the model used by Nyorekwa and Odhiambo (2017) that analyzed the effect of monetary policy on Tanzania's THE GDP. For the study, time-series data was used from 1975 to 2012. The autoregressive Distribution Lag model along with the Bound-testing approach was used for the study. Hence, this study is anchored on the above, by modifying the economy to assets of deposit money banks Hence, the multiple regression model, Thus: $y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n$.

$$ASDMB_t = B_0 + B_1INTR_t + B_2EXR_t + B_3INFR_t + \dots + \epsilon_t \dots \dots \dots \text{Equ 1}$$

Where: ASDMB = Assets of money deposit banks, Intr = Interest rate, Exr = Exchange rate

Infrt = Inflation rate, Et = Error term, B₀ = center of origin, B₁= B₄ = Coefficient of estimation.

Apporrari Expectation, Interest rate and inflation rate negative while sometimes, the exchange rate may be positive or negative.

4. Data Presentation and Analyses

Table 4.1: Sectorial Distribution of Monetary Rates and Assets of Deposit Money Banks Variables in Nigeria, from 1981-2021 in Log Form

| YEAR | LNASDMB | LNINTR | LNINFR | LNEXR |
|------|---------|--------|---------|---------|
| 1981 | 2.9693 | 1.7917 | -0.3710 | -0.4942 |
| 1982 | 3.1206 | 2.0794 | -0.2876 | -0.3962 |
| 1983 | 3.2846 | 2.0794 | -0.1392 | -0.3229 |
| 1984 | 3.4035 | 2.3025 | -0.0512 | -0.2679 |
| 1985 | 3.4657 | 2.3025 | 0 | -0.1123 |
| 1986 | 3.6808 | 2.3025 | 2.6173 | 0.7033 |

| | | | | |
|------|---------|--------|---------|--------|
| 1987 | 3.9086 | 2.5455 | 2.2721 | 1.3907 |
| 1988 | 4.0609 | 2.5455 | 4.1141 | 1.5122 |
| 1989 | 4.1723 | 2.9177 | 3.7999 | 2.0003 |
| 1990 | 4.4183 | 2.9177 | 1.2809 | 2.0841 |
| 1991 | 4.7665 | 2.7409 | 3.1354 | 2.2934 |
| 1992 | 5.0700 | 2.8622 | 3.8877 | 2.8506 |
| 1993 | 5.4212 | 3.2580 | 4.1157 | 3.0933 |
| 1994 | 5.6870 | 2.6026 | 4.3412 | 3.0858 |
| 1995 | 5.9536 | 2.6026 | 3.9435 | 3.0858 |
| 1996 | 6.1285 | 2.6026 | 2.6602 | 3.0858 |
| 1997 | 6.3705 | 2.6029 | 2.3223 | 3.0858 |
| 1998 | 6.5433 | 2.6026 | 2.4765 | 3.0858 |
| 1999 | 6.9754 | 2.8903 | -1.6094 | 4.5292 |
| 2000 | 7.4198 | 2.6390 | 2.6741 | 4.6260 |
| 2001 | 7.7173 | 3.0204 | 2.8033 | 4.7179 |
| 2002 | 7.9254 | 2.8033 | 2.5014 | 4.7955 |
| 2003 | 8.0221 | 2.7080 | 3.1696 | 4.8625 |
| 2004 | 8.2303 | 2.7080 | 2.3025 | 4.8941 |
| 2005 | 8.4151 | 2.5649 | 2.4510 | 4.8839 |
| 2006 | 8.8780 | 2.3025 | 2.1400 | 4.8571 |
| 2007 | 9.3039 | 2.2512 | 1.8870 | 4.8349 |
| 2008 | 9.6753 | 2.2772 | 2.7146 | 4.7754 |
| 2009 | 9.7716 | 1.7917 | 2.4849 | 5.0031 |
| 2010 | 9.7602 | 1.8325 | 2.4680 | 5.0126 |
| 2011 | 9.8728 | 2.4849 | 2.3321 | 5.0360 |
| 2012 | 9.9659 | 2.4849 | 2.4849 | 5.0594 |
| 2013 | 10.0982 | 2.4849 | 2.0794 | 5.0582 |
| 2014 | 10.2229 | 2.5649 | 2.0794 | 5.0660 |
| 2015 | 10.2461 | 2.3978 | 2.2617 | 5.2641 |
| 2016 | 10.3444 | 2.6390 | 2.9231 | 5.5353 |
| 2017 | 10.4514 | 2.6390 | 2.7343 | 5.7228 |
| 2018 | 10.5375 | 2.6390 | 2.4336 | 5.7238 |
| 2019 | 10.6578 | 2.6026 | 2.4832 | 5.7265 |
| 2020 | 10.8774 | 2.4423 | 2.7568 | 5.8827 |
| 2021 | 10.8774 | 2.5257 | 2.7568 | 5.8827 |

Source: CBN Statistical Bulletin (2021) See Appendix 1 For Raw Data

Where: LNASDMB =Log form of Assets of deposit money banks, LNINFR= Log form of the Inflation rate, LNIEXR=Log form of Exchange rate, LNINTR=Log form of Interest rate. These variables were log-transformed to ascertain the growth from the variables and also bring the variable to linear form. It is also be noted that the variables are measured in billion naira as part of its quantification and percentage

Data Analysis

Tests of Unit Root Using Philip and Peron

Table 4.2: Summary of Unit Roots Test Results

| Variable | PP Statistic | Critical Values @ 5% | Probability Val | STATIONARY |
|----------|--------------|----------------------|-----------------|------------------------|
| LNADMB | -3.1804 | 2.9458 | 0.0295 | I(0), Intersect Only |
| LNINFR | -3.5645 | -3.5529 | 0.0048 | I(1) Trend & Intersect |
| LNEXR | -6.8774 | -3.5403 | 0.0000 | I(1) Trend & Intersect |
| LNINTR | -4.0746 | -3.5403 | 0.0148 | 1(1) Trend & intersect |

Source: Author's e-view 10 output with data in Appendix One

From the result of Philip and Peron unit root test statistics contained in table 4.2, LNADMB is integrated at order zero, $i(0)$., Log of the inflation rate, Log of exchange rate, Log of interest rate are all integrated at order $i(1)$ Given

these different orders of integration, the Ordinary Least Square Regression Method was given up in preference for the Autoregressive Distributed Lag Model which tolerates such stationary property combination. In addition, the sample size is also good enough for the ARDL given that its estimates remain robust and consistent in the face of a large sample size and finally good for data characterized with structural breaks.

Basic Descriptive Statistics/Standard tests for Normality

Table 4.3: Basic Descriptive Statistics/ Standard tests for Normality:

| | LNADMB | LNINFR | LNEXR | LNINTR |
|--------------|-----------|-----------|-----------|-----------|
| Mean | 8.534402 | 4.557361 | 3.314872 | 6.230883 |
| Median | 8.707881 | 4.851183 | 3.609378 | 6.170040 |
| Maximum | 11.75793 | 7.703342 | 6.269558 | 10.02224 |
| Minimum | 4.975569 | 0.978251 | -0.526616 | 2.148274 |
| Std. Dev. | 2.336377 | 2.331131 | 2.096516 | 2.702102 |
| Skewness | -0.188011 | -0.220064 | -0.271857 | -0.019390 |
| Kurtosis | 2.600188 | 3.596882 | 3.924073 | 3.605231 |
| Jarque-Bera | 3.326374 | 3.423884 | 2.500971 | 3.082565 |
| Probability | 0.189534 | 0.180515 | 0.316483 | 0.214106 |
| Sum | 324.3073 | 173.1797 | 125.9651 | 236.7736 |
| Sum Sq. Dev. | 201.9702 | 201.0644 | 162.6290 | 270.1502 |
| Observations | 40 | 40 | 40 | 40 |

Source: Author's e-view 10 output with data in Appendix One.

Table 4.3 contains the basic measures of central tendency, spread, and variations calculated on the different series of the dataset. In skewness, all the variables are negatively skewed to the left showing the degree of their departure to the line of symmetry. Also, the Kurtosis of the distribution is less than 3 meaning that they are leptokurtic and are not peaked. Of particular interest is the Jacque-Bera (JB) statistics which is a test for normality. It is a combined test of Skewness (S) of zero (0) and kurtosis (K) of three (3), which are signs of a Mesokurtic distribution. In this case, however, the JB statistics show that the variables are tending to 3 which are signs of Mesokurtic. The assumption of normality is accepted by the JB statistics, as well as the (K) and (S) figures. This, however, does not affect the goodness of the data for the estimation in this study as the kurtosis of all the variables is between 1-3 and the Skewness above 0-1 which is consistent with the properties of most financial time series. Finally, all the variables are normally distributed because they are tending towards 3. However, since other variables are normally distributed. There is no variable to disrupt the normality distribution of the variables for this study.

Test of Hypotheses

Test of Hypothesis One

Step 1: Restatement of the Hypotheses in Null and Alternate Form

H₀: Interest rate did not positively and significantly impact the assets of deposit money banks in Nigeria.

H₁: Interest rate positively and significantly impacts the assets of deposit money banks in Nigeria.

Step II: Presentation and discussion of the results arrived at using the estimation technique

| Variable | Coefficient | Prob.* |
|----------|-------------|--------|
| LNINTR | -0.053 | 0.052 |

Source: Appendix 2

Step III: Statement of Decision Criteria

Accept H₀ if the probability value is > 0.05, otherwise, reject H₀ and accept H₁. Accept H₁ if the probability value is < 0.05, otherwise, reject H₁ and accept H₀.

Given the coefficient of the parameter estimates of LNINTR as -5.3% and the probability of t-statistics of 0.52 > 0.05 which is non-significant, it shows that it is statistically negative and non-significant.

Step IV: Taking a Decision on the Rejection or Acceptance of the Null or Alternate Hypothesis

Result reveals that the probability values of LNINTR are -5.3% and the probability of t-statistics of 0.52 > 0.05 which is non-significant. The study accepted the Null hypothesis and rejected the alternate hypothesis thereby concluding that interest rate had a negative and non-significant impact on assets of deposit money banks in Nigeria.

Test of Hypothesis two

Step 1: Restatement of the Hypotheses in a Null and Alternate Form

H₀: Exchange rate did not positively and significantly impact the assets of deposit money banks in Nigeria.

H₁: Exchange rate positively and significantly impacts the assets of deposit money banks in Nigeria.

Step II: Presentation and Discussion of the Results Arrived at Using the Estimation Technique

| Variable | Coefficient | Prob.* |
|----------|-------------|--------|
| LNEXR | 0.12 | 0.0004 |

Source: Appendix 2

Step III: Statement of Decision criteria.

Accept H₀ if the probability value is > 0.05, otherwise, reject H₀ and accept H₁. Accept H₁ if the probability value is < 0.05, otherwise, reject H₁ and accept H₀.

Given the coefficient of the parameter estimates of LNEXR as 12% and the probability of t-statistics of 0.0004 < 0.05 which is significant, it shows that it is statistically positive and significant,

Step IV: Taking a Decision on the Rejection or Acceptance of the Null or Alternate Hypothesis

Result reveals that the probability values of LNEXR is 12% and the probability of t-statistics of 0.0004 < 0.05 which is significant. The study rejected the Null hypothesis and accepted the alternate hypothesis thereby concluding that exchange rate had a positive and significant impact on assets of deposit money banks in Nigeria.

Test of Hypothesis two

Step 1: Restatement of the Hypotheses in Null and Alternate Form

H₀: Inflation rate did not positively and significantly impact the assets of deposit money banks in Nigeria.

H₁: Inflation rate positively and significantly impacts the assets of deposit money banks in Nigeria.

Step II: Presentation and Discussion of the Results Arrived at Using the Estimation Technique

| Variable | Coefficient | Prob.* |
|----------|-------------|--------|
| LNINFR | -0.03 | 0.029 |

Source: Appendix 2

Step III: Statement of Decision criteria

Accept H₀ if the probability value is > 0.05, otherwise, reject H₀ and accept H₁. Accept H₁ if the probability value is < 0.05, otherwise, reject H₁ and accept H₀.

Given the coefficient of the parameter estimates of LNINFR as -0.03% and the probability of t-statistics of 0.029 < 0.05 which is significant, it shows that it is statistically negative and significant.

Step IV: Taking a Decision on the Rejection or Acceptance of the Null or Alternate Hypothesis

Result reveals that the probability values of LNINFR are -0.03% and the probability of t-statistics of 0.029 < 0.05 which is significant. The study accepted the Null hypothesis and rejected the alternate hypothesis thereby concluding that the inflation rate had a negative and significant impact on assets of deposit money banks in Nigeria.

5. Result, Conclusion, and Recommendations

5.1 Result

Based on the specific objectives of the study, the following are the specific findings:

1. Interest rate had a negative (-0.053) percent and non-significant impact (0.52) on assets of deposit money banks in Nigeria.
2. Exchange rate had a positive (0.12) percent and significant impact (0.0004) on assets of deposit money banks in Nigeria,
3. Inflation rate had a negative (-0.03) percent and non-significant impact (0.029) on assets of deposit money banks in Nigeria.

5.2 Conclusion

This study investigated the effect of monetary policy on assets of deposit money banks in Nigeria. Reviews of Conceptual, empirical, and theoretical basis for the work were done and are in line with our Apporari expectations. The research methodology concentrated on the use of the baseline ARDL. Based on findings, the study concludes that monetary policy decisions play serious significant effects on the assets of deposit money banks in Nigeria.

5.3 Recommendations

In line with the specific objectives of this study, we recommend as follows:

1. It was recommended that government should create reasonable credit to the private sector and therefore regulates the interest rate to be charged.
2. Exchange rate has a significant effect on Insurance profitability in Nigeria. This study recommends that public enlightenment campaigns should be done by the government directing people about the availability of money kept for agricultural loans and various credits to control the black market in the exchange rate.
3. It was recommended that effective policies such as policies that will encourage manufacturers to have access to bank credits without democratic bottleneck will go a long way to provide efficiency in the system and hence improve or control inflation; however, gradual control of inflation through mopping up excess liquidity will be done by the monetary authorities to enhance the growth of deposit money bank assets.

5.4 Contribution to knowledge

This research work adds to existing works in this area of finance, banking, and economics. In very specific terms, this work contributes to knowledge in the following ways:

1. **By way of methodology**, the study combined ARDL of baseline. This, to the best of my knowledge, is different from what exists in literature where works on the impact of monetary policy on the assets of deposit money banks in Nigeria are scanty.
2. **By way of literature**, most of the work on monetary policies was done to establish the impact of monetary policy on THE GDP but this study deviated to the assets of deposit money banks in Nigeria.
3. **By way of currency**, this work is more current because it covers the impact of monetary policy on the assets of deposit money banks in Nigeria from 1981 to 2021.

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Appendix 1

| YEAR | ASDMB | EXR | INTR | INFR |
|------|----------|--------|-------|-------|
| 1981 | 19.48 | 0.61 | 6.00 | 0.69 |
| 1982 | 22.66 | 0.67 | 8.00 | 0.75 |
| 1983 | 26.7 | 0.72 | 8.00 | 0.87 |
| 1984 | 30.07 | 0.76 | 10.00 | 0.95 |
| 1985 | 32 | 0.89 | 10.00 | 1 |
| 1986 | 39.68 | 2.02 | 10.00 | 13.7 |
| 1987 | 49.83 | 4.02 | 12.75 | 9.7 |
| 1988 | 58.03 | 4.54 | 12.75 | 61.2 |
| 1989 | 64.87 | 7.39 | 18.50 | 44.7 |
| 1990 | 82.96 | 8.04 | 18.50 | 3.6 |
| 1991 | 117.51 | 9.91 | 15.50 | 23 |
| 1992 | 159.19 | 17.30 | 17.50 | 48.8 |
| 1993 | 226.16 | 22.05 | 26.00 | 61.3 |
| 1994 | 295.03 | 21.89 | 13.50 | 76.8 |
| 1995 | 385.14 | 21.89 | 13.50 | 51.6 |
| 1996 | 458.78 | 21.89 | 13.50 | 14.3 |
| 1997 | 584.38 | 21.89 | 13.50 | 10.2 |
| 1998 | 694.62 | 21.89 | 13.50 | 11.9 |
| 1999 | 1070.02 | 92.69 | 18.00 | 0.2 |
| 2000 | 1668.84 | 102.11 | 14.00 | 14.5 |
| 2001 | 2247.04 | 111.94 | 20.50 | 16.5 |
| 2002 | 2766.83 | 120.97 | 16.50 | 12.2 |
| 2003 | 3047.86 | 129.36 | 15.00 | 23.8 |
| 2004 | 3753.28 | 133.50 | 15.00 | 10 |
| 2005 | 4515.12 | 132.15 | 13.00 | 11.6 |
| 2006 | 7172.93 | 128.65 | 10.00 | 8.5 |
| 2007 | 10981.69 | 125.83 | 9.50 | 6.6 |
| 2008 | 15919.56 | 118.57 | 9.75 | 15.1 |
| 2009 | 17522.86 | 148.88 | 6.00 | 12 |
| 2010 | 17331.56 | 150.30 | 6.25 | 11.8 |
| 2011 | 19396.63 | 153.86 | 12.00 | 10.3 |
| 2012 | 21288.14 | 157.50 | 12.00 | 12 |
| 2013 | 24301.21 | 157.31 | 12.00 | 8 |
| 2014 | 27526.42 | 158.55 | 13.00 | 8 |
| 2015 | 28173.36 | 193.28 | 11.00 | 9.6 |
| 2016 | 31082.82 | 253.49 | 14.00 | 18.6 |
| 2017 | 34593.89 | 305.79 | 14.00 | 15.4 |
| 2018 | 37705.56 | 306.08 | 14.00 | 11.4 |
| 2019 | 42523.85 | 306.92 | 13.50 | 11.98 |
| 2020 | 52966.04 | 358.81 | 11.50 | 15.75 |
| 2021 | 52966.04 | 358.81 | 12.50 | 15.75 |

Appendix 2

| Dependent Variable: LNASDMB | | | | |
|--|-------------|-----------------------|-------------|-----------|
| Method: ARDL | | | | |
| Date: 12/01/21 Time: 15:21 | | | | |
| Sample (adjusted): 1983 2021 | | | | |
| Included observations: 39 after adjustments | | | | |
| Maximum dependent lags: 2 (Automatic selection) | | | | |
| Model selection method: Akaike info criterion (AIC) | | | | |
| Dynamic regressors (3 lags, automatic): LNINTR LNXR LNINFR | | | | |
| Fixed regressors: C @TREND | | | | |
| Number of models evaluated: 128 | | | | |
| Selected Model: ARDL(2, 0, 0, 0) | | | | |
| Note: final equation sample is larger than selection sample | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob.* |
| LNASDMB(-1) | 1.313400 | 0.160416 | 8.187435 | 0.0000 |
| LNASDMB(-2) | -0.431243 | 0.150981 | -2.856281 | 0.0075 |
| LNINTR | -0.053659 | 0.083187 | -0.645044 | 0.5235 |
| LNXR | 0.116847 | 0.038460 | 3.038151 | 0.0047 |
| LNINFR | -0.030236 | 0.013243 | -2.283154 | 0.0292 |
| C | 0.583702 | 0.332417 | 1.755931 | 0.0887 |
| @TREND | 0.007313 | 0.011019 | 0.663665 | 0.5117 |
| R-squared | 0.999040 | Mean dependent var | | 7.502130 |
| Adjusted R-squared | 0.998860 | S.D. dependent var | | 2.578714 |
| S.E. of regression | 0.087072 | Akaike info criterion | | -1.883023 |
| Sum squared resid | 0.242607 | Schwarz criterion | | -1.584435 |
| Log likelihood | 43.71894 | Hannan-Quinn criter. | | -1.775892 |
| F-statistic | 5549.681 | Durbin-Watson stat | | 1.890089 |
| Prob(F-statistic) | 0.000000 | | | |
| *Note: p-values and any subsequent tests do not account for model selection | | | | |