Monetary Policy and Financial Performance of Quoted Deposit Money Banks in Nigeria

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Abstract: This study examined the effect of monetary policy and financial performance of deposit money banks in Nigeria.Ex-post facto research design was adopted to examine how monetary policy variables affect financial performance measured by return on assets in selected Nigerian deposit money banks over a period of 15 years (2005-2019). The Study is established on Quantity of Money Theory. Multiple regressionswere used to estimate the joint and individual effects of monetary policy variables measured by exchange rate, monetary policy rate and maximum bank lending rate onreturn on assets. The study revealed that the endogenous variables were significantly related with the dependent variable (return on assets). Thus, these independent variables strongly have an impact on the financial performance of deposit, money banks in Nigeria measured by return on assets. It is concluded that monetary policy instruments have been effective for deposit money banks by inducing higher savings, increasing credit supply, stimulating investment which helps these banks to generate higher levels of profitability. Therefore, the Study recommended that the Government should also consistently adopt monetary policies that will help Nigerian banks to improve on their profitability and also there is a need to strengthen monetary policy rate through effective and efficient regulatory and supervisory framework.

Keywords: Exchange Rate, Maximum Bank Lending Rate, Monetary Policy Rate, Return on Assets.

I.   Introduction

Monetary policy includes a cautious exertion by the Central Bank of Nigeria (CBN) to control the money supply for the accomplishment of certain financial objectives. The input of the Nigerian deposit money banks in development procedures can't be over-underlinedas they perform numerous roles (Ayodele, 2014). Traditional and monetarist theories have contended on fiscal strategies such as monetary policy mechanismsas effective tools of regulations tending to affect banksfinancial performance. It is the perspective of the Central Bank of Nigeria (CBN) to securely guarantee the financial performance of deposit, money banks byusing monetary policy (Akomolafe, Danladi, Babalola, &Abah, 2015).

The issue of inadequate credit allocation to the productive sectors remainsa subject and along these lines raises question on the intensity of fiscal arrangement, instruments in impacting the course of bank credit to the Nigeria economy. The use of monetary policy instruments such as THE cash reserve ratio, monetary policy rate, money supply, etc., by the Central Bank of Nigeria is to guarantee constancy of the performance of deposit money banks and impact the security of their assets. However, the effect of these fiscal instruments of banking execution in Nigeria has gotten disparate outcomes (Bawa, Akinniyi, &Njarendy, 2018).

The degree to which monetary impacts economic and financial events have been broadly contended throughout the years; it is similarly acknowledged that fiscal policy influences financial and money related to execution of any economy. There are disparate views on the degree of the impacts and the channels through which these impacts are accomplished (Ndubuaku, Ozioma, Nze, &Onyemere, 2017). This is especially significant in the Nigeria setting where the financial capital markets are not well-developed and Nigerian government has throughout the years embraced different instruments of fiscal strategies to manage and control the cost, volume, accessibility and movement of cash credit and furthermore the presentation of deposit money banks (Ndugbu&Okere, 2015).

Conversely, Ogundipe, Akintola, and Olaoye, (2020) most financial intermediaries are regularly unconcerned towards diverting assets to beneficial investments even notwithstanding lower loan costs. Every one of these factors has been referred to as constraining the exhibition of financial approach in Nigeria. Fundamentally, severe structural supply

constraints are deemed to inhibit expansion of output even when the demand for it increases. An expansionary monetary policy consequently often results in inflation rather than output growth.

The accessibility of monetary policy instruments affects both the speed and efficiency of recognition of policy objectives. For example, if the objective is to reduce money supply, the required policy frameworks are then put in place. The number of instruments that can be manipulated by policy makers if adequate would be reinforced in quickly achieving the desired objectives. But if inadequate, the desired objectives could only be approximated or met after a long time lag reducing the effectiveness of the policy, thereby having the resultant effect on performance of deposit money banks in Nigeria (Onoh, 2017).

The loans and advances of deposit, money bankaccounts for a major portion of the total credit to the private sector. However, these banks still face serious issues in relation to government regulations, institutional complications and other intrinsic related risks(Ogbeifun&Akinola, 2019). This Study is therefore primarily aimed to examine the impact of monetary policy mechanisms (monetary policy rate, inflation rate, exchange rate) on financial performance of Deposit Money Banks in Nigeria which would be of huge importance to the regulators in creating an ideal monetary policy regime that would achieve the macro economic objectives in Nigeria.

II.   Review of Literature

2.1   Conceptual Review
2.1.1   Monetary Policy in Nigeria

Monetary policy involves the use of monetary instruments to regulate or control the volume, cost, availability and the direction of money and credit in an economy to achieve some specific macroeconomic policy objective (Ayodele, 2014). It is a deliberate attempt by the monetary authority (Central Bank) to control the money supply and credit condition in the economy so as to achieve certain economic objective. Some of the macroeconomic objectives include price stability, full employment, sustainable economic growth, balance of payment equilibrium (Akinwale, 2018). The effectiveness of monetary policies in achieving its targeted objectives, however, depends on the level of compliance with the policy directives by the banks. This is because the policies sometimes go against their profit interests.

The central bank is responsible for the conduct of monetary policy to pursue the macroeconomic objectives of the government. Items in deposit money banks' balance sheet are influenced by the Central Bank of Nigeria (CBN) through the use of direct monetary policies. The CBN sets the interest and allocates credits in the economy, according to the economic objectives and plans of the Government. The policies involve targeting monetary aggregates to monitoring and manipulating policy rates to direct the interbank rate in the desired direction which in turn determines the direction of other market rates (Central Bank of Nigeria, 2016).

2.1.2   Monetary Policy and Financial Performance of Deposit Money Banks in Nigeria

The banking sector of a nation is the channel through which idle funds are provided to the productive sector, thereby facilitating the use of surpluses in the economy to generate employment and promote economic development. The banking sector provides strong confidence for depositors by motivating and encouraging savings in the economy (Aurangzeb, 2012). Akomolafe (2014) opined that sustainable economic growth is often related with nations with strong financial sector. However, the incidence of banking and financial crises in the world, and its aftermath on the world economies gives confidence on the importance of the sector on the performances of an economy. More significantly, the banking sector serves as the avenue through which the monetary policies of the government are carried out. Imoisi, Olatunji, and Ekpenyon (2013) suggested that monetary policy involves the use of monetary instruments to regulate or control the volume, cost, availability and the direction of money and credit in an economy to achieve some specific macroeconomic policy objective. They further explained that, it is a deliberate attempt by the monetary authority (Central Bank) to control the money supply and credit condition in the economy so as to achieve certain economic objective. Ajayi, and Atanda (2012) viewed some of the macroeconomic objectives to include price stability, full employment, sustainable economic growth, balance of payment equilibrium. They opined that monetary instruments include bank rate, open market operation, reserve requirements etc.

The effectiveness of monetary policies in achieving its targeted objectives, however depends on the level of compliance with the policy directives by the banks. This is because the policies sometimes go against their earnings ability (Enyioko, 2012). The existence, growth and survival of a business organization mostly depend upon the profit which an organization is able to earn and this profitability increases the value of shareholders to a considerable extent (Hassan, 2016). The profitability of the organization will definitely contribute to the economic development of the nation by way of providing additional employment and tax revenue to the government. Moreover, it will contribute the income of the investors by having a higher dividend, and thereby improves the standard of living of the people (Akomolafe, Danladi, Babalola&Abah, 2015).

In order to make profit for instance, commercial banks invest customers' deposits in various short term and long term investment outlet, however core of such deposits are used for loans. Hence, the more loans and advances they extend to borrowers, the more the profit they make (Simon-Oke, &Jolaosho, 2013). Thus, when a government embarks on contractionarymonetary policies, it reduces the available resources with the banks. This consequently reduces their ability to make profits.

2.1.3   Monetary Policy Instruments
The instruments of monetary policy can be characterized into two namely:
1. Direct or qualitative instruments
2. Indirect or quantitative instruments

2.1.3.1 Direct or Qualitative Instruments of Monetary Policy Tools
There are several instruments available for money and credit control, however, the instrument mix to be employed at any time is a function of the goals to be achieved and the degree of usefulness of such instrument to a large extent affects the economic fortunes of the country (Ajayi&Atanda, 2012).

- **Reserve Requirement**

Deposit Money Banks (DMBs) are authorized by the Central Bank of Nigeria (CBN) to maintain a percentage of their deposit liabilities (reserves) as vault cash. This requires that a fractional reserve limits the amount of loans deposit money banks can make to the domestic economy and thus limit the supply of money. This assumption means that Deposit Money Banks generally maintain a stable relationship between their reserve holdings and the amount of credit they extend to the public (Akomolafe, Danladi, Babalola, &Abah, 2015).

- **Special Deposits**

Special deposits are the additional cash reserves (minimum cash requirement) that deposit money banks are ordered to lodge with the Central Bank of Nigeria. The central bank has the authority to issue guidelines from time to time requiring all deposit money banks to maintain special deposit, an amount equal to the percentages of the bank's deposit liabilities (Ayodele, 2014)

- **Moral Suasion**

Moral suasion is an instrument by which policy makers encourage or discourage particular behaviours of consumers, businesses, and other economic agents, without resorting to formal actions such as laws or legislation. The use of moral suasion by the Central Bank of Nigeria is more effective during short-term crises such as wars, energy shortages, or financial instability. It is also used when other monetary policy instruments failed or cannot be used to persuade economic agents to adopt certain policy guidelines. Moral suasion also implies exerting pressure on the banking system, or other economic agents, without any strict action to ensure compliance with the rules (Dhungana, 2016).
In many cases, it is a suggestion to the banks to do or not to do something. Moral suasion is used to inform the deposit money banks about the expectations of the central bank through a monetary policy guideline.

- **Selective Credit Control**

This instrument is used to distinguish among the sectors of the economy into preferred and less preferred sectors. This is usually designed to influence the direction of credits in the economy so as to ensure that credits go to those sectors designed as "preferred". When plans are drawn up, these credit controls are being integrated into the budget. For instance, in the course of the government's programme to regenerate the agricultural production, which is the most favoured sectors, credits to the sector is at lower interest rate while the least favoured sectors pay the highest rate of interest (Ekpung, Udude, &Uwalaka, 2015).

2.1.3.2. Indirect or quantitative instruments
The Quantitative Instruments are also known as the general tools of monetary policy. These tools are related to the Quantity or Volume of the money. They are designed to regulate or control the total volume of bank credit in the economy. These tools are indirect in nature and are employed in influencing the quantity of credit in the country. They are:

- **Open Market Operations (OMO)**

Open Market Operations(OMO) is used to wipe out shortage of money in the money market, to influence the term Central Bank buys or sells on behalf of the Fiscal Authorities securities to the banking and non-banking public (i.e. In the

open market). One such security is treasury bills. When the Central Bank sells securities, it reduces the supply of reserves and when it buys (back) securities by redeeming them, it increases the supply of reserves to the deposit money banks, thus affecting the supply of money (Ibeabuchi, 2007).

- **Interest Rate**

Obidike, Ejeh, and Ugwuegbe (2015) asserted that the Central Bank lends to financially sound Deposit Money Banks at a more favourable interest rate, called the minimum rediscount rate (MRR). The minimum rediscount rate sets the benchmark for the interest rate regime in the money market and thereby affects the supply of credit, the supply of savings (which affects the supply of reserves and monetary aggregate) and the supply of investment (which affects full employment and GDP)

- **Exchange Rate**

The balance of payments can be in deficit or in surplus and each of these affect the monetary base, and hence the money supply in one direction or the other. By selling and buying foreign exchange, the Central Bank ensures that the exchange rate is at levels that do not affect domestic money supply in undesired directions, through the balance of payments and the real exchange rate. The real exchange rate when misaligned affects the current account balance because of its impact on external competitiveness (Imoisi, Olatunji&Ekpenyong, 2013).
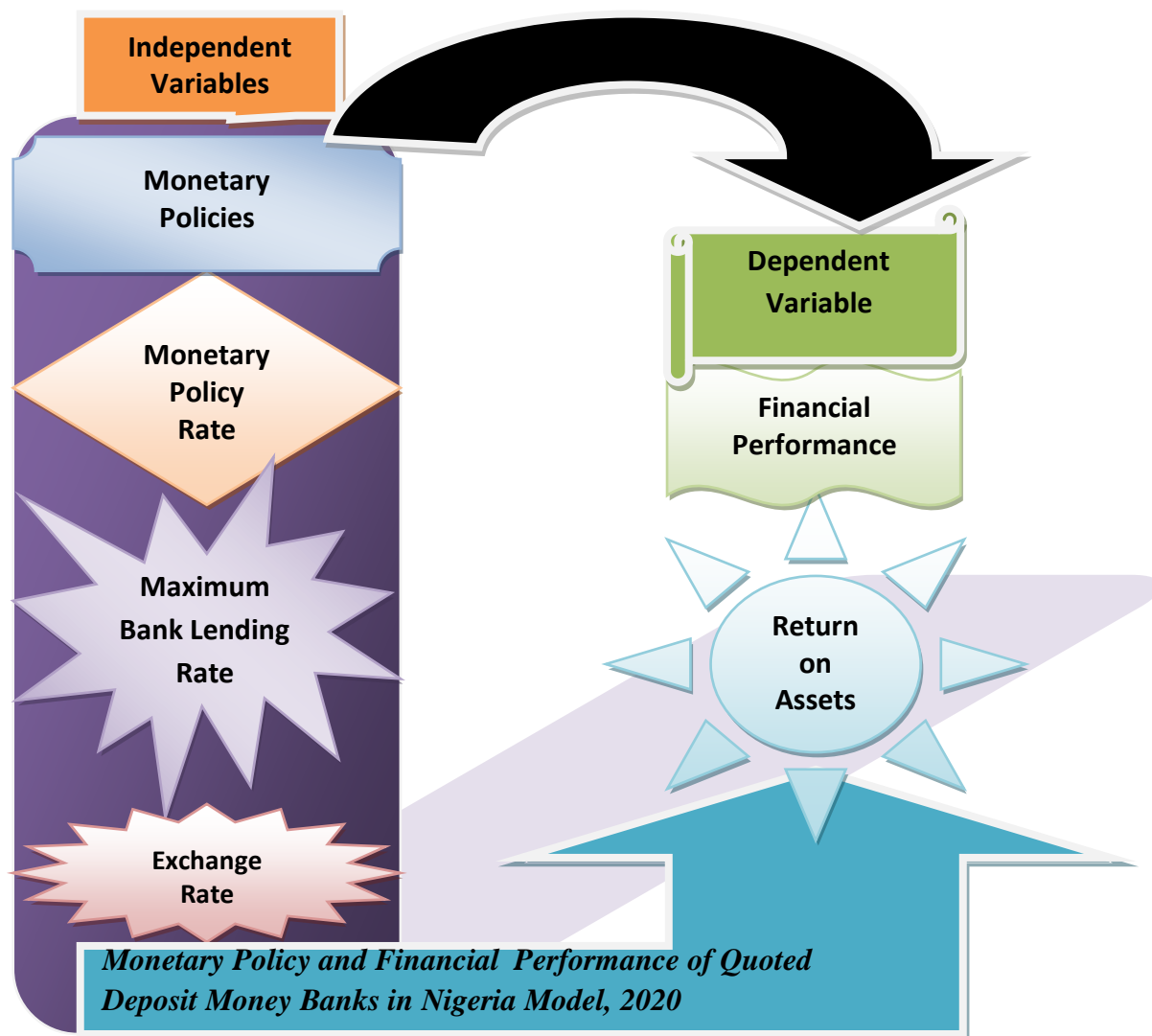
- **Rediscount Rate**

The rediscount rate is the rate at which the central bank provides loans to deposit money banks. Such lending by the central bank is usually at panel rates and it serves as a lender of last resort. By making appropriate changes in the rate, the central bank controls the volume of total credits indirectly. This has the purpose of influencing the lending capacity of the deposit money banks. During the periods of inflation, the central bank may raise the rediscount rate, making the obtaining of funds from the central bank more expensive. In this way, credit is made tighter. Similarly, in the depression, when it is necessary to encourage deposit money banks to create more credits, the central bank will lower the rediscount rate (Onoh, 2017).

2.1.4 Financial Performance of Deposit Money Banks in Nigeria

Pandey (2010) termed performance to be characterized as an ability of enterprise to appreciate investments given into business activities, which will contribute to continual self-improvement and achievement of goals. Bank performance was analysed byMengistu, (2015) in terms of its capacity to generate sustainable profitability. He opined that profitability is a bank's first line of defense against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings. An institution that persistently makes a loss will ultimately deplete its capital base, which in turn puts equity and debt holders at risk. Thus, this study employed, Return on Assets (ROA) and Return on Equity as a metric of financial performance.

Return on assets is a key indicator often used in the literature of bank financial performance. It shows the profit earned per Naira of assets and most importantly reflects the management's ability and efficiency to utilize banks' financial and real investment resources to generate profits. The ROA depends on the bank's policy decisions as well as on uncontrollable factors relating to the economy and government regulations (Osuka&Osadume, 2013). In addition to this, Soyemi, Akinpelu, and Ogunleye, (2013) asserted that bank profitability is best measured by ROA because high equity multipliers do not distort it. They corroborated this view by affirming that researchers focus on and make use of ROA as one of the major tools to measure bank profitability to guard against most of the limitations associated with the use of other accounting financial performance proxies.

2.1.5 Conceptual Framework for Monetary Policy and Financial Performance of Quoted Deposit Money Banks in Nigeria

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┌─────────────────┐
│  Independent    │
│   Variables     │
└─────────────────┘

┌─────────────────┐                    ┌─────────────────┐
│   Monetary      │                    │   Dependent     │
│   Policies      │                    │   Variable      │
└─────────────────┘                    └─────────────────┘

   Monetary                               Financial
   Policy                                 Performance
   Rate

   Maximum                                Return
   Bank Lending                           on
   Rate                                   Assets

   Exchange
   Rate
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Monetary Policy and Financial Performance of Quoted Deposit Money Banks in Nigeria Model, 2020

Source: Researchers' Conceptual Framework forMonetary Policy and Financial Performance of Quoted Deposit Money Banks in Nigeria Model, 2020

2.2   Theoretical Framework

Quantity Theory of Money

The widely accepted approach to monetary economics was the quantity theory of money formulated by Nicolaus Copernicus in 1517. The theory was used as part of a broader approach to micro and macro issues referred to as classical economics from the works of Irving fisher who laid the foundation of the quantity theory of money through his equation of exchange (Ibeabuchi, 2007).

Anyanwu (1993) stated in his proposition that money has no effect on economic aggregate but price. The classical economists decided upon the quantity theory of money as the determinant of the general price level. Most theorists were of the opinion that the quantity of money determines the aggregate demand, which in term determine the price level as posited by Amacher&UIbrich (1986).

Onouorah, Shaib, Oyathelemi and Friday (2011) mentioned that the quantity theory of money was not only a theory about the influence of money in the economy and how a Central Bank should manage the economy's money supply, but it represented a specific view of the private market economy and the role of government. Also, Punita, and Somaiyi, (2006) added that the private market such as deposit money banks provided the best framework for achieving socially and economically desired outcomes. According to the theory, the role of government was providing a system of laws and security to protect private property, as well as providing a stable financial and monetary framework.

Soludo (2007) acknowledged the theory that, money affects the economy, which is the reason why Central banks adopt monetary policy to control the flow of money in the economy through banks that are regarded as the private market industry that mobilizes the largest volume of money in any economy. The economic depression of the 1930s, according to Onyemaechi (2005) drastically changed attitudes about the role of money and monetary policy as a tool of economic stabilization. Monetary policy was then viewed as an ineffective method of fighting depressions, and the belief in a self-regulating market that reached socially desirable results was destroyed.

2.3   Empirical Review

Nguyen and Le, (2017) examined the impact of monetary policy on commercial banks' profit in Vietnam by using panel data regression. In their study, the data are collected from 20 commercial banks, which were doing business in Vietnam's banking market, ranging from 2007 to 2014 in annually frequency. Monetary base (MB), discount rate (DIS) and required reserve ratio (RRR) are used as proxies for monetary policy. Profit before tax (PAT) is used to represent commercial banks' performance. The results show that there is a positive relationship between banks' profits and monetary policies. Among those chosen variables representing SBV's monetary policy, only MB has a significant positive impact on bank's profit at the significance level of 10%. On this premise, the study recommends that MB should be one of the variables in the center of being concerned in the SBV's policies regarding the banking performance and stability.

Ekpung, Udude and Uwalaka (2015) investigated the effect of monetary policy on banking sector performance in Nigeria. The study period covers 36 years from 1970 to 2006, using selected indicator and employing the OLS regression technique. Results showed that overall; monetary policy has a significant effect on the bank deposit liabilities. Meanwhile, on individual basis, we discovered that Deposit Rate (DR) and Minimum Discount Rate (MDR) had a negative influence on the banks deposit liabilities in Nigeria, whereas Exchange Rate (EXR) had a positive and significant influence on the banks deposit liabilities in Nigeria. They conclude therefore that monetary policy plays a vital role in determining the volume of bank's deposit liabilities in Nigeria. The study recommends that government and its monetary authorities should strive to create a better environment for banking sectors to grow in the country by packaging appropriate monetary policies that would guarantee and enhance growth and development of the banking sectors in Nigeria.

Ndugbu and Okere (2015) investigated the impact of monetary policy on the performance of deposit, money banks – the Nigerian Experience(1993-2013).Data for this study were collected from the Central Bank of Nigeria (CBN) statistical bulletin, annual reports and statement of accounts. Ordinary Least Square and co-integration was used to evaluate the impact of monetary policy on the performance of deposit money banks. The Augmented Dicker Fuller (ADF) unit root test and co-integration proved that the variables are stationary and a long-run relationship exist among the variables The OLS revealed that amongst all the monetary policy variables (bank deposit rate, bank lending rate, cash reserve ratio and liquidity ratio) considered in the model, he only bank deposit rate has significant relationship though inverse relationship. On this premise, the study recommends, among others, that the Central Bank of Nigeria (CBN) should moderate the deposit rate as a tool for regulating deposit money banks operation. Again, there is needed to modify the monetary policy instruments to reflect and respond more rapidly and easily to local economic conditions**.**

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 effects regression is the most appropriate. The results show 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. This study, therefore, recommends that interest rate policy should be looked into by the monetary authority in a way that is friendly to loan advancement in the country.

Punita and Somaiya (2006) investigate the impact of monetary policy on the profitability of banks in India between 1995 and 2000. The monetary variables are bank rate, lending rates, cash reserve ratio and statutory ratio, and each regressed on banks profitability independently. Lending rate was found to exact positive and significant influence on banks profitability, which indicates a fall in lending rates will reduce the profitability of the banks. Also the bank cash reserve ratio and statutory ratio were found to have significantly affected profitability of banks negatively. Their findings were the same when lending rate, bank cash reserve ratio, and statutory ratio were pooled to explain the relationship between bank profitability and monetary policy instrument in the private sector.

III. Methodology

The study covered Nigeria's banking sector with time series data rather than cross-sectional data. Also, it was appropriate for testing the hypotheses of the study and helped to answer the research questions concerning interest rates and the performance of deposit, money banks in Nigeria which were the crucial concern of this study.

The Study selected Five (5) quoted deposit money banks, which include; Access Bank, Ecobank, First Bank, Wema Bank and Zenith Bank. The sampling technique adopted in the selection was the convenience sampling because they are "convenient" sources of data for the researcher. Thus, the researcher adopted this because the information needed by the selected banks is conveniently and readily available to the researcher for the period of analysis (2005-2019).

Regression analysis was adopted to obtain interpretable findings. Return on Assets was used to measure financial performance of quoted deposit money banks. On the other hand, monetary policy rate and other control variables (maximum bank lending rate and exchange rate) were used to measure monetary policy in Nigeria for the period under study.

3.1 Model Specification

The following mathematical model was developed to analyze the effect of monetary policy on performance of deposit, money banks in Nigeria using the Maximum bank lending rate, monetary policy rate, and exchange rate as the independent variables and regressed against the dependent variable; return on assets (ROA).

This study employed the following model specified as shown below.

$$Y_{lt} = \alpha_{it} + \beta_1 MBLR_{lt} + \beta_2 MPR_{lt} + \beta_3 EXCHR_{ltt} \ldots \ldots \ldots \ldots \ldots 3.1$$

Where Y represents financial performance of deposit, money banks in Nigeria measured by return on assets

α= the constant term

MBLR= Maximum Bank Lending Rate

MPR=Monetary Policy Rate

EXCHR = Exchange Rate

β= the coefficient of the function

e = error term.

Since the return on assets is a proxy used in measuring financial performance in Nigeria, in this study, the model was modified as follows:

$$ROA_{it} = f(MBLR, MPR, EXCHR) \ldots \ldots \ldots \ldots \ldots 3.2$$
$$ROA_{lt} = \alpha_{it} + \beta_1 MBLR_{lt} + \beta_2 MPR_{lt} + \beta_3 EXCHR_{ltt} + \varepsilon_{it....} \ldots \ldots \ldots \ldots 3.3$$

IV. Results and Discussions

4.1.1 Descriptive Analysis

Table 4.1 Descriptive Statistics

	EXCHR	MBLR	MPR	ROA
Mean	172.9013	22.78800	11.40000	0.071531
Median	153.8600	22.62000	12.00000	0.107346
Maximum	360.0000	31.09000	14.00000	0.187693
Minimum	118.5000	9.030000	6.000000	-0.251615
Std. Dev.	68.42111	5.565351	2.662236	0.106897
Skewness	1.926381	-0.692544	-0.877360	-2.047237
Kurtosis	5.425850	3.690082	2.722903	6.779069
Jarque-Bera	12.95533	1.496676	1.972390	19.40380
Probability	0.001537	0.473152	0.372993	0.000061
Sum	2593.520	341.8200	171.0000	1.072961
Sum Sq. Dev.	65540.27	433.6238	99.22500	0.159976
Observations	15	15	15	15

Source: Researchers'Computed Output E-views, (2020).

The descriptive statistics presented in table 4.1 gave a preview of the central tendencies, measure of dispersion, minimum and maximum values, degree of peakedness, asymmetric value , and the Jarque-bera statistics of all the series used in the study.

The table showed average mean values of 172.90, 22.788, 11.40, and 0.0715, for exchange rate, maximum bank lending rate, monetary policy rate and return on assets respectively. The least and highest values of exchange rate were ₦118.50 and ₦360.00 respectively. For maximum bank lending rate, the table showedleast and highest values of 9.03% and 31.09% respectively. Minimum and maximum values of monetary policy rate reported in table 4.1 stood at 6% and 14% respectively. The table reported minimum value of -0.2516 for return on assets while the maximum value stood at0.1877. From the table, it was shown that all the variables except exchange rate (1.926) were skewed to the left, given the corresponding negativeskewness statistics of -0.6925, 0.8773, and -0.2516 for maximum bank lending rate, monetary policy rate and return on assets respectively. Their negative values of skewness show that, the coefficients of the variables are negative and their means are less than median values, also the negative skewed distribution also showed that there is higher risk than what the standard deviation measures.

As regards Kurtosis, a kurtosis with distribution greater than 3 is a leptokurtic distribution. A leptokurtic distribution (greater than 3) has a sharper peak with lower probability than a normal distribution of kurtosis whose value is equal to 3. A kurtosis with less than 3 is a platykurtic distribution which has a lower and wider peak with higher probability than leptokurtic and normal distribution. Notably, the kurtosis statistics revealed that only monetary policy rate (2.7230) wasplatykurticwhile exchange rate (5.4259), maximum bank lending rate (3.6900) and return on assets (6.7790).

The above analysis is meant to only reveal the descriptive statistics of each of the variables. Therefore, no conclusion was drawn from the characteristics observed. It can also be seen that all the variables have 15 observations. This can be recognized as accessibility of information on the variables used in the study.

4.1.2 Unit root Diagnostic Test
Table 4.2 Unit Root Test Results

Variables	Level			1st Difference		
	ADF-Fisher Chi-Square					
	Intercept	Intercept and Trend	None	Intercept	Intercept and Trend	None
EXCHR	0.9999	0.8973	0.9958	0.4929	0.3832	0.0179**
MBLR	0.3535	0.2413	0.3814	0.3447	0.8719	0.0413**
MPR	0.5325	0.2791	0.7012	0.0021**	0.0002**	0.0008**
ROA	0.0001**	0.1325	0.2526	0.3145	0.3576	0.0201**

**5% level of significance
Source: Researchers'Extract from Computer Output, E-views, 2020

Table 4.3 Summary of Unit root tests

Augmented Dickey-Fuller(ADF)				
Variables	Level	First Difference	I(d)	Remarks
EXCHR	-	0.0179**	I(1)	Stationary
MBLR	-	0.0092**	I(1)	Stationary
MPR	-	0.0109**	I(1)	Stationary
ROA	-	0.0437**	I(1)	Stationary

**5% level of significance
Source: Researchers'Extract from Unit Root Test Result, 2020 (Table 4.3)

In order to examine the integration order amongst the variables, the study used the Augmented Dickey Fuller (ADF) Test. This tool of unit root test (ADF) was tested for all the variables by taking null hypothesis as 'series is non-stationary and the alternative hypothesis as 'series is stationary'. If the computed critical probability value exceeds 0.05, level of significance, then, null hypothesis is accepted; it is concluded that series is stationary and vice-versa.

It is evident from the unit root test results that none of the variables was stationary at level indicated as I(0), but they were stationary at first difference specified as I(1). This suggests that co-integrating regression estimate is an appropriate appraisal method as the variables are in the same integration order, hence, all the variables have unit root in their level form but at first difference, the serieswere stationary. Thus, the model follows integrating process and Johansen co-integration test was conducted in this context.

4.1.3. Co-integration Analysis

Table 4.4 Result of Johansen Co-integration Test

Date: 07/23/20   Time: 21:56

Sample (adjusted): 2007 2019

Included observations: 13 after adjustments

Trend assumption: Linear deterministic trend

Series: EXCHR MBLR MPR

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.903369	39.01757	29.79707	0.0033
At most 1	0.485431	8.638511	15.49471	0.3999
At most 2	7.61E-05	0.000990	3.841466	0.9751

Trace test indicates 1 cointegratingeqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Researchers' Result of Johnansen Co-integration Test, 2020

The test for co-integration was performed using Johansen maximum likelihood estimation approach. Under this approach, trace test statistics was used in testing whether a long run relationship exist among the variables. The result in the co-integration test as revealed above shows the non-existence of co-integration or long-run relationship between exchange rate (EXCHR), maximum bank lending rate (MBLR), and monetary policy rate (MPR). The condition for co-integration among the variables is that the critical value of 5% must be less than the trace statistics. Considering the result, the critical value of 5% is lower than the trace statistics at none hypothesized. Hence, the hypothesis of co-integration has been accepted at 5% significance level, indicating a long run relationship in only one independent variable while the remaining variable have a short run relationship. Having established that, there is no long-run relationship among the variables through the use of Johansen co-integration test, regression analysis of the model was estimated.

4.2   Testing of Hypothesis

The regression model using ordinary least squares was required in testing the hypotheses. The decision rule was to accept the alternate hypothesis and reject the null hypothesis if the P-value obtained was lower than the 5% (0.05) benchmark specified in E-views for the analysis.

H_01: Monetary Policy has no significant impact on the financial performance of deposit money banks in Nigeria.

Table 4.5 Regression Result

Dependent Variable: ROA

Method: Least Squares

Date: 07/23/20   Time: 23:09

Sample: 2005 2019

Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCHR	-0.000584	0.000390	-1.495826	0.1628
MBLR	-0.003260	0.004304	-0.757406	0.4647
MPR	0.040913	0.010761	3.801817	0.0029
C	-0.219682	0.105104	-2.090135	0.0606

R-squared	0.629530	Mean dependent var	0.071531
Adjusted R-squared	0.528492	S.D. dependent var	0.106897
S.E. of regression	0.073402	Akaike info criterion	-2.162552
Sum squared resid	0.059266	Schwarz criterion	-1.973738

Log likelihood	20.21914	Hannan-Quinn criter.	-2.164563
F-statistic	6.230663	Durbin-Watson stat	2.501216
Prob(F-statistic)	0.009926		

Source: Computed Output E-views, (2020).

4.3   Discussion of Findings

The regression results revealed that there was a negative and insignificant relationship between exchange rate and return on assets. This was evident from the coefficient (-0.000584) and P-value (0.1628) associated with exchange rate which was higher than the benchmark of 5 per cent specified for this analysis. This outcome basically implied that, with all other variables held constant, an increase or a change in exchange rate by one unit resulted in a 0.000584 unit decrease in financial performance of deposit money banks in Nigeria. This result is inconsistent with the findings of Ekpung, Udude and Uwalaka (2015). They found out that Exchange Rate (EXR) had a positive and significant influence on the performance of deposit money banks measured by banks deposit liabilities in Nigeria.

In addition, that there was also a negative and insignificant relationship between maximum lending rate and return on assets. This was evident from the coefficient (-0.003260) and P-value (0.4647) associated with maximum bank lending rate which was higher than the benchmark of 5 per cent specified for this analysis. This outcome basically implied that, with all other variables held constant, an increase or a change in maximum bank lending rate by one unit resulted in a 0.00326 unit decrease in financial performance of deposit money banks in Nigeria. This finding is consistent with the results in the works of Akanbi and Ajagbe (2012), Hassan (2016), they found negative relationship between bank lending rate and financial performance suggesting that high lending rate dampens individuals, firms and industries from procuring loans and advances triggering diminishing money in the economy, credit and price reduction. Thus, deposit money banks are unable to generate earnings associated with borrowings/loans and advance which thereby causes decline in their performance.

The regression result revealed a significant positive relationship between monetary policy rate and financial performance of deposit money banks in Nigeria. This was evident from the coefficient (0.040913) and P-value (0.0029) associated with monetary policy rate, which was less than the benchmark of 5 per cent specified for this analysis. This outcome basically implied that, with all other variables held constant, an increase or a change in monetary policy rate by one unit resulted in 0.040913 unit increase in financial performance in Nigeria.

This could also be attributed to the fact that, even though government adopts contractionary monetary policies (i.e. a type of monetary policy that is extended to reduce the rate of monetary expansion to fight inflation), deposit money banks are still able to manage available resource, and invest customers' deposits in various short term and long term investment outlets, especially loans and advances. Hence, the more loans and advances they extend to borrowers, the more the profit they make. This result is similar with the works of Oladele, Amos, and Adedeji, (2017), Eke, Eke, and Inyang, (2015), Emeka, Agok, and Ene, (2015), OkoyeandEze, (2013); their results confirmed that monetary policy rate has significant and positive effects on the financial performance of Nigerian deposit money banks.

Findings from the time series regression analysis using least square model for table 4.5 indicated that, R^2 (coefficient of determination) of the variables was 0.6295. As a measure of the overall fitness of the model, the R^2 indicated that, the model was capable of explaining 63 per cent of the variation in the dependent variable which could be traced to the independent variables and that the remaining 37 per cent of the variations in return of assets of deposit money banks in Nigeria were as a result of other factors not included in the model. This suggests that the descriptive power of the model is strong. This outcome was supported by the adjusted R^2 of 52.9 per cent, which was the percentage of total variation that could be explained by the model.

Similarly, findings from the F-Statistic which is a proof of the validity of the estimated model presented a p-value of (0.009926) less than 0.05. This impliedevidently that jointly, the endogenous variables (exchange rate, maximum bank lending rate, monetary policy rate) were significantly related with the dependent variable (return on assets).

Thus, these independent variables strongly have impact on the financial performance of deposit money banks in Nigeria measured by return on assets. Also, the analysis revealed a Durbin-Watson statistic value of 2.501. The durbin-watson statistic usually has a value between 0 and 4. Values from 0 to less than 2.0 indicate positive autocorrelation and values from 2 to 4 indicate negative autocorrelation. Thus, the result (2.501) showed that the independent variables were negatively auto correlated.

V.   Conclusion

This study has examined monetary policyandfinancial performance of deposit money banks in Nigeria using. Specifically, the study explored the association between monetary policy mechanisms measured by (exchange rate,

maximum lending rate, and monetary policy rate) and financial performance measured by return on assets. Originating from the results made in the study, it is concluded that monetary policy instruments have been effective for deposit money banks by inducing higher savings, increasing credit supply, stimulating investment which helps these banks to generate higher levels of profitability. It has also succeeded to establish that, monetary policy tools have strong impact on the financial performance of deposit money banks in Nigeria.

Based on the above, the following recommendations were made:
1. The Nigerian government through the CBN should set lending rates an optimum level as these would help to boost credit expansion, money supply and invariably returns and profitability of deposit money banks in Nigeria. Additionally, deposit money banks should mobilize more deposits in order to enhance their lending capability and should formulate comprehensive and realistic financial plans to boost financial performance.
2. Government should also consistently adopt monetary policies that will help Nigerian banks improve on their profitability and also there is need to strengthen monetary policy rate through effective and efficient regulation and supervisory framework. Managements of deposit, money banks should make efforts to create the conditions for an efficient banking system devoid of information asymmetry in order to adapt to changing macroeconomic variables of interest rates.

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