Dynamics of Monetary Policy on Performance of Deposit Money Banks in Nigeria

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Abstract
The study examined dynamics of monetary policy on performance of deposit banks in Nigeria. The objectives of the study were to examine the effect of money supply, exchange rate, interest rate on the performance of banks. The research design adopted in this study is the exploratory design to identify the factors that contribute to monetary policy in controlling profitability in Nigeria. Secondary sources of data were used as the main method of data collection. The relevant data for this study have been obtained from the Central Bank of Nigeria (CBN) statistical bulletin. The data were collected on annual basis from 1990-2019. The study employs desk survey. Data were gotten from Statistical Bulletins of the Central Bank of Nigeria. Other information was sourced from relevant journals and textbooks. Ordinary least square of multiple regression statistical technique was employed to establish the relationship between dependent and independent variables. Based on the analysis, the findings revealed that there was a positive and significant effect of money supply on profitability, there was a positive and significant effect of exchange rate on profitability, and there was a negative and significant effect of interest rate on profitability. The study recommended that more emphasis should be placed on money supply, hence it has much influence in profitability of banks in Nigeria. Therefore, government should ensure that money supply is just sufficient to stimulate non-profitability sustainable economic growth.

Keywords: *Monetary policy, money supply, exchange rate, interest rate, profitability*

INTRODUTION

Monetary policy includes a number of policies by which a country controls its money stock so as to achieve microeconomic goals. It is a major economic stabilization tool which involves measures designed to regulate and control the volume, cost, availability and directions of money and credit in an economy with the aim of achieving some specific objectives (Anyanwu 1993). It involves all actions taken by monetary authorities to affect the monetary base through influencing the availability and cost of credit in pursuance of sustainable growth of output, price stability and a healthy B.O.P position. According to Ahuja (2013), the objectives of monetary policy include price stability, maintenance of balance of payment equilibrium, employment creation, output growth and sustainable development. While the objective of monetary policy includes price stability, full employment and growth, targets of monetary policy refer to the variables such as supply of money or bank credit, interest rates which are sought to be changed through the monetary policy instrument such as open market operation and selective credit control etc., so as to attain the laid out objectives.

The choice of what monetary policy instruments and the degree of application is partly dependent on the prevailing circumstances within the economy. For instance, during economic boom, a contractionary monetary policy could function predominantly. However, where there is perceived depression or pessimism within the economy, the expansionary monetary policy gets uncovered. As posited by Nzotta (2004) the success of the monetary policy in an economy depends on the operating economic environment, the institutional framework and the level of its implementation with a view that there is a stable relationship between the quantity of money in an economy and her economic activities. The principal aim being to make sure that there is balance between money supply and the growth rate of the economy without committing errors The manipulation of monetary policy through money supply and interest rate is done by the CBN through the use of monetary policy instrument which include Minimum Rediscount Rate, Open Market Operations (OMO); Cash Reserve Requirement, Liquidity ratio, among others (Ajudua, Davis & Osmond, 2015). Depending on the aim, the central bank reduces or increases the monetary policy rate if the aim is to increase or reduce liquidity and investment, while the commercial banks in turn, increasing or reducing the interest rate charged to borrowers so as to attract borrowing at low interest rate or wade them off. Open market Operations also involves the buying and selling of treasury bills, treasury certificate, commercial papers, etc. by the CBN so as to determine the level of money in circulation (Ajudua, Davis & Osmond, 2015). The reserve requirement also known as the reserve ratio requires the commercial bank to put a little fraction of their reserve behind their demand and time deposit liabilities. This can be manipulated to reduce the ability of the commercial banks to make loans to the public by simply increasing the ratio and enhancing their lending position by reducing the rate (Jhingan1997). The inability of monetary policy to enhance the banking sector's performance has been blamed on corruption, diversion of borrowed funds, lack of integration of macroeconomic plans, inept policy implementation, financial hoarding and illiteracy and lack of economic potential for rapid economic growth and development. This has led to adverse inflationary trend, undulating foreign exchange rates, fall and rise of gross domestic product, unfavourable balance of payments and over reliance on oil revenue. Others include policy reversal, poor sectorial output and arbitrary interest charges on loans and low compensation on deposits. This has further increase the leakage of funds from the financial sector, rendering monetary policy impotent to control the output and activities of the economy in general and banking sector in particular. In view of the above, one begins to wander if monetary policy has any significant effect on banking activities and the economy in general. This therefore is the target of this study to investigate the effect of monetary policy on banking performance amidst the numerous challenges.

THEORETICAL FRAMEWORK

Keynes in his book published in 1936 "The General Theory of Employment, Interest and money" formulated a monetary theory centred on output rather than prices. He disagreed with the classical view and posited that there is an indirect and non-proportional relationship between change in money and price level. Keynes posited "that economics has been divided into two compartments with no doors or windows between the theory of value and the theory of money and prices". This dichotomy between the relative price level (as determined by demand and supply of goods) and the absolute price level (as determined by demand and supply of money) arises from the failure of the classical monetary economists to integrate value theory with monetary theory. Consequently, changes in the money supply affects only the absolute price level but exercise no influence on the relative price level. According to Keynesian monetary transmission mechanism, given the assumption that the economy is at less than full employment equilibrium, the built-in-policy transmission mechanism works through the financial system to the real sector via interest rate thus, emphasizing that the

quantity of money has an indirect relationship with prices via interest rate, thus an increase in quantity of money will lead to a fall in interest rates which increases volume of investment and raise effective demand through the multiplier effect thereby increasing output, income and employment .

LITERATURE REVIEW

A large number of empirical studies have been done to estimate the impact of monetary policy on performance of banks. Chimadoi and Igwe (2010) examine the real exchange rate overshooting and the output cost of bringing down profitability. They found out that despite profitability sluggishness, core profitability can be reduced quickly by jumps in the price level induced by jumps in the exchange rate. Chaudhary and Ahmad (1995) assessed the long-run co-integration of profitability and some macroeconomic variables as money supply, and government budget deficit in Pakistan. Based on the monetarist and quality theory approach to profitability and with a unit root test for stationary, they observed that the domestic financing of budget, particularly from the banking system on performance of banks in the long-run. The results provided support for a positive relationship between money supply and profitability. Kilindo (1997) attempted an experience of Tanzania's economic relationship between fiscal operations, money supply and profitability. Testing the structural model for the period of 1970-84, the evidenced by the significant coefficients of the structural model and simulation results, shows a strong relationship between fiscal operation, money supply and profitability in Tanzania. Kibritcioglu (2002) consolidates persistence of profitability in Turkey as a net result of sophisticated dynamic interaction of four group of explanatory factors of demand-side (monetary) shock, supply-side (or real) shocks, adjustment factors, and political processes. This means that growth is a result of in-appropriation of various structural and economic factors. London (2008) provides empirical evidence on the relationship between money and profitability in Africa. Using both cross-section and time series econometric analysis, shows that although, the simple monetarist profitability model appears to hold when tested in cross- section equations covering several countries and averaged over several years, the same generally not true for individual countries in time series analysis or cross- section studies. London analysis strongly suggests that factors other than the rate of monetary expansion have played an important role in determining short-run profitability trend in Africa, and given the lesser role that are to be assigned to monetary factors over the short-run, the study urges greater flexibility in deploying policy instruments towards profitability target in African countries and caution against the application of rule based on regional result in favour of those derived from country-specific findings. McCallum and Nelson (2010) considered the relationship existing between monetary aggregates and profitability, and whether there is any substantial reason for modification of policy analysis. After affirming the Friedman's proposition which says that if a change in the quantity of (nominal) money were exogenously engineered by the monetary authority, then the long-run effect would be a change in the price level (and other nominal variables) of the same proportion as the money stock, with no change resulting in the value of any real variable, they hold a contrasting view that, the monetarist proposition holds in a model economy if, and only if the model exhibits the property known as long-run "neutrality of money" They therefore challenge the view that has been widely expressed in the literature, both by critics and advocates of the use of money in monetary policy analysis. Monetary policy is the process by which the central bank or monetary authority controls money supply, availability of money and the cost of money or rate of interest. Monetary policy is used to attain set of objectives geared towards the growth and stability of the economy. These goals usually involve stable price and low unemployment. Monetary theory provides insight into how to craft optional monetary policy (Chukwu, 2010) Monetary policy

is a major economic stabilization weapon which involves measures designed to regulate and control the volume, cost, availability and direction of money and credit in an economy to achieve some specified macroeconomic policy objectives, that is, it is a deliberate effort by the monetary authority to control the money supply and credit conditions for the purpose of achieving certain broad economic objectives. "Johnson defines monetary policy as policy employing central banks control of the supply of money as an instrument for achieving the objectives of general economic policy. (Gbadebo & Mohammed,2015)

In Nigeria, monetary policy is designed to attain price stability balance of payment equilibrium and high rate of economic growth. The central Bank of Nigeria (CBN) ensures that the nation attains price stability and balance of payment equilibrium. Monetary policy as the use of open market operations, change in discount rate, change in reserve requirement and other measures available to the monetary authorities to control the rate of growth of money supply. He further notes that the goals of monetary policy are price stability, relatively full employment and satisfactory rate of economic growth. Monetary policy measures as a deliberate action adopted by the government to regulate and control the supply of money so as to promote the achievement of national objectives. According to Habibulah (2011) monetary policy is the control of supply of money as an instrument in achieving the objectives of a general economic policy. He goes further to state that it is a policy which deals with the discretionary control of money supply by monetary authorities in other to achieve stated or desired economic goals. He points out that monetary policy involves measures which the government adopts using specific instruments to stimulate the economy so as to attain the desired objective which may include increased output in the industry, agriculture or other sector of the economy, employment generation, control of inflation, balance of payment and mobilization of savings. Nnanna (2001) views monetary policy as a government policy about money. It is a deliberate manipulation of cost availability of money and credit by one government as a means of achieving the desired level of prices, employment, output and other economic objective. During the independent era in the 1960s, with the creation of the CBN, the monetary issues that needed prompt attention were the issue of the Nigerian currency, the establishment of a strong financial base and the promotion of domestic financial infrastructure such as the money and capital market institution and instruments. This led to the introduction of the first Nigerian money market instrument-the Treasury bill and the establishment of the Lagos stock exchange. Between 1964 and 1966 the defence credit expansion policy adopted in 1962 which subsequently led to increase in the demand for imports causing a drain on the foreign reserve. Policy instruments such as discount rate control, interest rate, moral suasion etc. were used to reserve the trend with a ceiling of 15% imposed on commercial banks credit and granting credit to finance imports and construction were restrained, minimum rediscount rate was rate from 4% to 5% in 1965. Thus, a restrictive monetary policy was pursued in Nigeria during this period (Oladipo & Akinbobola, 2011).

RESEARCH METHODOLOGY

This study examined the impact of monetary policy on performance of banks. The research designed is adopted in this study is the exploratory design to identify the factors that contribute to monetary policy in controlling profitability in Nigeria. Secondary sources of data were used as the main method of data collection. The relevant data for this study have been obtained from the Central Bank of Nigeria (CBN) statistical bulletin. The data were collected on annual basis from 1990-2019. The study employs desk survey. Data were gotten from statistical bulletins of the Central Bank of Nigeria. Other information were sourced from relevant journals and textbooks. Ordinary least square of multiple regression statistical technique was employed to establish the relationship between dependent and independent

variables. Based on this theoretical postulation, the study specified profitability as a linear function of money supply (MS), exchange rate (ER) and interest rate (IR). Profitability (INF) was used as the dependent variable. Based on these determinant factors, the model for this study is formulated and specified functionally as;

BPROF = F(MS, ER, IR)

Where

BPROF = Banks profitability
MS = Money supply
ER = Exchange rate
IR = Interest rate

The above model can be expressed in its estimated form as:

$BPROF = b_o+b_1MS+b_2ER+b_3IR+U$

The log form of the model can be written as

$LOG(BPROF) = b_o+b_1LOG(MS)+b_2LOG(ER)+b_3LOG(IR)+U$

Where;

BPROF = Dependent variable
MS,ER,IR = Independent or explanatory variables
b_o = the autonomous intercept of the model
b_1-b_3 = the parameters to be estimated
U = random error term

The theoretical expectations about the signs of the coefficients of the parameters are; $a_1>0$, $a_2>0$, $a_3>0$

Analysis of data

The regression result of the impact of monetary policy on the performance of banks in Nigeria (1990-2019).

TABLE 1

Regression result

Variable	Coefficient	Std. error	t-stat	Prob.
C	2.327873	0.337660	6.894123	0.0200
MS	3.481684	0.932634	3.733174	0.0310
ER	0.972772	0.099138	9.812283	0.0500
IR	-3.746307	1.657189	-2.260667	0.0210

R^2 = 0.705674, R^2(adj) = 0.632093, f-stat. = 9.5903, DW = 2.3485

The estimated result as presented in Table 1 above is analyzed in terms of three criteria, namely; economic a priori criteria, statistical criteria and econometric criteria.

Economic a priori criteria

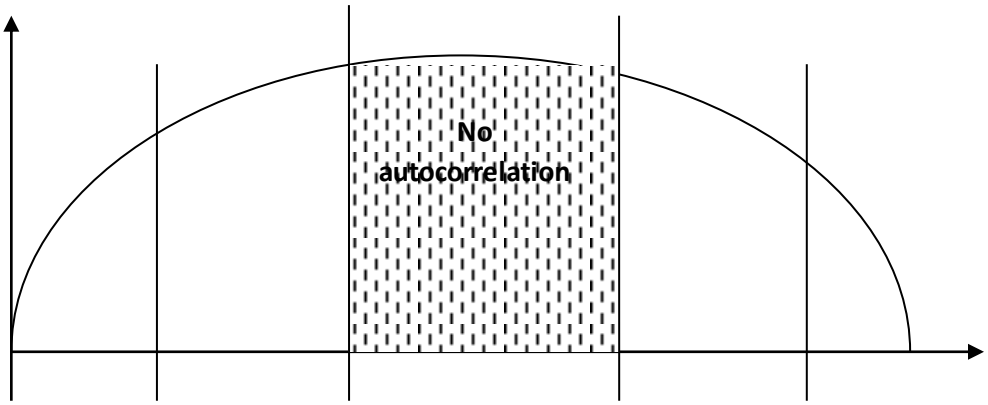
The empirical results show that all explanatory variables turned out with their correct expected signs, except interest rate. The estimated regression line has a positive intercept, represented by the constant term. This means that holding the explanatory variables constant, there will still be an increase in banks performance by 2.32 percent. The positive sign of the coefficient of money supply shows a positive relationship with banks performance, exchange rate with positive relationship with profitability while interest rate negative relationship with profitability Therefore 1 percent increase in money supply (3.48%), exchange rate (0.97%) will lead to an increase in profitability while 1 percent decrease in interest rate (-3.74%) will lead to a decrease in profitability.

Statistical criteria

The statistical test of significance of the parameter estimates is carried out using the t-statistic test. From the results obtained, two variables (money supply and exchange rate) were statistically significant. These variables were significant in influencing profitability. The high values of R-squared of 0.7056 and adjusted R-squared of 0.6320 showed that the estimated regression result has a good fit on the data. In particular, the adjusted R-squared of 0.6320 showed that about 63 percent of the systematic variation in the dependent variable has been explained by variations in the explanatory variables. The f-statistic value of 9.59 is reasonably high and showed the overall estimated regression model was statistically significant at the conventional 5 percent level of significance. This means that independent variables have joint effect on the dependent variable.

Econometric criteria

The Durbin-Waston statistic is employed here to test for the absence of autocorrelation in the model. The Durbin-Watson statistic at 5 percent level of significance shows that the critical regions of the D-W graph is represented as follows:



From the results obtained, the D-W value of 2.348 falls in the acceptance region, representing the region of no autocorrelation. This region is represented by the shaded region of the D-W graph above, showing that there is no autocorrelation among the residual terms in the model. This means that the estimated equation is well-behaved. The model therefore can be applied in the Nigerian economy for policy formulation.

Summary of findings

The major findings of the study include;

i) There is a positive and significant effect of money supply on profitability
ii) There is a positive and significant effect of exchange rate on profitability
iii) There is a negative and significant effect of interest rate on profitability.

Conclusion/Recommendations

It is a well known fact that over the years, monetary policy has not made the desired impact on price stability in Nigeria. Nonetheless, a number of reasons have been advanced for why the performance of monetary policy over the years has been abysmal. These include lack of sufficient control of the financial institution, political interference and the inability of monetary authority to use monetary instrument. However, based on this study, money supply, interest rate and exchange rate are the monetary policy variables that affect performance of banks either positively or negatively

In the light of our finding, the following recommendations are made:

1) More emphasis should be placed on money supply, hence it has much influence on profitability of banks in Nigeria.
2) Therefore, government should ensure that money supply is just sufficient to stimulate non-profitability sustainable economic growth.
3) The prevalence of underground market (black market) in the exchange rate system has undermined the policy objective of controlling profitability. Therefore, Central Bank of Nigeria should advise banks to obtain clearance from the presidency through the Ministry of Finance before adjustment of exchange rate.

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