Monetary Policy and Economic Performance in Nigeria

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Abstract

The study examines the impact of monetary policy on the Nigerian economy; for the period1996-2019. Secondary data were collected from Central Bank of Nigeria Statistical Bulletin, 2020.The study used Gross Domestic Product as proxy for Nigerian economy and used as the dependent variable; while, monetary policy rate, cash reserve requirement and liquidity ratio are used as independent variables to measure monetary policy. Hypotheses were formulated and tested using Ordinary Least Square (OLS). The study reveals a positive significant impact of monetary policy rate, on Gross Domestic Product in Nigeria. Cash reserve ratio has a positive significant impact on Gross Domestic Product. Liquidity ratio has significant impact on Gross Domestic Product in Nigeria. The coefficient of determination indicates that about 62% of the variations in performance of Nigerian economy can be explained by changes in monetary policy variables (TB, CRR and LR) in Nigeria. The study concludes that monetary policy had significantly affected performance of Nigerian economy. The study recommends that policy makers should formulate monetary policies that would stimulate the economy. Financial institution and banks should formulate strategy to sign up profitable portfolios so as to remain in business in case of increase in the cash reserve requirement. Policy makers should ensure consistency of monetary policy in the economy before reviews, so as to measure its impact on the economy. Regulatory authorities will need to build a strong synergy between monetary policy and banking institutions so as to chart a common course for the performance of the economy.

Introduction

The study carried out by Nwokolo and Chike (2019) posits that when central bank actions and regulations restrict the activities and operations of profit-making financial institutions such as banks, immediately search on alternative way of making their profit. The policy constraints can also affect the level of development in the economy. The instrument of monetary policy does not affect economic activities directly; rather they work through their effects on financial markets. The policy instrument has their initial effect on the demand and supply of reserves held by depositing institutions and consequently on availability of credits. Monetary policy refers to the combination of measures designed to control supply of money and credit in the economy to achieved macroeconomic objectives Duronni and Ajuadele (2018).

These measures include the followings: Open market operation, Cash reserve requirement, Interest rate policy, Discount allocations and Special deposit etc. hence, the above-mentioned measures can influence the banking operations to her stakeholders. Since the exposition of the role of monetary policy in influencing macro-economic objectives of banks like price stability, equilibrium in balance of payments, loans and credits advancement etc., the monetary authorizes are saddled with the responsibility of using monetary policy to affect the banking industry. In Nigeria monetary policy has been used since the central bank of Nigeria was saddle with the responsibility of formulating and implementing monetary policy (Adeala & Atuebgu, 2019).

The work of Fagbammi and Sudende (2018) reveals that over the years, the economy has experienced a lot of reforms. The smoothing of the business cycle, preventing financial crisis and stabilizing long-term rates and the real exchange rate have been of major concern to the operation of banks in Nigeria. Banks in Nigeria are profit seeking organizations, which main objective and goals is to remain in business and at the same time effect on their customers through her activities. The stable and solid financial sector is essential to make a well-functioning national economy and to ensure balance liquidity with the economy. Appropriate liquidity management is essential to foster bank growth. A performing bank is that which is able to meet up with the demands of stakeholders and her major support to the economy while she remains in business throughout.

The most popular instrument of monetary policy was the insurance of credit rationing guidelines, which primarily sit the rates of exchange for the components and aggregate commercial banks loans and advances to both the private and public sector. The sectoral allocation of bank credit in CBN guidelines was to stimulate the productive sectors and thereby stem inflation any pressures. The fixing of interest rate at relatively levels was done mainly to promote investment and growth. When investment is promoted through this activity, more customers are pulled to the banks and these have effect on banks performance (Folaweno & Osinubi, 2017).

A study Adeala and Atuebgu (2019) stressed that occasionally, special deposits were imposed to reduce the amount of free reserves and credit-creating capacity of the banks. Minimum cash ratios were stipulated for the banks in 1970's on the basic of their total deposit liabilities, but since such cash ratios were usually lower than those voluntarily maintained by the banks, they proved less effective as a restraint on their credit operations. All these activities are tied to the mission and visions of the banks in Nigeria, this achievement accomplishment determines whether a bank is performing or not, which buoys down to the performance of the banks.

The study conducted by Olagunju and Olabode (2018) shows a negative significant relationship between monetary policy and economic growth in Nigeria. While, the work of Dupomi and

Ajudele (2018) found that the monetary policy has no significant effect on economic growth in Nigeria. In Nigeria monetary policy has been used since the central bank of Nigeria was saddle with the responsibility of formulating and implementing monetary policy (Adeala & Atuebgu, 2019). The work of Duabola and Ben (2019) reveals that over the years, the economy has experienced a lot of reforms. The work of Kwame (2020) shows a positive significant effect of monetary policy on economic growth in Ghana. This inconsistent result has created a knowledge gap in this study; and, it is against this background that the study attempts to investigate the impact of monetary policy on the performance Nigerian economy.

2.1 Conceptual Review

The work of Adeala and Atuebgu (2019) posits that in an attempt to enhance an understanding of monetary policy it is expedient to first of all take a look at what money is in this context. Money is anything that is generally accepted as a medium of exchange; putting it differently Adam smith, wealth of nations opines that "It is not any scarcity of gold and silver, but the difficulty which such people borrowing and their creditors find in getting payment that occasions the general complaint of scarcity of money. According to the chambers Dictionary, money is current coin piece of stamped portable metal used in commerce as a medium of exchange and measure of value.

Different definitions have been put together by various proponents but the Bottom line has it that for anything to be called money it must be subject to general acceptability by all in a given society or country, and as such made its scarcity inevitable. Banks being at the center stage to direct money from one unit of the economy to the other then come under scrutiny so as not to misdirect this scarce commodity and make life difficult for economic agents. The components of money had evolved over the years through the conduct of transaction in the economy, precious metals, such as gold and silver were used as means of payment or exchange and served as the main form of money Olagunju and Olabode (2018).

Hence, a study carried out by Godwin and Comfort (2019) stressed that later, paper money in form of currency notes and cheques served as a means of payments, paper notes that were convertible to precious metal were used as money backed by law. In modern times, notes are no longer backed by metals. These notes are called "fiat" money. Fiat money is paper money legally backed by the government of a country as a generally acceptable means of exchange for goods and services. The authority to issue such money is delegated to a government agency like the central bank of Nigeria or Ministry of Finance. Money is made up of cash (Note and Coins) demand deposits and other deposit balances. The cash component consists of balance held in the vaults of deposit money banks (DMB's) and the notes and coins in circulation with the rest of the public, the demand deposits consist of the current / cheque accounts held in deposit money bank that can be withdrawn at will or demand. Other deposits balances comprise time, savings and foreign money, these components constitute the money supply of a country at any point in time.

Money supply is the amount of money that is available to the economy at any point in time; money supply could be defined both in a narrow and broad terms or views depending on the ease with which it could be converted into cash. A narrow definition of money supply comprises currency in circulation and demand deposit while a broader definition includes balances in other deposit accounts. In Nigeria, narrow money consists of the currency in circulation plus demand deposits while broad money is made up of narrow many plus savings. The definition of what constitutes narrow or broad money depends to a large extent on the level of development of the financial infrastructure and its development (Olagunju & Olabode, 2019).

Deposit money banks are the most important savings, mobilization and financial resource allocation institutions. Consequently, this role makes them an important phenomenon in economic growth and development. In performing this role, banks have the potentials, for mobilizing financial resources and allocating them to the productive investments in the economy and in return will enable them to maximize profit. (Victor & Eze, 2018). Clearly one of the policy option open to the government in the economy is the use of monetary policy to regulate the supply of money, the cost of credit and availability of credit to the economy (Uchenna & Ahuja, 2018).

In considering monetary policy framework, the regulatory authority like Central Bank of Nigeria
have to decide between contractionary or expansionary monetary policy options based on prevailing economic conditions. The policy Constraints can also affect the level of development in the economy. The instruments of monetary policy do not affect economic activities directly rather they work through their effects on financial sector of a country. The policy instruments have their initial impact on the demand for and supply of reserves held by Banks and consequently on availability of credit. By manipulating these instruments, the Central Bank effect the rate of growth of the money supply, the level of interest rate, security prices, credit availability and liquidity creation from the commercial bank. These factors, in turn can exert monetary imbalances or shocks on the economy by influencing the level of investment, consumption, imports, exports, government spending, total output, income and price level in the economy.

This is consistent with the work of Godwin and Comfort (2019) that examines bank profitability and liquidity management between 2010 to 2012.The study reveal that there is a statistically significant relationship between bank liquidity and profitability. This was also supported by the work of Olagunju, Adeyanju and Olabode (2018) which focuses on liquidity management and commercial banks profitability. Their studies indicate a positive significant relationship between liquidity ratio and profitability. The study concluded that profitability is significantly influenced by liquidity. This study is in line with the anticipated Income theory developed by Dwerth (2015). The theory depends on loan portfolio as liquidity source. In essence, banks' liquidity can be planned if scheduled loan payments are based on future income of the borrower at a point in time.

Thus, the theory recognizes the influence of the maturity structure of the loan and investment portfolio on liquidity position of banks. More so, Banks are also confronted with time preference theory of interest. This theory was propounded by Irwing (1930); he defined interest as "payment for waiting, a reward for making a choice to postpone consumption to a future date". He theorized that people generally have the predisposition towards current consumption (expenditure over

future consumption) therefore the interest rate must be attractive enough to encourage sacrifice for immediate satisfaction. Fisher further explained that time preference is determined by the willingness principle and investment opportunity principle. A comparison of Fisher's theory and Keynes' theory indicate that both theories are dependent on income and availability of profitable investments. The willingness (indifference) principle is a function of income just like the transactional and precautionary motive, while the investment opportunity principle is just like the speculative motive, which is a function of the opportunity cost of profitable investments opportunities (for example, the interest rate). However, while Keynes explains his theory using liquidity preference, Fisher concentrated on time preference. These theories are

very important in managing financial system in developed and developing countries because they explain the effect of monetary policy shocks and how economic agents respond.

A study carried out by Godwin and Comfort (2019) stressed that over the years, Nigeria has embarked on different monetary policy frameworks such as the prudential guideline, credit ceiling, and Structural Adjustment program era in a bid to grow the economy. There was extensive use of direct control measures with a mix of instruments before the Structural Adjustment Program (SAP) in 1986. The worsening economic situation under the direct control framework led to the introduction of SAP, and the eventual indirect financial liberalization framework that followed. These measures were all taken in a bid to make monetary policy viable to serve as a catalyst for economic growth CBN (2017). To achieve the desired level of profit and remain in business, commercial banks are confronted with how to manage their resources in line with policy variables set out by the Central Bank of Nigeria. Commercial banks should not compromise efficient and effective liquidity management. Consequent upon the above assessment there is a justification to re-examine the effect of monetary policy on deposit money banks profitability in Nigeria (Adeala & Atuebgu, 2019).

2.2 Theoretical Review

Quantity Theory of Money

The quantity theory of money and its variants simply see the quantity of money as the main determinant of the price level or the value of money. It is a classical theory that sought to explain economic activities in the economy made popular by Irving Fisher in his equation of exchange. Fisher is of the view that, all things being equal, changes in the quantity of money in circulation leads to a proportional change in the price level with an inverse effect on the value of money, Fisher (1926). Using the income version of the theory, national income can be derived with an increase in the stock of money. A change in the amount of money has the potential of affecting economic activities through the velocity of money. That is to say how many times a given money stock changes hand in the economy divided by the price level gives the total output generated, this is explained by equation (2) while equation (1) explains the determination of the price level in the economy given the money stock and its velocity (Adunbge & Anahugere, 2018)

Keynesian Monetary Theory

Keynes monetary theory explains effects of variation in money supply on the level of economic activity through its effect on the rate of interest which determines investment in the economy, Ahuja (2018). According to Keynes, rate of interest is determined by the equilibrium of demand for and supply of money, which in turn affects aggregate demand that provides a mechanism through which changes in money supply affects the goods market which determines the level of output and employment. The assumption is that investment is a function of the rate of interest with an inverse relationship; therefore, a fall in the rate of interest induces investment. Increased investment leads to increase in real national income (Y) via effective demand which is an embodiment of consumption expenditure(C), investment (i), government expenditure (g) and net export (Xn). In Keynes view, increments of the existing money stock leads to increment of output as long as the economy is operating under unemployment equilibrium and does not affect prices. However, when full employment output is achieved, further increments to the money stock exerts pressure on prices which rise Proportionally to increase in effective demand. Hence in the Keynesian transmission

mechanism, increase in the money stock leads to an increase in output indirectly though the rate of interest and only raises prices when the full employment output is reached and not before.

This work is anchored on Keynes theory of money and pricing (1930) because it views monetary policy instruments as reward for parting with liquidity (money), It provides that interest rate is determined by the demand and supply of money. The theory opined that supply of money is usually determined by monetary authority which is the central bank of Nigeria while the demand for money is a function of income and interest rate. The theory further explained that transactionary and precautionary motive of liquidity is dependent on income, while speculative motive is dependent on interest rate. The Keynesian theory implies that low interest rate as a component of cost administered is detrimental to increasing savings and hence investment demand. Proponents of this theory argue that increase in the real interest rate will have strong positive effects on savings which can be utilized in investment, because those with excess liquidity will be encouraged to save subject to favorable interest rate, thus banks will have excess money to lend to investors for investment purpose thereby raising the volume of productive investment and increase their profitability. Keynes also emphasized that the rate of interest is purely a monetary phenomenon.

This theory introduced the concept of liquidity trap, a situation where low interest rates discourage savings and consequently reduces investments due to lack of investable fund. Anyingang and Udoka (2019) in their study observed that the Keynesian liquidity preference theory views interest rate is a stock theory. It is a stock analysis because it takes the supply of money as given during the short run and determines the interest rate by liquidity preference or demand for money. This theory is likening to the Nigerian situation under the regulated monetary policy era, where interest rate, cash reserve requirement, liquidity ratio and other prudential guidelines are set by government authorities as either low or high depending on the policy direction and the state of the economy. The low interest rate encouraged inefficiency in the use of capital and resultant negative growth trend in investment and the negative trend is also because of lack of investable fund as people preferred to hold liquid cash as there is no adequate inducement to part with liquidity vice versa. Keynes theory is regarded as an improvement over classical theory as it considers interest as a monetary policy phenomenon that links the present and the future.

This theory abandoned the assumption of full employment, introduced the concept of unemployment therefore; it considered the change in the income level and its relation with savings and investment. Thus in Keynesian analysis more investment leads to more consumption, or in other words, investment and consumption go together. Keynesian analysis is more realistic in the context of unemployment of resources prevailing in the economy. Development of modern industrial society would give rise to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of industry. The raise in public expenditure will more than proportional increase in the national income (income elastic wants) and will thus result in a relations expansion of the public sector (Ajayi & Akinda, 2019).

The Keynesian Theory

The Keynesian are the twentieth century economists who embraced and also broadened John Maynard Keynes's principle in the existence of incessant unemployment equilibrium, dissimilar to the classical economist idea on says law of market arguing that the market economy is self-adjusting therefore there is no need for government involvement in the

economy. They believe that fiscal policy and not monetary policy is the most powerful policy measures to make the economic stable and move it forward. They are sometimes referred to as Demand-side economists, Keynes accepts that the forces of demand and supply could not attain full employment conditions.

Keynesians therefore insisted that only government interference (public sector) through the use of unrestricted policy measures would take the free enterprise economy out of depression and ensure steady growth. Variations in savings and investment are responsible for modifications in business activities and employment in an economy of all economists who discussed the relations between public expenditure and economic growth, Keynes was among the most noted with his apparently contrasting view point on this relationship. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instrument promote economic growth. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in employment, profit ability and investment through multiplier effects in aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers.

2.4 Empirical Review

Akambi and AJagbe (2018) conducted a study on the effect of monetary policy on Nigeria economy between 1992 and 2017 indicates that lending rate liquidity ratio, reserve ratio affects net profitability of commercial banks. The monetary variables were banks rate, lending rates, cash reserve system and statutory ratio, and each was regressed on banks profitability independently. Lending rate was found to exert positive and significant influence on banks' profitability, which indicates a fall in lending rates will reduce the profitability of the banks. Also, bank rate, cash reserve system and statutory ratio were found to have negative and significant effect on the profitability of banks. Their findings were the same when lending rate, bank rate, cash reserve system and statutory ratio were pooled to explain the relationship between banks profitability and monetary policy instruments in the private sector.

Olokoye (2019) conducted a study on the determinant of monetary policy and bank lending behaviors in Nigeria between 1980-2017 and the study found that the commercial bank deposit rate has great impact on their lending behaviour further investigation on this studies indicates that loans and advances of commercial banks respond positively to changes in their volumes of deposit and negative, to changes in their investment. Other studies conducted by Adebgoye and Unuigbe (2010) between 1977 to 2010 found that returns and profitability of commercial banks are significantly affected by macro-economic variable and other characteristics.

Uhomoihbi (2017) examines the determinant of monetary policy and bank profitability reveals that real interest rate in Nigeria from 1980 to 2016, has an undulating trend between 1980 to 2016 with high degree of undulation, therefore there was a steep decline to an all-time low in totality. The regression result further revealed that real interest rate inflation, monetary policy and exchange rates regime are significant while banking sector development, stock market, and financial structure are insignificant and the relationship between corporate tax policy and bank profitability in Nigeria is inconclusive.

Tomola (2018) studied the determinant of banks profitability in developing economy with evidence from Nigeria observed that improved capital and interest income, as well as efficient expenses management and favorable condition contribute to higher banks performance and growth in Nigeria. Furthermore, he adds that government policies in the banking system most encourage economic growth in the country, bank management must efficiently manage their portfolios in order to protect the long-run interest profit making.

Obende and Akinda (2019) conducted a study on the determinant of monetary policy and banks profitability in Nigeria indicates that banks profitability is largely determined by risk and other factor that relates to the internal organization of banking firm. He further brings to bear that market concentration is a significant determinant of banks profitability. More so, exchange rate was found to be significant as a determinant of bank profitability through return on equity and net-interest margin, but not significant to return on asset (ROA) as a measure of profitability.

Punita and Somaiya (2017) conducted a study on the impact of monetary policy on the performance of banks in India between 1995 and 2016. The monetary variables were banks rate, lending rates, cash reserve system and statutory ratio, and each was regressed on banks profitability independently. Lending rate was found to exert positive and significant influence on banks' profitability, which indicates a fall in lending rates will reduce the profitability of the banks. Also, bank rate, cash reserve system and statutory ratio were found to have negative and significant effect on the profitability of banks. Their findings were the same when lending rate, bank rate, cash reserve system and statutory ratio were pooled to explain the relationship between banks profitability and monetary policy instruments in the private sector.

Ajayi and Akinda (2018) investigated the effect of monetary policy and bank performance indicates that bank rate, inflation rate, and exchange rate are total credit enhancing while liquidity ratio and cash reserve ratio exert negative effect on banks total credit although it is only cash reserve ratio and exchange rates that is found to be significant at 5% critical value. They further add that monetary policy instruments are not effective to stimulate credit in the long run, while bank total credit is more responsive to cash reserve ratio.

Agbokhese and Asekone (2017) appraised the impact of monetary policy on bank credit creation in Nigeria between 1980-2016 found that there was a positive linear relationship between total credit creation and the explanatory variables, total credit creation, total deposit and treasury bill rate while reserve requirement ratio and interest rate had a negative relationship with total credit creation. They further add that any monetary policy by the monetary authorities to control credit that emphasizes on reserve requirement could not be effective as the banks could afford to raise and keep substantial deposit as reserve contrary to the action of the monetary authorities. The study also recommends that the central bank should not rely too much on reserve requirement as a monetary policy tool on credit creation rather a monetary policy rate on credit creation that could affect the lending rate as well as the open market operation while commercial bank could increase credit through more cost effective strategies for sourcing for deposit to fund their credit creation as high lending would appear to reduce demand for credit in Nigeria.

Jegede (2017) investigated the effectiveness of monetary policy on the commercial Banks lending in Nigeria between 1988 – 2016 and found that there exist a long run relationship among the variables such as exchange rate and interest rates which significantly influenced commercial banks' lending, while liquidity ratio and money supply exert negative effect on commercial banks' loan and advances, meaning that monetary policy instruments are not effective to stimulate commercial bank loans and advances in the long run, while bank total credit is more responsive to cash reserve ratio.

Aremu, Ekpo, and Mustapher (2018) appraised other determinant of bank profitability in developing economy, taking a look at Nigeria banking industry revealed that bank size and cost efficiency do not significantly determine bank profitability in Nigeria while credit risk was found to be significant driver which affects bank profitability both in the long and short run.

To them liquidity affects banks profitability in short run, labour efficiency only affect banks profitability in the long run but as for the external or macro-economic variable which determines bank profitability, broad money supply was found to be significant at both the long and short run.

Fadzlan and Muzafa (2018) that conducted a study on the determinant of bank profitability in a developing economy from Bangladesh. Their result indicates that loan intensity, credit risk and cost have positive and significant impact on bank performance, while non-interest income exhibits negative relationship with bank profitability. They further add that the size has a negative impact on returns on average equity (ROAE). hey revealed that there is positive relationship between Return on Asset and cash and bank balanced to total liabilities, but negative relationship between Return on Equity, loan and advances to total assets. However, their study was at variant with other studies because it suggests that there is no significant impact between liquidity and profitability among listed banking firms in Nigeria between 1998 to 2016.

William (2017) investigated the determinant of profitability of the commercial bank in Ghana during the recent years of 1994 to 2015 global financial crises the study confirmed that despite the economic crises, banks in Ghana make profit. He further adds that before the global financial crisis banks were also making profit and performance were influenced by two bank specific variables and the industry specific variables; capital and reserve to total assets, non-interest income to gross income, and total bank deposit of the banks, while profitability during the global financial crisis has been influenced by all the macro-economic variables of one bank specific variable and industry specific variable; annual growth rate, annual average base lending rate inflation, growth rate and money in circulation and non-interest income to gross income, in a post consolidation.

Studies conducted Kenny, Lanre, and Jumoke (2017) view the determinant of profitability among deposit money bank in Nigeria between 1996 – 2016 found that total asset, capital adequacy ratio is also negatively to and statistically significant. The external financial structures have no significant influence on profitability. Their studies further suggest that some banks may be suffering from diseconomy of scale which is as a result of ineffectiveness that maybe associated with large complex organization, the studies show that management expenditure, current & savings account variable does not have any effect on bank profitability.

Etieme and Christopher (2017) Studied in the United States of America and Canada to examined the impact of monetary policy on the Nigerian economy. The study also further suggest that these relationships vary depending on the bank or the bank business model and the state of economy (GDP}.They further add that the results are particularly relevant as policy makers to devise new standards establishing an appropriate level of liquidity for bankers.

Aminuand Dauda (2018) examined the impact of monetary policy on the performance of Nigerian economy.The study reveals that management efficiency has been a driving force in determining the profitability of banks in Nigeria with respect to the short run analysis. The studies also indicated how macroeconomic factor such as Gross Domestic Product (GDP) growth rate had led to a negative impact of profitability in Nigeria which according to him is as a result of the unsettle policy reformation between 1992-2017.

Syed, Jawaid, and Junaid (2017) focused on the profitability of the banking sector in Pakistan between 1994 to 2015 found negative and significant effect of bank size, credit risk, with

liquidity, taxation and non-traditional activity with profitability conversely positive and significant effects of capitalization of banking sector development and inflation have been found with profitability. However the stock market development has – negative but significant relationship with profitability.

Lipunga (2018) who examined the determinants of profitability of listed commercial banks in developing countries: Evidence from Malawi also confirms that bank size, liquidity and management efficiency have a statistical significant impact on return on asset (profitability) however – capital adequacy has insignificant effect On the other hand his result suggest that earning yield is significantly influenced by bank size, capital adequacy and management efficiency whereas – liquidity is found to have insignificant influence on earning yield.

Agbonkhese and Asekome (2019) studied the effect of monetary policy on the Jordanian commercial banks and found that increase in the capital ratio and liquidity assets ratio leads to decrease in profitability of Jordanian commercial banks. He further recommends that absolute utilization of the liquidity in various investments in order to increase the Banks profitability in the

Jordanian bank from 1998 to 2015 is paramount. They revealed that there is positive relationship between Return on Asset and cash and bank balanced to total liabilities, but negative relationship between Return on Equity, loan and advances to total assets. However, their study was at variant with other studies because it suggests that there is no significant impact between liquidity and profitability among listed banking firms in Nigeria between 1998 to 2015.

Junaidu and Kuzewa (2017) evaluated the impact of liquidity ratio on the profitability of Nigerian banks from 1998 to 2015; they revealed that there is positive relationship between Return on Asset and cash and bank balanced to total liabilities, but negative relationship between Return on Equity, loan and advances to total assets. However, their study was at variant with other studies because it suggests that there is no significant impact between liquidity and profitability among listed banking firms in Nigeria between 1998 to 2015.However, there is an insignificant Co-integration- relationship between net interest margin and the two measures of liquidity based- on this research, further research was recommended to investigate liquidity mismatches. hey revealed that there is positive relationship between Return on Asset and cash and bank balanced to total liabilities.

Gbodera and Chiwendu (2018) studied monetary policy and economic performance in Nigeria between 1998 to 2016. The study revealed that there is a statistically significant relationship between bank liquidity measures, current ratio, liquid ratio, cash ratio loan to deposit ratio, loan to asset ratio and return on equity (profitability). It shows statistically insignificant relationship. hey revealed that there is positive relationship between Return on Asset and cash and bank balanced to total liabilities, but negative relationship between Return on Equity, loan and advances to total assets. However, their study was at variant with other studies because it suggests that there is no significant impact between liquidity and profitability among listed banking firms in Nigeria between 1998 to 2016.

Lagungu, Adeyanju and Olabode (2019) focused their study on monetary policy on economic performance in Nigeria. The study indicates that there exists significant relationship between liquidity and profitability as such profitability is significantly influenced by liquidity. The study concluded that for the success of operations and survival commercial banks should not

compromise efficient and effective liquidity management, illiquidity and excess liquidity are "financial disease" that can easily erode the profit base on the bank as it affects banks attempt to attain higher profitability level.

Nndako (2019) examined monetary policy and bank performance from 1998 to 2016; the studies indicate that there is a negative significant deterministic relationship between net interest margins and funding liquidity risk. However, there is an insignificant Co-integration-relationship between net interest margin and the two measures of liquidity based- on this research, further research was recommended to investigate liquidity mismatches. hey revealed that there is positive relationship between Return on Asset and cash and bank balanced to total liabilities, but negative relationship between Return on Equity, loan and advances to total assets. However, their study was at variant with other studies because it suggests that there is no significant impact between liquidity and profitability among listed banking firms in Nigeria between 1998 to 2016.

Adewale and Odumi (2019) investigated the effect of monetary policy on the performance of Nigerian economy. However, there is an insignificant Co-integration- relationship between net interest margin and the two measures of liquidity based- on this research, further research was recommended to investigate liquidity mismatches. hey revealed that there is positive relationship between Return on Asset and cash and bank balanced to total liabilities. The result finally confirms a quite robust analysis and Clearly indicates that liquidity management have important-policy implications for development and emerging economies considering the systemic consequences of liquidity problem.

3.0 Methodology

3.1 Research design

The study adopted *ex-post-facto* research design to source requisite information. An *ex-post-Facto* research design is a systematic empirical inquiry that requires the use of variables which the researcher does not have the capacity to change its state or direction in the course of the exercise (Kerlinger, 1973 & Onwumere, 2009). The ex-post-facto research design is used because the data are already documented by reputable institutions like the World Bank, International Monetary Fund (IMF), Central Bank of Nigeria (CBN) and National Bureau of Statistics. Thus, researchers adapt and rely on such official publications for valid and reliable academic exercise.

3.2 Population and Sample

This study captures all the activities of monetary policy on the Nigerian economy, for the period 1995-2019.

3.3 Sampling Technique

Judgmental sampling technique was used in this study; this is because, it enables the researcher to take into cognizance major development that have taken place with respect to the study.

3.4 Method of Data Collection

Data for this study consist of 25-years annual observation period of (1995-2019) and were collected from Central Bank of Nigeria Statistical Bulletin.The model is estimated using the Gross Domestic Product as a proxy for the Nigerian economy and employ as the dependent variable, while interest rate, liquidity ratio and cash reserve requirement are used as independent variables to measure monetary policy for the period 1995-2019. The variables are defined as follows: GDP = Gross Domestic Product as a proxy for the Nigerian economy; MPR= monetary policy rate; LR=Liquidity Ratio and CRR = Cash Reserve Requirement Ratio as indicated in appendix 1.

3.5 Data Analysis and Techniques

Ordinary Least Squares (OLS) technique is employed to analyze the data collected. Ordinary Least Squares (OLS) technique is used because it minimizes the error sum of squares and it also has a number of advantages such as unbiasedness, consistency, minimum variance and efficiency. The statistical test of parameter estimates will be conducted at 5% level of significance. Hence, the Durbin- Watson test is used to test the presence of autocorrelation.

3.6 Model specification

Multivariate linear regression models are used to test each of the null hypotheses proposed for the study. Based on the formulated hypotheses, a model is developed for the study as follows: This model was adapted from the work of Uwadware (2019). The functional model is stated as:

ROA = *f*(MPR, LR, CRR)

Where:

ROA=Return on Asset as a proxy for the profitability of deposit money banks

MPR = Monetary policy rate

LR = Liquidity ratio

CRR= Cash Reserve Requirement

The above model is modified in this study by introducing Gross Domestic Product as proxy for Return on Asset and was employed as dependent variable. The modified functional model was stated as:

GDP = *f*(MPR, LQR, CRR) ………………………………………… (1)

Where:

GDP = Gross Domestic Product as proxy for economic growth and used as the dependent variable

MPR = Monetary policy rate

LQR = Liquidity Ratio

CRR= Cash Reserve requirement

The econometric model is stated as:

$Ln(GDP) = b_0 + Lnb_1MPR + Lnb_2LQR + Lnb_3CRR + \mu$…………………….(2)

b_0 = intercept and b_1, b_2 and b_3 are the coefficients of the regression equation. μ is the stochastic or error term; while, Ln is the natural log of the variables. Log transformation is necessary to reduce the problem of heterosk elasticity; because, it compresses the scale in which the variables are measured, thereby reducing a tenfold difference between two values to a twofold difference (Gujarati, 2004).

4.1 Data Presentation and Discussion of Result

The study centered on the impact of monetary policy on the Nigerian economy; over a period of 1996-2019. Data for this study consist of 25-years annual observation period of (1996-2019). The study used annual data, because quarterly data may not be accessed for some of the variables. The study used Gross Domestic Product as a proxy for Nigerian economy as the dependent variable; while, monetary policy rate, liquidity ratio and cash reserve requirement are used as independent variables to measure monetary policy for the period 1996-2019.

4.2 Descriptive Statistics

	GDP	MPR	LR	CRR
Mean	6546588	26.25434	19.73546	23.04637
Median	5374600	28.89650	17.47380	23.64860
Maximum	4373940	37.06645	36.33745	45.10000
Minimum	3524700	38.03628	9.250000	19.53436
Std. Dev.	6.674802	39.86905	5.403850	9.617132
Skewness	0.684952	3.146739	1.067069	0.185586
Kurtosis	3.385932	14.19450	5.256220	2.604247
Jarque-Bera	0.465954	218.7151	12.83540	0.384959
Probability	0.072485	0.075323	0.0853432	0.068749
Sum	162.3475	3173.45	596.4000	1486.929
Sum Sq. Dev.	1158.846	685474.4	907.1700	2867.166
Observations	25	25	25	25

Source: E-views 9.0 output

Table 4.1 shows that Gross Domestic Product for the period under study had a mean value of N65,4588, liquidity Ratio had 19.73%, monetary policy rate had 26.25434 and liquidity ratio had 19.75, while cash reserve ratio had 46.04. The Jarque-Bera statistic shows that two of the variables, namely liquidity ratio and return on assets were normally distributed while cash reserve ratio and liquidity ratio were highly skewed. Furthermore, cash reserve ratio has a mean of 23% this implies that for the period under review the cash reserve ratio was very high.

4.3 Data Analysis.

Data for this study consist of 25-years annual observation period of (1996-2019) and were collected from Central bank of Nigeria Statistical Bulletin. The data covers a period of twenty-six years, from 1996-2019. Thus, multivariate linear regression model is used to test the null hypotheses proposed for the study

Table 4.2: Ordinary Least Square (OLS) Estimation Results

Dependent Variable: GDP
Method: Least Squares, Time: 42:34
Sample: 1996-2019
Included observations: 26

Date: 24/05/2021	Coefficient	Std. Error	t-Statistic	Prob.
C	325.3142	0.032346	0.432946	0.000001
LnMPR	8.963324	0.465735	1.042383	0.000032
LnLR	6.175230	0.152646	3.227602	0.000013
LnCRR	5.714260	0.645323	2.231767	0.000024

R-squared	0.621240	Mean dependent var	134.7024
Adjusted R-squared	0.560069	S.D. dependent var	23.79766
S.E. of regression	12.12326	Akaike info criterion	1623.057
Sum squared resid	214.1524	Schwarz criterion	16.82415
Log likelihood	-17 .2346	F-statistic	8.431560

Durbin-Watson stat	1.986452	Prob(F-statistic)	0.000000

Source: Author's computation with the use of E-view 9.0

From table 4.2 the coefficient of determination (R^2=0.62 1240) indicates that about 68% of the variations in Nigerian economy can be explained by changes in monetary policy variables (MPR, LR, CRR) in Nigeria. This implies that a significant portion of Nigerian economy is explained by monetary policy variables. The F-Statistics of (8.431560) which is significant at 5% confirms the impact of monetary policy on the Nigerian economy; over a period of 1995-2019. The influence of the explanatory variables on the dependent variable is statistically significant and this is also confirmed by the F-probability which is statistically zero.

4.5 Discussion of Findings

From the study, the result reveals that there is a positive significant impact of monetary policy on Nigerian economy. The above corroborate the work of Aduke (2019) who investigates the effect of monetary policy and bank performance indicates that bank rate, inflation rate, and exchange rate are total credit enhancing while liquidity ratio and cash reserve ratio exert negative effect on banks total credit although it is only cash reserve ratio and exchange rates that is found to be significant at 5% critical value. They further add that monetary policy instruments are not effective to stimulate credit in the long run, while bank total credit is more responsive to cash reserve ratio. There is a positive significant impact of cash reserve ratio on return on asset of banks in Nigeria (Udenta, 2019). There is a negative significant impact of interest rate on the return on asset of banks in Nigeria. Coefficient of determination indicates that about of the variations in banks profitability can be explained by changes in monetary policy variables (INTR, LR and CRR) in Nigeria. This implies that a significant portion of banks performance is explained by monetary policy variables. The F-Statistics of which is significant at 5% confirms the impact monetary policy on banks profitability in Nigeria; for period the 1990-2016. The influence of the explanatory variables on the dependent variable is statistically significant and this is also confirmed by the F-probability which is statistically zero.

Based foregoing, the study recommends that:

a. Monetary authorities and policy makers should formulate monetary policies that would stimulate the banking environment for enhanced performance.

b. Financial institution and banks should formulate strategy to sign up profitable portfolios so as to remain in business in case of increase in the cash reserve requirement.

c. Government should ensure consistency of monetary policy in the economy before reviews, so as to measure its effect on the banking system and the economy at large.

iv) Regulatory authorities will need to build a strong synergy between monetary policy and banking institutions so as to chart a common course for economic growth.

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Appendix1:
Monetary Policy and the Nigerian Economy 1996-2019

Years	Gross Domestic Product (₦' Billion)	Cash Reserve Ratios (%)	Monetary Policy Rate (%)	Liquidity Ratios (%)
1996	4,032.30	16.90	13.50	43.10000
1997	4,189.25	22.70	13.50	40.20000
1998	3,989.45	27.70	14.31	46.80000
1999	4,679.21	62.00	18.00	61.00000
2000	6,713.57	77.80	13.50	64.10000
2001	6,895.20	125.30	14.31	52.90000
2002	7,795.76	139.70	19.00	52.45000
2003	9,913.52	152.30	15.75	50.90000
2004	11,411.07	158. 00	15.00	50.47500
2005	14,610.88	101.10	13.00	50.17500
2006	18,564.54	206.50	12.25	55.70000
2007	20,657.32	148.10	8.75	48.75000
2008	24,296.33	150.70	9.81	44.25388
2009	24,794.24	87.00	7.44	30.70000
2000	54,612.26	95.60	6.13	30.42500
2011	62,980.40	770.00	9.19	42.00000
2012	71,713.94	133.86	12.00	49.70000
2013	80,092.56	227.04	12.00	46.20000
2014	89,043.62	357.18	13.00	38.30000
2015	94,144.96	227.04	11.00	46.20000
2016	101,489.49	357.18	12.00	38.30000
2017	113,711.63	231.34	36.00	38.60000
2018	123,621.34	143.34	33.00	38.30000
2019	134,547.74	145.34	35.00	38.20000

Source: Central Bank of Nigeria Statistical Bulletin, 2019.