How Monetary Policy has Shaped Nigeria's Economic Growth

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Abstract

No nation grows without the role of monetary authorities in the formulation and management of the country's monetary policies. Such policies are aimed at controlling the availability, cost and direction of money supply to attain basic economic objectives of reduction inflection, unemployment, exchange rate stability and economic growth among others. In Nigeria, the Monetary Policy Committee of the Central Bank of Nigeria is charged with this responsibility. The objectives of the study were to determine the effects of monetary policy proxied as cash reserves, liquidity reserves and monetary policy rate on economic growth proxied as GDP. The study applied ex-post facto design with secondary data as instrument for data collection. Multiple regression model, applying ordinary least square regression was used for analysis. Findings showed that cash and liquidity reserves have significant positive effect on GDP; monetary policy rate significantly affected GDP, evidencing high cost of borrowing. It is recommended, that monetary authorities should pursue expansionary policies so as to boost employment and economic growth and at the same time balancing that with acceptable level inflection.

Keywords: Cash reserves, Liquidity reserves, Monetary policy rate, Gross domestic product

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Background to the Study
The Monetary Policy Committee of the Central Bank of Nigeria is charged with formulation and manipulation of the monetary policy indices in Nigeria. Monetary policy administration may be seen as the action of the monetary authorities, aims at manipulating the quantity, cost and availability of money and credit in circulation in order to achieve desired economic objectives of the government (CBN, 2011). This is done by manipulating cost of money and/or money supply so as to alter the volume of money/credit in the circulation.

Monetary Policy implementation has recorded special attention by economic stakeholders as it forms the basis for the attainment of economic stability. In Nigeria, the Central Bank of Nigeria is charged with the conduct of monetary policy. As Ono (2013), opined, for a sustainable economic growth and development, there is need to put in place monetary policy to facilitate an appropriate economic policy framework. In such policy design, according to him some variables must be involved, unfortunately, the basic needs of the monetary variables were not considered by the authorities to the detriment of the economy. The most difficult function of central banks as apex financial institutions is the manipulation of money supply so as to address macroeconomic problems. This can only be achieved by having a basket of workable good monetary policy tools.

According to Onoh (2013), there should be readily availability of data bank for the storage, collection and retrieval of data for monetary policies implementation. The CBN monetary policy is positioned to achieve both external viability and internal stability (CBN, 2011). The policy instruments are aimed at attaining price stability, increase employment, favourable balance of payment and economic growth among others. In 2006, the Monetary Authority (CBN) came out with new policy framework so as to attain external and internal economic balances. With the stable short interest rate, it ensures relative stability in the domestic currency. The Monetary Policy Rate (MPR), which was before called Minimum Rediscount Rate (MRR) is the rate that determines market rates. It is expected that through the operating principles of the Monetary Policy it will motivate the deposit money banks to aim at having the minimum required balances with the Central Bank.

Statement of the Problem
As stated earlier, monetary policy involves measures through which the central bank manages the supply or manipulation of the volume of money in circulation so as to achieve targeted economic objectives of price stability, stable inflation, nonetheless, economic growth, exchange rate stability among others. The Central Bank of Nigeria has always been in action trying to solve these economic problems as evidenced in the adjustment of the monetary policy tool of cash and liquidity reserves, open market operations etc. There is no doubt that the monetary action of the Central Bank of Nigeria seems to be yielding little or no results as evidenced in the economic indices of high inflation, high unemployment, low economic growth etc. for instance annual average inflation rate stood at 17.5 percent in 2020 against 13.2 percent of previous year and above
the central bank target of 6 to 9 percent. Poverty and unemployment rate remained high from 40 percent and 33.3 percent in 2020. All these are indications that a lot need to be done in order to have economic sensitive policies that ease off the adverse pressure on the policy indicators and that is what this paper tried to address.

**Objectives of the Study**
The main objective of the study was to determine the effect of Monetary Policy on the economic Growth of Nigeria, while the specific objectives of the study were;

i. To determine the effect of open market operation on the economic growth of Nigeria.
ii. To examine effect of Monetary Policy Rate on the economic growth of Nigeria.
iii. To ascertain the significant effect of cash reserve ratio on the growth of Nigeria.
iv. To determine the effect of liquidity ratio on the economic growth of Nigeria provided as Gross Domestic Product (GDP)

**Research Questions**
From the fore going, the following research questions were germane:

1. What is the effect of Omo on the economic growth of Nigeria?
2. Has monetary Policy rate any significant effect on the growth of Nigeria?
3. What is the effect of cash reserve ratio on economic growth of Nigeria?
4. Has liquidity ratio any effect on the economic growth of Nigeria?

**Research hypotheses**
H01: There is no significant effect of open market operation on economic growth of Nigeria
H11: There is a significant effect of Omo on economic growth of Nigeria
H02: there is significant effect of monetary policy rate on the economic growth of Nigeria
H12: There is significant of monetary policy rate on the economic growth of Nigeria
H03: There is no significant effect of cash reserve ratio on the economic growth of Nigeria
H13: There is significant effect of cash reserve ratio on economic growth of Nigeria.
H04: There is no significant effect of liquidity ratio on the economic growth of Nigeria.
H14: There is significant effect of liquidity ratio on the economic growth of Nigeria.

**Scope of the Study**
The scope of study covered the entire economy of Nigeria, from 1980 to 2020. The study looked at monetary economic sector and considers the variables like open market operation, cash reserves, liquidity reserves, monetary policy rate and economic growth proxed as Gross Domestic Product [GDP] of Nigeria for the period under study. The earlier part of the period experienced at least four major places in its practices of monetary policy. The first place under study experienced and depended on the deregulation between 1975 and 1985 which relied on the deregulation of monetary policy using direct monetary policy and the monetary policy instrument such as credit ceilings, selective credit control or credit rationing. Consolidation of money policy followed later.
Review of Literature

Conceptual Frame Work

Concept of Monetary Policy

Monetary policy is a combination of measures used to influence both the money supply and volume of credit in the economy, so as to achieve economic growth, price stability and balance of payment equilibrium, (Sani, Amusa and Agbeyangi, 2012)

In his own view, Onwukwe (2015), sees monetary policy as the deliberate manipulation of money supply and interest rate by the monetary authorities so as to attain growth in employment, reduction of inflation and balance of payment imbalance. Usually, manipulation of interest rate in a country affects the level of inflow of foreign investments into that country. A country that pays high interest rate is likely to attract foreign investment, though such high interest rate may also be a signal that all is not well with such country.

Interest rate which is cost of funds plays vital role in the function of intermediation. Interest rate is usually expressed as a percentage of the principal sum and most times compounded the central bank also through its monetary function changes the exchange rates based on the desired economic condition of the country. Such change in interest rate may be direct or indirect. It is direct when the exchange rate is administratively fixed and it is indirect when it is guided deregulation. A state of deregulation is where the exchange rate is purely allowed to be controlled by market forces or forces of demand and supply. (Fijoh, 2009). Exchange rate is basically the rate at which one country’s currency exchanges for a given unit of another country’s currency (Omotor, 2017). Other instruments of the monetary policy are cash reserves ratio which is the percentage of deposits banks keep with the central bank. Usually banks are not expected to withdraw from such deposits except where the bank is facing serious financial crises. Another of the instrument is the liquidity ratio. This is the percentage of deposit banks are expected to keep aside so as to meet customers’ withdrawal demands. This means that banks are not expected to use the liquidity reserves for loans and other investments (Fijoh 2008).

Monetary Policy Variables

CBN (2011), sees monetary policy as a guide to Central Bank in manipulating money supply so as to attain to the economic objectives of full employment, low inflation and economic growth. The monetary policy action is necessary so as to control the economic demand and supply functions of the economic. When monetary aggregates are tranlredted using the policy tools reflect on the overall state of the economy on such indicators as inflation, employment, production, output and over all wellbeing of the citizenry.

CBN mandates the DMBs to extend credits to the preferred sectors of the economy. This way the available savings is allocated and credits are extended to the priority sectors as such investment is directed in particular directions as desired by the authorities, mainly agriculture and small and medium scale industries and enterprises.
Money Supply
Money supply measures the total money in calculation both in and outside the banks. While the M1 definitions of money takes about total cash plus demand deposits, the M2 is made up of M1 plus balance in time deposit account of banks. [Omo, 2007]. In order to increase the volume of money in circulation, the CBN pursues expansionary monetary policy with the resultant effect of boosting investment or economic activities and employment. On the other hand contractionary policy will mean reduction of money in circulation which will lead to reduction in inflation [CBN, 2011]. In order to cause a change in money supply the CBN can use such instrument as legal reserves. With credit creation there would be multiplier effect on total deposit when credit are extended which will affect inflation rate, interest rate, exchange rate etc.

Phases of Monetary Policy in Nigeria
Abulu (1989), the Central Bank of Nigeria form its inception had various instrument of monetary control at its disposal. However, the extent to which each of the monetary policy instruments used has been changing from time to time. In this regard it has become usual to classify monetary policy in Nigeria into two phases based on the type of instruments being emphasized by the Bank, during each phase. They are era of direct monetary control (1958 to 1986) and the Era of indirect or market - based monetary control.

During the first phase, covering 1958 to 1986 the emphasis of the Central bank was on the use of those tools which directly affect the price of money and the flow of bank credit such as interest rates policy, directives or direct controls, moral suasion, and stabilization securities. Rather than allowing market forces to determine interest rates and the flow of credits, interest rates were administratively fixed, while the Central Bank had direct control on the maximum amount of credit to be allocated by each bank and the sectors to which the credit would go. Apart for giving specific directives, appeal and persuasion were used to influence the activities of banks. Although the use of indirect tools like reserve requirements, open market operation on their use was not much.

The second phase of the administration of monetary policy in Nigeria began in 1986 when the Babangida administration began a gradual deregulation of the economy under the Structural Adjustment Programme (SAP) introduced in that year. This phase much emphasis on the use of market orientated instruments to achieve monetary policy objectives. The determination of interest rates which is the price of money, the ceiling on banks credits, and its allocation to the various sectors of the economy were left to be determined by market mechanism.

Open Market Operations
This is one of the instruments in the policy tool box of the Central Bank to influence or manipulate money supply. Open market operation is simply the buying and selling of government securities in the open market with the policy intention of increasing or reducing the amount of money in circulation through the banking system.
Objectives of Monetary Policy
According to Fijoh (2008), monetary policy of a country is designed to achieve some macroeconomic objectives.

1. To create high level of employment which is to achieve near or full employment or reduction in the level of employment.
2. To achieve price stability as instability in price levels bring uncertainty and instability to the economy. Monetary authorities will as a responsibility will try to put in place measures that will stabilize price levels. In any case, price stability only means a relative stability in price levels over a given period of time. This is because prices will always go up and down because of agitations of market operators.
3. To correct unfavourable balance of payment. Balance of payment is a financial statement showing the total value of imports and exports of a country in a given period usually a year. The net effect will be favourable or unfavourable balance of payment.
4. Increase in Economic Growth, which reflects the increase in the gross domestic product and per capita income over a long period of time.

Monetary Policy Objectives’ Conflict and Resolution
In principle, these objectives sound simple but in practice they are quite conflicting and difficult to achieve at the same time. A policy designed to achieve one objective may end up throwing another objective into a problem. For example, a policy that is designed to put more money into the economy so as to increase employment and investment may end up increasing inflation. In the other way round a reduction in money supply to reduce inflation may end up reducing economic activities and economic growth.

In resolving this conflict of objectives, government must at each point in time decide which objective needs priority attention based on current prevailing economic situation. Another method of resolving this conflict by the government is having a trade-off between the objectives, i.e., tolerating a given level of inflation when it actually has in mind of fighting unemployment (Fijoh, 2008).

Empirical Review
Olubusoye and Oyaromade (2008) did a study on inflation, money supply and economic development in Nigeria. The study adopted error correction model. It was revealed that the lagged consumer price index (CPI) contributes to the dynamic of fluctuations in the price levels in Nigeria, with the level of output at significant level of 5% error margin, In their own study, Omoke and Ugwanyi (2010) looked at price, output and money. They found out that control of money supply which means money stability leads to price stability. Also Ditim (2009) in his study of interest rate mechanism, used simple ordinary least tool and found out that interest rate insignificantly affects price stability. in their study, Adofu, Abula and Audu (2010), analyze the impact of interest rate deregulation on the Nigeria economy and found out that interest rate has significant effect on economic activities of Nigeria.
While Onyeiwu (2012), studied on monetary policy and Economic development and revealed that positive and significant relationship exit between Economic development and reserve ratios, Saibu and Nwosa (2011), in their study found out that an insignificant relationship exist between economic development and reserve ratio.

Sanchita and Rina (2011) found out that there is significant effect between treasury bill operations and economic development, while Saibu and Nwosa (2011) found out that no significant relationship exists between the two. The work tried to bridge the gaps between these discrepancies among experiments in the field.

**Theory – Keynesianism**
This study anchored on the Keynesian model (Keynes, 1936). The model came with revolution bringing out monetary modes to tackle the problem of the time. The Keynesians came with discretion policy as far as their analysis required using economic instruments for intervention. In 1936, Keynes stood in favour of discretionary policy because of its multiplier effect on economic growth as Argi (1998) put it, the Keynesian policy after the war had the following proposals: rigid money wages and full employment; unstable private sector caused by either strong or weak investment and negative shock of demand that lowered employment. Though it has been argued that the monetary authorities may deviate from formulated policies by them possibly because of external events and government trying to benefit during the time of election thereby falsifying agents' expectation (Nordhaus 1975). This notwithstanding, the gains of the Keynesian model are still outstanding.

**Methodology**

**Research Design**
This study employed ex-post facto research design. The data used was secondary data and no attempt was made to control or manipulate it. The aim was to determine the effect of the independent variables on the dependent variables.

**Method of Data Collection**
The study used secondary data which included, monetary policy (cash reserve ratio, liquidity ratio and monetary policy rate), these served as independent variables. Gross domestic product was used as proxy for economic growth which was the dependent variable. The data was sourced from the Central Bank of Nigeria Statistical Bulletin for the period under review.

**Method of Data Analysis**
The study adopted a quantitative technique based on established studies and methodology. To test for the hypothesizes, the following tools will be adopted: Multiple regression models, applying ordinary least square (OLS) regression analysis, unit root test so as to test for stationarity of the variables; co integration test to establish if there is long run relationship between the variables. Model Specification. This study established the extent monetary policy has affected banks profitability. This study will use a modified
Eigbiremolem and Igberaese (2013) multiple regression model. Cash reserve ratio (CRR), liquidity ratio (LQR) and monetary policy rate (MPR) which are proxies for monetary policy will save as independent variable while return on assets (ROA) which is proxy for bank profitability will save as dependent variable.

Eigbiremolen and Igberaese Multiple regressions model
Log (RDP) = ao+ao LSME+a2 RENTOR + a3INF +…..U1

Where

\[ \text{RGDP}= \text{Real Gross Domestic Product} \]
\[ \text{LSME} = \text{loans to SMEs} \]
\[ \text{RINTR}= \text{Real interest rate} \]
\[ \text{INF}= \text{Inflation} \]
\[ ao= \text{intercept} \]
\[ a1-a3= \text{coefficients of independent variables} \]

Modified model for this study will be
\[ \text{ROA} = b0+b1\text{CRR}+b2\text{LRR}+ b3\text{MPR}+….Ui \]

Where:

\[ \text{GDP} = \text{Gross Domestic Product} \]
\[ \text{CRR} = \text{Cash Reserve Ratio} \]
\[ \text{LRR} = \text{Liquidity reserve ratio} \]
\[ \text{MPR} = \text{Monetary policy Rate} \]
\[ bo,b1,b2,,b3 = \text{Variable co-efficient} \]
\[ Ui = \text{Error term} \]

**Decision Rule**
The decision rule will be to conclude the existence of significant relationship between the dependent and independent variables if the probability of the t-value is less than 0.05 at 5% level of significance

**Data Presentation and Analysis**

**Results and Discussion of effect of Monetary policy on Economic Growth**

**Table 1:** Regression Coefficients of GDP and Monetary Policy, \( n = 29 \) (1992-2020)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficients</th>
<th>Test Statistic</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>100470.365</td>
<td>6.237</td>
<td>0.000</td>
</tr>
<tr>
<td>Cash Reserves Ratio</td>
<td>-5047.906</td>
<td>-10.020</td>
<td>0.000</td>
</tr>
<tr>
<td>Liquidity Ratio</td>
<td>-1510.961</td>
<td>-4.357</td>
<td>0.000</td>
</tr>
<tr>
<td>Monetary Policy Rate</td>
<td>-3705.396</td>
<td>-3.833</td>
<td>0.001</td>
</tr>
</tbody>
</table>
The results of Table 1 show that the effect of Cash Reserves Ratio on economic growth (GDP) is -5047.906 indicating that 1 percent decrease in Cash Reserves Ratio causes an increase of N5047.906 Billion increase in the GDP economic growth of Nigeria. The test statistic for the Cash Reserves Ratio is 10.020, which is significant at more than 0.01% significance level as its p-value is 0.000. Thus, we say that the positive effect that Cash Reserves Ratio has on Nigeria GDP is significantly at 0.01% significant level. The effect of Liquidity Ratio Nigerian GDP is -1510.961 with the test statistic value of -4.357, which is statistically significant at above 0.01% level. This indicates that 1% decrease in Liquidity ratio results to N1510.961 billion increase in the GDP economic growth of Nigeria for the period under review. The effect of Liquidity Ratio the GDP is found to be significant. One percent decreases in Monetary Policy Rate causes a N3705.396 increase in the GDP economic growth of Nigeria. The associated test statistic value is -3.833 with a p-value of 0.00, that is, the effect of Monetary Policy Rate is negatively significant at 0.1% significant level.

**Table 2:** Coefficient of Determination and Durbin-Watson Statistic

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.940</td>
<td>0.884</td>
<td>0.870</td>
<td>17339.492</td>
<td>1.086</td>
</tr>
</tbody>
</table>

The results of Table 2 show that the multiple correlation coefficient, R is 0.940, the multiple coefficients of determination, $R^2$ is 0.884 and adjusted R Square is 0.870 indicating that the combined effect of Cash Reserves Ratio, Liquidity Ratio and Monetary Policy Rate explain about 87.0% of the variation in GDP. And this highly statistically significant at 0.5%. The Durbin-Watson statistic shows that there is no presence of serial correlation in the residual as $DW = 1.086 < d_L = 1.198$ and does not lie between the $d_L$ of 1.198 and $d_U$ of 1.650 for $n = 29$ and $k' = 3$ (number of explanatory variables).

**Residual Diagnostics**

The standardized residual is used to conduct key diagnostics tests which include stationary test and normality test. The time series plot of the standardized residual is given in Figure 4.1 and Autocorrelation Function for Standardized Residual given in Figure 4.2 show that the standardized residual is non-stationary, indicating that the regression model used in this study modelled could not model the economic growth very well because the left over in the residual is white noise.
**Figure 1:** Time series plot of the standardized residual

![Time series plot of the standardized residual](image1.png)

**Figure 2:** Autocorrelation Function for Standardized Residual with 5% significance limits.

![Autocorrelation Function for Standardized Residual](image2.png)

**Table 3:** Unit root and Stationary test and Normality of Standardized Residual (SRED)

<table>
<thead>
<tr>
<th>Model Selection Criteria</th>
<th>$H_0$: SRED has a unit root</th>
<th>$H_0$: SRED is Stationary</th>
<th>$H_0$: SRED is Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ADF Tests</td>
<td>PP Tests</td>
<td>KPSS</td>
</tr>
<tr>
<td>Test statistic</td>
<td>-3.193</td>
<td>-3.293</td>
<td>0.239</td>
</tr>
<tr>
<td>P-value</td>
<td>0.031</td>
<td>0.025</td>
<td>5% critical value = 0.463</td>
</tr>
</tbody>
</table>

**Note:** ADF, PP and KPSS tests are performed for the model with the intercept only as the time series plot indicates.

The 3 tests of unit root and stationery (ADF, PP and KPSS) shown in Table 3 confirm that the standardized residual (SRED) of the predicted model is stationary and has no unit root and the test for normality done using Jarque-Bera confirms that the standardized residual is normally distributed.
Table 4.

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP</th>
<th>Cash Reserves Ratio</th>
<th>Liquidity Ratio</th>
<th>Monetary Policy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>906.03</td>
<td>4.40</td>
<td>22.4</td>
<td>17.50</td>
</tr>
<tr>
<td>1993</td>
<td>1257.17</td>
<td>6.00</td>
<td>40.7</td>
<td>26.00</td>
</tr>
<tr>
<td>1994</td>
<td>1768.79</td>
<td>5.70</td>
<td>58.7</td>
<td>13.50</td>
</tr>
<tr>
<td>1995</td>
<td>3100.24</td>
<td>5.80</td>
<td>41.6</td>
<td>13.50</td>
</tr>
<tr>
<td>1996</td>
<td>4086.07</td>
<td>7.50</td>
<td>46.5</td>
<td>13.50</td>
</tr>
<tr>
<td>1997</td>
<td>4418.71</td>
<td>ss7.80</td>
<td>39.9</td>
<td>13.50</td>
</tr>
<tr>
<td>1998</td>
<td>4805.16</td>
<td>8.30</td>
<td>38.2</td>
<td>14.31</td>
</tr>
<tr>
<td>1999</td>
<td>5482.35</td>
<td>11.70</td>
<td>55.5</td>
<td>18.00</td>
</tr>
<tr>
<td>2000</td>
<td>7062.75</td>
<td>9.80</td>
<td>55.00</td>
<td>13.50</td>
</tr>
<tr>
<td>2001</td>
<td>8234.49</td>
<td>10.80</td>
<td>52.00</td>
<td>14.31</td>
</tr>
<tr>
<td>2002</td>
<td>11501.48</td>
<td>10.60</td>
<td>50.00</td>
<td>19.00</td>
</tr>
<tr>
<td>2003</td>
<td>13556.97</td>
<td>10.00</td>
<td>50.00</td>
<td>15.75</td>
</tr>
<tr>
<td>2004</td>
<td>18124.06</td>
<td>8.60</td>
<td>50.00</td>
<td>15.00</td>
</tr>
<tr>
<td>2005</td>
<td>23121.88</td>
<td>9.70</td>
<td>50.00</td>
<td>13.00</td>
</tr>
<tr>
<td>2006</td>
<td>30375.18</td>
<td>4.20</td>
<td>50.00</td>
<td>12.25</td>
</tr>
<tr>
<td>2007</td>
<td>34679.94</td>
<td>4.00</td>
<td>40.00</td>
<td>8.75</td>
</tr>
<tr>
<td>2008</td>
<td>39954.21</td>
<td>3.00</td>
<td>35.00</td>
<td>9.81</td>
</tr>
<tr>
<td>2009</td>
<td>43461.46</td>
<td>1.30</td>
<td>25.00</td>
<td>7.44</td>
</tr>
<tr>
<td>2010</td>
<td>55469.35</td>
<td>1.00</td>
<td>25.00</td>
<td>6.13</td>
</tr>
<tr>
<td>2011</td>
<td>63713.36</td>
<td>8.00</td>
<td>30.00</td>
<td>9.19</td>
</tr>
<tr>
<td>2012</td>
<td>72599.63</td>
<td>12.00</td>
<td>30.00</td>
<td>12.00</td>
</tr>
<tr>
<td>2013</td>
<td>81009.96</td>
<td>12.00</td>
<td>30.00</td>
<td>12.00</td>
</tr>
<tr>
<td>2014</td>
<td>90136.98</td>
<td>20.00</td>
<td>30.00</td>
<td>13.00</td>
</tr>
<tr>
<td>2015</td>
<td>95177.74</td>
<td>20.00</td>
<td>30.00</td>
<td>11.00</td>
</tr>
<tr>
<td>2016</td>
<td>102575.42</td>
<td>22.50</td>
<td>30.00</td>
<td>14.00</td>
</tr>
<tr>
<td>2017</td>
<td>114899.25</td>
<td>22.50</td>
<td>30.00</td>
<td>14.00</td>
</tr>
<tr>
<td>2018</td>
<td>128086.91</td>
<td>22.50</td>
<td>30.00</td>
<td>14.00</td>
</tr>
<tr>
<td>2019</td>
<td>145639.14</td>
<td>22.50</td>
<td>30.00</td>
<td>13.50</td>
</tr>
<tr>
<td>2020</td>
<td>154252.32</td>
<td>22.50</td>
<td>30.00</td>
<td>11.50</td>
</tr>
</tbody>
</table>

Summary of Research Findings

Findings emanating from this study are as follows:

From the test of hypothesis one, cash reserve ratio indeed had significant positive impact on economic growth of Nigeria. This was confirmed through the use of P-value (0.0000) which is less than 5% level of significance;

From hypothesis two, the liquidity ratio in Nigeria is high as its of coefficient stands at 346.828. The cost of micro credit coefficient stands at 346.828 with a t-statistics of -4.357 while probability value is 0.000. This shows that the liquidity ratio is significant. This means there is significant effect of liquidity ratio on economic growth of Nigeria. The equation in the third model regressed GDP on monetary policy rate. The regression coefficient carries negative sign and its t-value (-3.833) is statistical and per value 0.001 significant at 5% level. This implies that monetary policy rate affects the GDP significantly. There is high cost of borrowing banks. The high interest rate usually arises from the fact that banks source their funds from market which is not cheap.
That decrease in cash ratio results to economic growth reflect by the level of economic activities. As more credits are made available to investor, there is increased economic growth. Economic growth remains the major targets of the government and monetary authorities. The level of banking habits remains one of the determinant factors of economic growth. Again the attainment of high level of accessibility, loan repayment and banking habit depend on the strength and stability of the monetary policy, evidenced by capital adequacy, assets quality technological customer oriented products. With these monetary policies will be able to efficiently meet its target of economic growth.

Policy Implication of the Findings
This study has examined the effects of monetary policy on economic growth of Nigeria. Results from study confirmed previous evidence obtained by number researchers on monetary policy in the economy. The findings of this study signify that the variables used for this are the major variables used for economic growth and monetary policy Nigeria compared with other emerging economies in the world. Despite the achievement of monetary policy in transforming economy there have been difficulties like policy inconsistency, abuses and fraudulent practices by banks, global economic crisis and inept regulatory abilities among others. Consequently, since monetary policies have made significant contributions to economic growth of Nigeria, banks need to been strengthened in terms of better capital base, skilled manpower, increase of size of loan, effective management, enabling polices and operational guidelines. This means that monetary policy will contribute immensely to the growth of economic growth of Nigeria the monetary policy tools are well managed.

Conclusion
The growth of the economy affects the economic development of the Nigerian population. In the work of Idoko and Oye (2012) who reported that 96 percent of the world’s income goes to 40% of the population while the remaining 60% of the population share 4 percent of the total world’s income. Kalu (2003) opines that a new method of providing credit is through effective monetary policy operation. This study examined the effect of monetary policy on economic growth of Nigeria. The multiple regression results reveal that about 98% of the systematic variation in the dependent variables is explained by the three independent variables i.e., cash reserve ratio (CRR), liquidity ratio (LDR), monetary policy rate (MPR), The P value is significant at the 5% level showing that there is a positive relationship between the economic growth and cash ratio (CRR), liquidity ratio (LDR), monetary policy rate (MPR) of Nigeria. On the basis of apriori expectation, only the coefficients of all the variables have negative signs. In fact a unit decrease in the cash reserve ratio (CRR) will increase the level of economic growth. The implication is that the economic growth responds favourably to measures taken to decrease cash reserves.

Based on the findings of this study, we have come to the conclusion that there is a significant positive effect of money policy operations in Nigeria. This means that if the monetary authorities can help in making efficient and effective policies the economy will grow better.
Recommendations
In order to improve on the effectiveness of monetary policy in Nigeria, the following recommendations are made:

1. In order to increase loan size for economic growth, the regulatory authorities should make such policies that encourage the banks to boost their lending abilities. Banks should be classified into tiers, which are “first tier”, and “second tier”, while the first tier is used to describe the urban banks, the second tier should describe the rural banks. The legal operational monetary policy requirements should be in order of classification, which should be tougher for the first tier. For instance, the cash reserves of the rural banks should be lower than that of urban banks.

2. Central Bank of Nigeria (CBN) should lower monetary policy rate for banks to charge lower interest rate to make loan more attractive and productive to the customers.

3. In order to increase the availability of loans the central bank should give microfinance banks soft loans to reduce cost of obtaining fund that will be used for loan by customers. In doing this, Federal Government should be commended for the inclusion of Nigerian Deposits Insurance Corporation in the regulatory of banks. This will result to reducing high level of risk associated with loans repayment delinquency.

4. It is obvious that monetary policy authorities rely on data gathered from the market as such effort should be made to ensure that the data are never manipulated. Money authorities should be discouraged from manufacturing data in homes and offices.

5. Government should be serious by providing good infrastructure like electricity, road, water etc. They should be able to create the enabling environment for the monetary policy to flourish. The poor states of these facilities make the cost of business very high. Economic growth will continue to be a mirage until government starts living up to her responsibilities.

6. The size of microfinance loan should be increased for income to increase and in turn reduce poverty level in the country.

7. Regulatory authorities should involve other economic operators in the monetary policy formulation and put-up measures to increase the awareness of monetary policy among the people.

There should be the involvement of traditional rulers, town criers, age grade leaders. Instead of the five-star hotels, the venue for such programmes should be the common village squares. This will help to source for reliable data. There should be a more serious regulatory framework. The recent review of the policy framework of the banks and the frequent failure of banks is enough sign that there are still loopholes in the regulatory framework. The regulatory authorities should be able to conduct effective supervisions (both on-site and off-site) so as to identify early symptoms of distress in these banks.
For banks to have more loanable funds, the central bank should reduce idle funds outside the banking system. Emphasis should be on such interest free funds as paid-up capital, reserves, government free funds and donor funds. Recommendation for Further Research In the attempts to conduct researches on monetary policy, further studies are recommended in the following areas. Comparative analysis of the effectiveness of other countries' monetary policies. This will help on the country's monetary policy.

**Contribution to Knowledge**

This research has contributed to knowledge in various ways:

The study has contributed to knowledge by providing vital information on monetary policy to guide the monetary authorities in decision making and also to future researchers in their study of monetary policy in Nigeria. In the contribution to knowledge the researcher is recommending a change in the media and audience used in creating awareness for gathering data. Awareness should include common village squares with the involvement of traditional rulers, town criers and age grades. Monetary policy should be introduced as a course in banking, finance and accounting curricula of Nigeria's tertiary institutions.

**References**


