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INFLUENCE OF MONETARY POLICY ON THE FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

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Abstract: This study examined empirically the impact of monetary policy on the performance of Nigeria deposit money banks between 1981 -2021. The data for study were extracted from Central Bank of Nigeria statistical bulletin 2021. The study employed various econometric tools to analyse the data obtained, but specifically applied the Generalized Method of Moments due to dynamic nature of the study. Deposit money banks performance as the dependent variable was proxied by total asset of banks while monetary policy variables were proxied by monetary policy rate, loan to deposit ratio and liquidity ratio respectively. The result showed that monetary policy rate and loan to deposit significantly impact total asset. This result is in line with the quantity theory of money supply. We therefore recommend that monetary policy rate should be optimized appropriately to boost the flow of money and economic performance in the country.

Keywords: Total Assets of Banks, Loan to deposit ratio, liquidity ratio, monetary policy rate, GMM.

1.1 Introduction

The objectives of monetary policy include price stability, maintenance of balance of payments equilibrium, promotion of employment and output growth, and sustainable development. The pursuit of price stability invariably implies the indirect pursuit of other objectives such as economic growth, which can only take place under conditions of price stability and allocative efficiency of the financial markets (CBN, 2016). It has become an obvious fact that the banking system of any nation plays an indispensable role in her financial stability. This sector's operations and performance have a direct impact on achieving macroeconomic goals as well improve the economy. This sector performs a significant role by intermediating funds from the surplus to deficit sectors of economic units thereby generating the appropriate framework for economic growth and development. Many central banks around the world consider Deposit Money Banks (DMBs) to be the most efficient means of implementing monetary policy.

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Central banks establish and implement monetary policies to moderate the volume, valuation, and associated costs of currency in circulation for government economic objectives to be accomplished. By managing the availability and pricing of credit, monetary policy influences the economy's financing conditions. The Central Bank of Nigeria (CBN) oversees monetary policy development and implementation, in addition to regulatory oversight of financial institutions, notably DMBs. CBN employs monetary instruments such as the cash reserve requirement (CRR), the liquidity ratio (LR), the minimum discount rate (MDR), open market operations (OMO), credit control, and monetary variables. Notably, there are two forms of monetary policy: expansionary and contractionary policies. When there is a lack of liquidity, expansionary monetary policy serves to supply money to the economy by lowering interest rates. As a result, it is employed during a downturn. By raising interest rates, contractionary monetary policy limits the amount of money in circulation and lowers inflationary pressures (Naseem, 2012; CBN, 2016; Isibor et al 2018; Ali, 2019). Generally, efficiency of monetary policy is felt by its effects on bank performance. This is attributable to the relevance of banks in the implementation of monetary policy. The CBN also directly influences the operations of DMBs through the controls imposed by monetary policies, which ultimately affects their performance. These controls may have an impact on bank policies and objectives that are unique to each bank, but they generally have an impact on profitability, liquidity, and shareholder wealth maximization (CBN, 2016). Monetary policy aims at ensuring that money supply is at a level that is consistent with the growth target of real income, such that non-inflationary growth will be ensured. An overriding issue that has berated the minds of Government over the years is the effectiveness of monetary policy in influences macro-economic variables in the country. opined that monetary policy has a strong measure of effect on the economy. Despite the lack of consensus among economists on how it works and on the magnitude of its effect on the economy, there is still remarkable strong agreement that monetary policy has significant impact on economy growth of every nation (Ude, 2015).

1.2 Statement of Problem

The effectiveness of monetary policy in influencing macroeconomic variables and sustained economic growth is a debating stigma among different researchers in time past. Policies implemented in the economy over the years has been detrimental to and inconsistent with the developmental needs of the economy, this concern has exerted pressures on the monetary policy committee to find a lasting inputs on the economy. Monetary policy, which is seen as a measure that are engaged by the Central Bank of any nation to check mate the direction and quantity of money has restructured and protected the banking system from undue crises. Monetary policy, according to the CBN (2016), protects banks, their customers, shareholders, and the economy. In fact, it protects all stakeholders and affiliated entities in a bank's lifeline. Various authors have in different time performed econometric analysis on the significance of monetary policy in driving the performance of deposit money banks (DMBs) in Nigeria; most result revealed that despite the constant changes of monetary policies, the desire results are yet to be effective; to some other results, it revealed positive and insignificant relationship with DMBs.

Nevertheless, not all studies supported its benefits on bank operational activity, liquidity, and financial performance. For example, some researchers discovered that monetary policy does not influence banks' performance, but others claimed that the influence is insignificant (Ajayi &

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Atanda, 2012; Akanbi & Ajagbe, 2012; Ogbulu & Torbira, 2012; Okoye & Udeh, 2009; Okpara, 2010; Okoro, 2013). Others reported that monetary policy has a favourable and substantial influence on banks' performance (Okoye & Eze, 2013; Ekpung et al. 2015;). This study is conceived to take a stand on the relationship between monetary policy variables, limited to monetary policy rate (MPR), loan to deposit ratio (LDR) and Liquidity ratio (LR) and the performance of deposit banks proxied by Banks total assets (BTAS).

The subsequent sections of this study are arranged as follows; section two takes care of review of related literature; section three addresses the materials and methods of analysis adopted; section four analyses the data, results, and interpretation while section five handles conclusion and recommendations for policy making.

2. Review of Related Literature

2.1 Conceptual Review

Monetary policy is the main channel at which CBN regulate the cost, volume, credit and money supply in the economy by influencing major macroeconomic variables which influences the growth of the economy, monetary policy is the deliberate policy designed by the Federal Government through the use of monetary policy instruments such as cash reserve ratio, interest rate, monetary policy rate, liquidity ratio etc to control the cost, volume, credit and supply of money in the economy (Okoro, 2013).

Monetary Policy in Nigeria Monetary policy is the conscious effort made by central bank to manage the volume, value, and availability of money in circulation to attain desired economic objectives of international and domestic equilibrium. The activity is achieved by adjusting the interest rates hence managing the amount of money in circulation (Uchendu, 2009; CBN, 2011). It is primarily an instrument for achieving the goals and objectives of monetary and price stability. Governments regulate money supply because of the belief that the growth in money supply influences inflation rate (Chuku, 2009; Onyeiwu, 2012). As a result, monetary policy includes any government acts aimed at influencing the behaviours of the financial sector. Due to varying economic frameworks, differentiation in stages of advancement in financial markets and variations in current economy, the efficiency of monetary policy and its significance as a driving force for economic stabilization differs significantly from one economy to the next.

The numerous monetary policy tools or instruments are usually divided into two categories. These are monetary policy instruments that can be used directly or indirectly (Jhingan, 2014; CBN, 2016). Direct monetary policy instruments include the Central Bank's order to DMBs on the maximum percentage or amount of loans (credit ceilings) to certain economic sectors or activities, interest rate caps, liquid asset ratio, and the issuance of credit guarantees to favoured loans. However, indirect monetary policy instruments are open market operations (OMO), cash reserve operations, monetary policy rate (MPR), liquidity ratio, moral suasion, and selective credit. Bank Performance The banking industry plays a major role in the economic development of a nation. It is based on this premise that a lot of researchers pay greater attention to the performance of DMBs. Macit (2012) suggested that the performance of DMBs can be measured in terms of competition, productivity, profitability, efficiency as well as concentration. Financial performance is based on how well a bank is performing over time and expressed in terms of profitability or losses incurred over the period under consideration (Bodie, Kane, & Marcus, 2005).

Some key instruments of monetary policy implemented by the CBN to regulate the volume and credit of money supply in the economy include but not limited to the following:

2.1.1 Cash reserve ratio: According to Udeh (2015), cash reserve ratio is the proportion of deposit liabilities which the deposit money banks, and other financial institutions are required to keep as cash with the central Bank of Nigeria. It's a mandatory cash reserve banks are to keep with CBN in line with the ratio as specify from time to time. This cash reserve ratio is estimated to check the excess liquidity in the banking system and control the volume of banks credit that can be extended by deposit money banks.

2.1.2 Liquidity ratio: liquidity ratio is the proportion of deposits of banks to be kept with CBN in specified liquid assets such as treasury bills, money at call, certificate of deposits etc mainly to strengthen the bank ability to meeting depositors' withdrawal demands and ensure public confidence Okoro, 2013).

However, Credit is the extension of money from the lender to the borrower Ajayi and Atanda (2012) noted that credit implies an arrangement by the debtor to pay the creditor for money lent or goods and services obtained on credit. Credit is a core business of financial institutions or banks because banks mobilized deposits from the surplus units of the economy and channeled it to the deficit units who need funds for productive uses. Therefore, the relationship between Banks and customers is that of debtors and creditors. According to CBN (2011), the total loans and advances given by the banks to economic agents is termed bank credit. Bank credit is often secured with collateral to ensure that the loan is recovered in the event of default. This credit is channels into investment to promote economic activities. Thus, banks provide the role of intermediation where credit is channel to the deficit sectors to enhance economy growth.

2.2 Theoretical Review

This section tends to review various theories underpinning the research work, such as:

2.2.1 Quantity Theory of Money

The monetarists used the quantity theory of money as the framework for explaining the relationship between money supply and the price level. According to Jhingan (2014), the Monetarists emphasize the role of money as the principal cause of demand-pull inflation. They contend that inflation is always a monetary phenomenon. Price tends to rise when the rate of increase in the money supply is greater than the rate of increase in real output of goods and services.

2.2.2 The Keynesian Theory

According to Keynesians, monetary policy has a significant impact on economic activity. Keynes theory in 1930 states that a change in the supply of money can permanently change variables such as the rate of interest, the aggregate demand and the level of employment, output, and income. Keynes disagreed with the classical assumption that money supply directly affects price levels, and that the economy was always at full employment. However, in a situation of unemployment, Keynes advocated for a cheap monetary policy (Udeh 2015). As a result, when the money supply is expanded, the first effect is on the interest rate, which tends to decline. A decrease in the rate of interest will encourage investment due to the marginal efficiency of capital. Multiplier effect increases effective demand, increasing income, output, and employment. Keynes posited that interest rate is governed by the demand for and supply of money. It went on to say that changes in money stock facilitate financial market activities such as interest rates, investment, output, and employment (Keynes, 1930; Udeh 2015).

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2.2.3 The Classical Monetary Theory

The evolution of this school of thought can be traced to great economists of the past, such as Jean Baptist Say, Adam Smith, David Ricardo, Pigou, and others who shared the same beliefs. They believe that "supply creates its own demand" The classical economists decided upon the quantity theory of money as the determinant of the general price level. Theory shows how money affects the economy. It may be considered in terms of the equation of Exchange. MV= PY (Okoye & Eze, 2013).

2.3 Empirical Review

Ejem and Ogbonna (2020) used vector error correction model, examine the response of deposit money banks to monetary policy transmission. The finding shows that cash reserve ratio negatively and significantly affects the performance of deposit money banks in Nigeria. While other monetary policy variables exert insignificantly to the performance of deposit money banks. They also found that apart from banks own shock, banks respond negatively to shocks from major monetary policy instrument.

Using OLS, Ehimare (2014) examined the effect of monetary policy on the Nigerian Deposit Money Bank (DMB) in Nigeria. The study used variables such as total loans and advances (TLA) as dependent variable and liquidity ratio (LR), cash reserve ratio (CRR), monetary policy rate (MPR), and average exchange rate (AER) as independent variables. The result of the findings showed that monetary policy rate has the most significant effect deposit money banks loans and advances during the period under study. The study thus recommends, among others, that the regulatory authority Central Bank of Nigeria should create credit procedures, policies and analytical capabilities which should be entrenched in the credit management of DMB's operations.

Ademola et al (2022) looked at the effect of monetary policy on the performance of Deposit Money Banks (DMBs) in Nigeria. Specifically, it assessed the effect of Cash Reserve Requirement (CRR) on banks' lending activities and ascertained the effect of Minimum Discount Rate (MDR) and Liquidity Ratio (LR) on banks' performance. In the study20 licensed DMBs were selected and time series data from 2014 to 2019 were obtained from Central Bank of Nigeria (CBN) Statistical Bulletin. Data were analysed using descriptive statistics, correlation and ordinary least square (OLS) model. Findings revealed a strong yet negative link between CRR and MDR and DMBs performance. This means that increase in CRR and MDR leads to a sharp decline in bank performance. LR, on the other hand, showed a substantial and positive link with DMB performance, showing that higher LR improves bank performance. Furthermore, the results of the OLS model revealed that CRR and MDR had an adverse but considerable influence on DMBs performance.

Ajayi and Atanda (2012) employed Enger-Granger two-step cointegration to examine the impact of monetary policy on the performance of banks in Nigeria. The empirical results revealed that monetary policy instruments are ineffective to trigger credit in the long run but found that bank rate, inflation rate and exchange rate have positive relationship with bank credit, while negative relationship exist between liquidity ratio, cash reserve ratio and total credit of the banks.

Ude (2015) examined the impact of monetary policy instruments on profitability of commercial banks in Nigeria using the Zenith Bank Plc experience. The paper used descriptive research design. It utilized time series data collected from published financial statements of Zenith Bank Plc as well as Central Bank of Nigeria Bulletin from 2005 to 2012. Four research questions and four hypotheses were raised for the study. Pearson Product moment

correlation technique was used to analyse the data collected while t-test statistic was employed in testing the hypotheses. The study discovered that cash reserve ratio, liquidity ratio and interest rate did not have significant impact on the profit before tax of Zenith Bank Plc. However, minimum rediscount rate was found to have significant effect on the profit before tax of the bank. The paper concluded that a good number of monetary policy instruments do not impact significantly on profitability of commercial banks in Nigeria. The paper recommended that management of commercial banks in Nigeria should look beyond monetary policy instruments to enhance their profits.

Ndugbu and Okere (2015), examined the impact of monetary policy on the performance of deposit money banks – the Nigerian Experience, using Ordinary Least Square to evaluate the model specified. Ordinary Least Square found that amongst all the monetary policy variables (bank deposit rate, bank lending rate, cash reserve ratio and liquidity ration) considered in the model, only bank deposit rate has significant relationship though inverse relationship.

Nguyen, Vu and Le (2017) looked at the impact of monetary policy on commercial banks' profit employing panel data regression. In the study, Monetary base (MB), discount rate (DIS) and required reserve ratio (RRR) are used as proxies for monetary policy. Profit before tax (PROFIT) is used to represent commercial banks' performance. The results showed that there is a positive relationship between banks' profits and monetary policies. Among those chosen variables representing State Bank of Vietnam's monetary policy, only MB has a significant positive impact on bank's profit at the significance level of 10%. Based on that, Nguyen, et'al (2017) are of the opinion 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

2.4 Gaps in Literature

The study anchored on the effect of monetary policy on the performance of banks; however, various researchers have used both theoretical and empirical methods to determine the significance of monetary policy on banks performance, such tools include least squared techniques, unit root, Granger causality etc. however, most period used for the research seems to be small to cover the exact impact. It is therefore on the premise that the researchers intend to use Generalized Method of Moments (GMM) to determine the impact of monetary policy on banks performance, due to the dynamic nature of the banking system and the economy in general.

3. Material and Methods

3.1 Preamble

The research work is anchored on impact of monetary policy on the performance of Nigeria deposit money banks between 1981 -2021. This section is divided into two main parts namely, sources of data and model specifications.

3.2 Sources of Data

This study employed of data obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin and Nigerian Deposit Insurance Commission (NDIC), spanning from 1981 to 2021 inclusive. Bank performance was represented by Bank Total Assets (BTAS) as the dependent variable and monetary policy rate (MPR), loan to deposit ratio (LDR), liquidity ratio (LR) as the independent variables

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3.3 Model Specification

For clarity of purpose, this study utilized model to examine monetary policy impact on performance of Deposit Money Banks. The model seeks to examine various monetary policy variables against bank total assets. We formulate our model as follows:

This model captured the various dimension of monetary policy and bank performance in Nigeria; thus, the functional model is formulated as follows:

BTAS = F (MPR, LDR, LR) (1)

GMM explicit form in first difference is.

$BTAS = b_0+b_1BTAS_{t-1}+b_2MPR+b_3MPR_{t-1}+b_4LDR+b_5LDR_{t-1} + b_6LR+ b_7LR_{t-1} +e_{t-1}$ (2)

Equation 1 and 2 are the models in its functional form, mathematical/econometrical form respectively. Where BTAS is bank total assets, MPR is monetary policy rate, LDR is loan to deposit ratio, LR is liquidity ratio and μ is the error term.

3.3 Method of Data Analysis

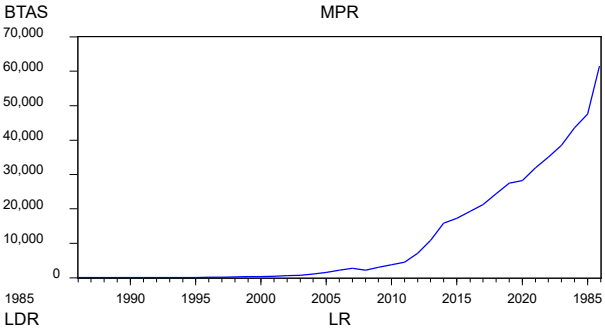
Descriptive Statistics is used in this study to know the distributive features of the data. The following residual diagnostic and stability tests were made, Serial correlation and Heteroscedasticity test. Augmented Dicker Fuller (ADF) unit root test was employed to check the stationarity of the variables. Due to dynamic nature of the banking sector and economy in general, the generalized method of moments (GMM) was applied to test the contemporaneous and long run relationships of the hypotheses. To ascertain the comprehensive causality implications of the variables in the model, Johansen cointegration and pairwise Granger causality were employed.

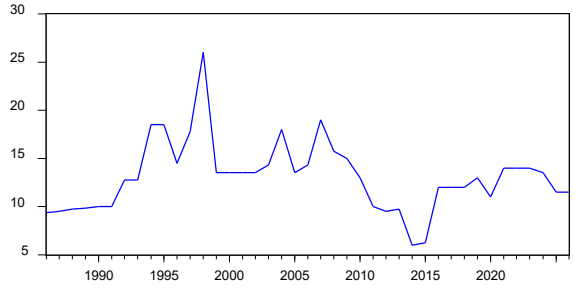
4. Analysis and Interpretation

This section analysed and reported the result of the model estimation conducted. The data for this analysis are bank total assets (BTAS) as the dependent variable, whereas the independent variables are monetary policy rate (MPR), loan to deposit ratio (LDR) and liquidity ratio (LR) obtained from CBN statistical bulletin and Nigerian Deposit Insurance Commission (NDIC) 2022 covering the period 1981 to 2021 inclusive.

4.1 Trend Analysis of Data

The time series plot of the data or trend analysis of data is shown in figure I below. The figures below showed that MPR, LDR and LR made an upward and downward movements with periods of peak and trough, whereas BTAS made a relative smooth upwards movement, suggesting the expected non-stationarity of the variables.





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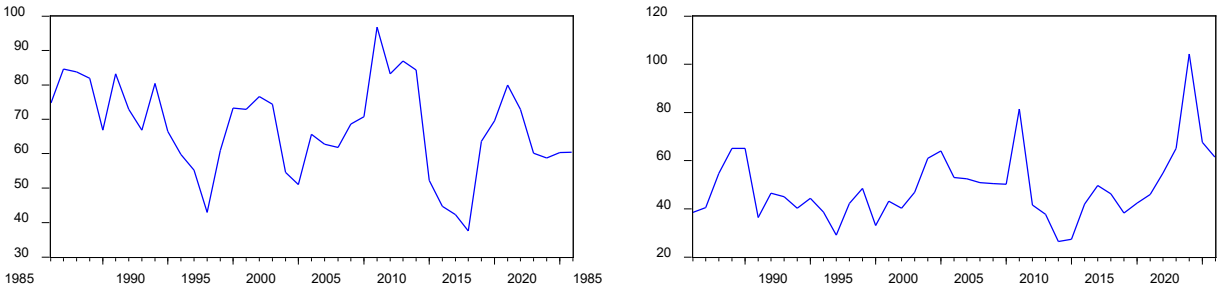

Figure 1: Trend Analysis of BTAS, MPR, LDR and LR

4.2 Description of Variables

Table 1 below shows the distributional characteristics of all the variables employed. Results in table 1 disclosed that the standard deviation of the variables are relatively high indicating high financial risk. This is affirmed by the wide margin between the values of the minimum and maximum. BTAS, MPR and LR recorded Kurtosis greater than 3, which is excess from the normal, suggesting a leptokurtic (slim or long tailed) distribution, while LDR exhibited Kurtosis lower than normal indicating platykurtic (fat or short tailed) distributions. The following variables BTAS, MPR, and LR have distributions that are positively skewed, whereas LDR has negatively skewed distribution. All the variables recorded p-values of Jarque-Bera that are significant at 5%, evidence of abnormal distribution, except LDR that has normal distribution with p-values of Jarque-Bera insignificant at 5% level.

Table 1: Descriptive Statistics for BTAS, MPR, LDR and LR

	BTAS	MPR	LDR	LR
Mean	11121.92	13.07488	67.48214	49.06683
Median	2247.040	13.00000	66.90000	46.23471
Maximum	62930.76	26.00000	96.81702	104.2024
Minimum	19.48000	6.000000	37.55947	26.39276
Std. Dev.	16232.37	3.662768	13.50868	14.66809
Skewness	1.478372	0.985943	-0.209371	1.464553
Kurtosis	4.305257	5.391023	2.605365	6.402032
Jarque-Bera	17.84531	16.40910	0.565598	34.42887
Probability	0.000133	0.000273	0.753671	0.000000
Sum	455998.6	536.0700	2766.768	2011.740
Sum Sq. Dev.	1.05E+10	536.6348	7299.376	8606.110
Observations	41	41	41	41

4.3 Global Utility Test:

In the macroeconomic analysis, it is necessary to check the global utility or usefulness of the specified models. To achieve this, the researchers used correlation matrix and ordinary least square.

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Table 2 below which disclosed correlation matrix have the range of correlations between BTAS, MPR, LDR and LR from -0.049266 to 0.353100, showing that the variables are not linearly correlated. For that the researchers have sufficient evidence to announce absence of multicollinearity.

Table 2: Correlation Matrix

Variables	BTAS	MPR	LDR	LR
BTAS	1.000000	-0.190057	-0.250392	0.353100
MPR	-0.190057	1.000000	-0.391835	0.043299
LDR	-0.250392	-0.391835	1.000000	-0.049266
LR	0.353100	0.043299	-0.049266	1.000000

Again, table 3 below shows the Ordinary Least Square (OLS) estimated model for the relationship between monetary policy variables and performance of deposit money banks. From the table, Fstatistic value is 4.866406 with p-value of 0.005947 showing that null hypothesis is rejected; there is overall significance, but Durbin-Watson statistics is 0.436987, showing presence of autocorrelation. and invalid for comparison. Therefore, cannot be used for further analysis and policy formulation. Then the researchers proceed to stationarity test to choose an appropriate tool for the estimation of the specified model.

Table 3: Ordinary Least Square (OLS) Methods

Dependent Variable: BTAS				
Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MPR	-1552.705	670.8025	-2.314698	0.0263
LDR	-445.1211	181.9330	-2.446621	0.0193
LR	387.3492	154.2989	2.510382	0.0166
C	42455.08	19419.78	2.186177	0.0352
R-squared	0.282935	Mean dependent var		11121.92
Adjusted R-squared	0.224794	S.D. dependent var		16232.37
F-statistic	4.866406	Durbin-Watson stat		0.436987
Prob(F-statistic)	0.005947			

4.4 Stationarity Properties of the Variables

This is important in time series analysis to know the appropriate technique to use in model estimation and to know the long run equilibrium links and causality between the variables. Here, Augmented Dickey Fuller (ADF) unit root test is used as shown in table 4. As revealed all variables did not attain stationarity at level, indicating non rejection of the null hypotheses that all the variables do not have unit root at level, instead are stationary at first difference or differenced once to be stationary, suggesting rejection of null hypotheses that all variables do not have unit root at first difference. LDR is both integrated at level and at first difference, but ADF statistics is more negative in first difference.

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Having confirmed that all the variables are integrated at order one or 1(1), the researchers then have enough evidence to go for co-integration test.

Table 4: ADF Unit Root Test at Level and First differenced Data

Variables	Maxlag	Level	1st Difference	Remarks
		ADF Statistics/Pvalue	ADF Statistics/ Pvalue	
LnBTAS	9	-1.026561(0.7345)	-4.173136(0.0022)	@1(1)
LnMPR	9	-1.614159(0.4660)	--6.227044(0.0000)	@1(1)
LnLDR	9	-4.697567 (0.0005)	--5.279465 (0.0001)	@1(1)
LnLR	9	-3.305242 (0.0212)	-7.199753 (0.0000)	@1(1)

4.5 Co-integration and Equilibrium Test

This is to know if there exist equilibrium relationships between BTAS and MPR, LDR, LR. Table 5 below revealed that unrestricted rank tests (Trace) co-integrations are at "None" and "At most 3" respectively, suggesting one co-integration equation at 5% level of significance among the variables. This shows that long run relationship exists between the dependent variable bank performance proxied by BTAS and monetary policy variables in Nigeria within the scope of this study.

Table 5: Johansen Cointegration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.441513	49.62026	47.85613	0.0338
At most 1	0.298152	27.48431	29.79707	0.0903
At most 2	0.231165	14.03087	15.49471	0.0821
At most 3 *	0.100894	4.041457	3.841466	0.0444

4.6 Estimating Relationship between Bank Performance and Monetary Policy

Due to the dynamic nature of the variables, the researchers engaged the Generalized Method Moments (GMM) as shown on table 6. It shows the J-statistic has coefficient of 2.807433 with probability value of 0.422278, suggesting the model is significant and suitable to adduce the contemporaneous relationship between BTAS,

MPR, LDR and LR. Therefore, it is found that both MPR and LDR have negative and significant relationship with BTAS, while LR insignificantly relate to BTAS. The adjusted R-squared is 12.6, suggesting that monetary policy variables jointly explain only 12.6% variation in bank performance. The constant is significant confirming that there are other variables or factors that influence or determine bank performance.

Table 6: Generalized Method of Moments

Dependent Variable: LNBTAS				
Method: Generalized Method of Moments				
Instrument specification: LNMPR LNMPR(-1) LNLDR LNLDR(1) LNLR				
LNLR(-1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNMPR	-3.294706	1.384224	-2.380182	0.0227
LNLDR	-3.889475	1.259914	-3.087096	0.0039
LNLR	2.062280	1.390093	1.483555	0.1466
C	24.17560	6.381739	3.788246	0.0006
R-squared	0.193535	Mean dependent var		7.343190
Adjusted R-squared	0.126329	S.D. dependent var		2.614807
S.E. of regression	2.444070	Sum squared resid		215.0451
Durbin-Watson stat	0.203515	J-statistic		2.807433
Instrument rank	7	Prob(J-statistic)		0.422278

4.7. Causal Relationship between BTAS, MPR, LDR and LR

Causality test is a tool used to know if causality exists or otherwise, between any two or more variables. From the table 7 below, it is shown that LR granger causes BTAS, but BTAS do not granger cause LR at 5% significant level, suggesting a unidirectional causality between BTAS and LR, no feedback effect. MPR and LDR do not have any causal relationship with BTAS at 5% level of significance.

Table 7: Pairwise Granger Causality Test Results

Null Hypothesis:	Obs	F-Statistic	Prob.
MPR does not Granger Cause BTAS	39	0.56816	0.5719
BTAS does not Granger Cause MPR		2.92677	0.0672
LDR does not Granger Cause BTAS	39	0.55652	0.5783
BTAS does not Granger Cause LDR		0.61589	0.5461
LR does not Granger Cause BTAS	39	10.2317	0.0003
BTAS does not Granger Cause LR		2.94889	0.0659

4.8 Discussion of Findings

This study, the impact of monetary policy on the performance of deposit money banks found that monetary policy rate and loan to deposit significantly relate to the performance of deposit money banks in the economy. This finding corroborates Ehimare (2014). Ndugbu and Okere (2015), Nguyen, Vu and Le (2017) findings, while contradicting the findings of Ejem and Ogbonna (2020). It agrees with the prepositions of the classical economists that relied on the quantity theory of money as the determinant of the general price level. Theory shows how money affects the economy. This result is real in practical terms because one of the monetary and developmental functions of the Central Bank of Nigeria is the promotion of money market. The CBN uses the deposit money banks to transmit her monetary policies in the economy (transmission mechanism).

5. Conclusions and Recommendation

5.1 Conclusion

This study was carried out to determine the significance of monetary policy on the performance of deposit money banks within the period 1981 to 2021 respectively. The variables used for the study include (banks performance proxy by bank total asset and monetary policy proxy by monetary policy rate, loan to deposit ratio and liquidity ratio) which are the dependable and independent variables estimated in the model obtained in chapter three above. Stationarity test using Augmented Dicky Fuller was employed to ascertain the level of stationarity problem and to avoid having spurious result. The test revealed that all variables are stationary at order one. Result of the of Generalized method of moments shows that monetary policy rate, loan to deposit ratio have negative and significant impact on bank total asset, whereas liquidity ratio has insignificant impact on bank performance. Unidirectional causality relationship was found between bank performance and Liquidity Ratio, no feedback effect.

5.2 Recommendation

Based on the findings from the performed analysis on the effect of monetary policy on the performance of banks in Nigeria, we recommend the following.

i. Monetary policy using the monetary policy rate should be optimized appropriately to boost the flow of money and economic performance in the country.

ii. The monetary policy committee should always revisit the monetary policy rate in line with the economic policy of the government; this will accelerate the pace of economic activities both national and international.

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