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MONETARY TARGETING STRATEGY AND PRICE STABILITY IN NIGERIAN ECONOMY, 1986- 2017

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Abstract: **The objective of this paper is to investigate the effect of monetary policy on Price stability in Nigeria between 1986 and 2017. The study used quarterly Times series data sourced from secondary sources and the Vector Autoregression (VAR) model analysis approach. The empirical model has broad monetary growth rate, monetary policy rate and exchange rate as the policy variables and price stability proxy by inflation rate as the policy variable. Analysis of the Time series properties of the variables revealed that they are not stationary at level. They are 1st difference stationary and cointegrated. Estimate of the impulse response revealed that price stability variable does not respond significantly to shocks from the monetary policy intermediate variable - Broad Money Supply (MS2) growth rate. Furthermore, the result of the analysis forecast variance shows that price stability variance due to variations in the broad money supply growth rate were statistically insignificant and variable. The policy implication of this finding is that targeting broad monetary growth as a strategy of monetary policy for price stability is ineffective strategy of monetary policy for price stability in Nigerian economy. The study concludes that there is need for a change of operating strategy from monetary targeting to inflation targeting for price stability in Nigerian economy**

Keywords: **intermediate variable, monetary policy, price stability, money supply.**

1. INTRODUCTION

The Central Bank of Nigeria (CBN), like many other central banks in developing countries, has the objectives of price stability, sustainable economic growth, balance of payment stability and full employment. However, the CBN is more focused on the stabilization goals than the development goals. The amended CBN Act of 2007 section 2 (9) stated the core objective of the central bank of Nigeria as the promotion of price stability, which is predictability of domestic price level or slow and predictable domestic price level which, of course, is a critical requirement for investment and sustainable economic growth.

In pursuant of her core objective, the CBN adopted a monetary policy strategy which assumes that there is a stable and predictable long run relationship between monetary aggregate and certain macroeconomic variables. Thus, in an in-deal situation, monetary policy, by indirectly manipulating monetary aggregate, will produce a definite and predicable impact on some economic variables: with accurate timing, controlling monetary aggregate growth rate will have significant effect on the level and direction of changes in macroeconomic variables.

However, since the adoption of the monetary targeting strategy by the monetary authority in 1986, the Nigerian economy is yet to experience relative price stability, sustainable economic growth, full employment as well as balance of payment

equilibrium: that is, meeting the monetary policy objectives in Nigerian economy is, increasingly, becoming difficult. From June, 2015 to June 2017, a period of twenty-four months, the external value of the Nigerian naira depreciated by over 100%: from 196.99 to a dollar in April 2015 to 398 to a dollar in May 2017. Also, price inflation doubled from 9.6% in 2015 to 18.7% in July 2017, up from 17.9% in 2016 (NBS, 2017). Also, during the same period, Nigerians economy recorded negative growth as well as increase in the level of unemployment.

In the face of falling output level and depreciation of the naira, the Monetary Policy Committee adopted expansionary monetary policy stance and reduced the monetary policy rate (MPR) from 13.0% in June 2015 to 11.0% in November 2015. In spite of this intervention, output continued falling and price inflation, also, continued the upward trend. Again, the monetary policy committee of the CBN in its meeting of 22 November, 2016 considered the rising inflation and the depreciation of the naira; but this time, the Monetary Policy Committee adopted contractionary policy stance and raised the MPR to 14%. Yet, falling output and rising price level could not be arrested until the last quarter of 2017 when the National Bureau of Statistics (NBS) announced a drop in the headline inflation level.

Most a time, monetary policy misses its target. It is difficult to achieve the target of monetary policy in Nigerian economy. For example, the target growth rate of broad monetary aggregate was 10.30% in 2017; but the broad money supply grew by 5.08%. In 2016, the target growth rate was 12.2%. Yet, the actual growth rate was 27%, more than double the target rate (CBN, Monetary Report, 2017). The Central Bank of Nigeria, always, blames the fiscal authority and other external factors for the target misses. However, there is the need to empirically prove that CBN's monetary policy framework and strategy is not a contributing factor to the seeming ineffectiveness of monetary policy in Nigerian economy.

The existence of macroeconomic instability in Nigerian economy may be as a result of ineffectiveness of the Central Bank of Nigeria monetary policy strategy, and there are grave dangers to this ineffectiveness of monetary policy strategy. The incidence of price instability, unemployment and sluggish economic growth may persist; and, in prolong case, may drive and entrench the economy in a recession. The problem of price and balance of payment disequilibrium will deter investment and constrain economic growth., and ultimately perpetuate unemployment in the economy

Addressing this macro-economic challenge is critical to growth and development of the Nigerian economy. To address this ugly trend, it is critically important to re-examine the Central Bank of Nigeria 's monetary policy strategy in the contemporary Nigerian economy. The problem of the study, therefore, is to empirically examine the effectiveness the monetary policy operating strategy for achieving the policy objective of price stability in Nigeria economy between 1986 and 2017.

The findings of this study will contribute to existing literature on this issue and would help in resolving the theoretical question about the effectiveness of monetary targeting strategy, and other strategies especially in Nigerian and other similar economies. It will help in developing effective and efficient monetary policy rule in Nigerian economy.

The remaining parts of study is organized into four sections as follows: Section two (2) is the literature review and presents a review of relevant theoretical and empirical literature of the study. Section three (3) is the method of the study. Method employed for the collection and analysis of the study data as well as the empirical model is presented and explained in this section. section four (4) is for, presentation of empirical results and discussion of findings. Section five (5) is devoted to summary of the study and conclusion from the study.

2. LITERATURE REVIEW

This section reviews the literature that explains the relationship between monetary policy and macroeconomic variables. For the purpose of this study, the body of the literature review would be focused on the monetarist's theory of price inflation:

The argument of the Monetarists centres on the relation between price level and changes in monetary aggregate or money supply. The controversy between the Keynesian and the Monetarist arise from whether changes in monetary aggregate affect the velocity of money and the output level. (Diptimai, 2000, p.14). The Monetarists are of the opinion that, in the long run, velocity of money demand or V is independent of changes in monetary aggregates. Therefore, changes monetary aggregate have no effect on the velocity of money. The direct implication of this is that changes in money supply leave

demand for money the same, but brings a corresponding change in the level of expenditure (since expenditure is equal to the (MV). Hence, over the long run, monetary policy has a significant effect on the level of expenditure and aggregate demand. This is a sort of contradiction to the Keynesian observation, which claimed that changes in monetary aggregate have impact on the velocity; but the impact is unpredictable and therefore, monetary policy is not a reliable instrument for managing aggregate demand (Keynes, 1936 p.170).

Another important monetarist attack on the Keynesian economist is the argument that the national output level is inelastic in the long run, but elastic in the short run. Based on this, the output in the long run is determined independent of aggregate. It implies that, in the long run, any change in aggregate demand represented by change in, which could come only from changes in monetary aggregate, is fully transmitted to price level. Hence, the rate of growth of monetary aggregate determines the rate of growth of inflation in the economy in the long run. The monetarists believe that monetary policy has definite and predictable effect on output and employment in the short run. However, monetary policy does not have any effect on output and employment in the long run.

The monetarist, like their progenitor, espoused direct transmission mechanism. According to these principles, when money supply increases, it increases the amount of money in the hand of the public than they wish to hold. Therefore, the public spend the extra on securities, goods and services and thereby increase the aggregate effective demand for goods. This will continue till the excess liquidly is eliminated. Thus, changes in money supply have effect on aggregate demand. The monetarists believe that the money demand function is relatively stable due to minor role played by the speculative demand for money. Again, they equally believe that interest elasticity of investment is not inelastic, but relatively elastic. Thus, monetary policy is more effective than the Keynesians assumed. This also implies that the indirect transmission mechanism is possible and faster than Keynes and the Keynesians assumed.

However, the monetarist observed that the direct transmission mechanism may be slow. Also, they admit that the velocity of money may fall in the short run as a result of fall in the yield of near money assets. Thus, the demand for money can change in an unpredictable manner in the short run. Therefore, monetary policy is not a good stabilization instrument in the short run.

In the long run, velocity of money is stable, and there is enough time for the direct transmission mechanism to work out. Thus, in the long run, monetary policy has a predictable effect on aggregate demand and employment and, therefore, can be used as a stabilization instrument. The monetarist, therefore favour a long run approach to monetary policy using monetary variables as operating instrument. The monetarist subscribes to targeting the long run growth of monetary aggregate instead of using the interest rate and fixing it.

A lot of empirical studies have been done the relation on the relationship between monetary policy and monetary policy objectives. Most of the studies agreed that price instability in Nigerian economy is a monetary phenomenon. The empirical studies and their findings as follow.

Aikaeli (2007) examined the effect of changes in money supply growth on inflation in Tanzania. He used monthly data from 1994 to 2006 and the Generalized Autoregressive Conditional Heteroscedasticity (GAREH) approach to analyze the data. Broad money supply M_2, and M_3 were used as proxies for monetary policy. The result revealed that changes in money supply have significant effect on inflation level after seven months lags.

Gbadebo and Mohammed (2015) studied the effectiveness of monetary policy in Nigerian economy. The study employed time series data collected from 1980 to 2012 and the Engle-Granger (1978) error correction model techniques. The study proved that changes in money supply have positive and significant effect on inflation both in the short and long run period. They, therefore, concluded that monetary influence is a significant cause of inflation in Nigeria economy.

Emerenimi and Eke (2014) examined the effect of monetary policy instruments on price inflation in Nigeria during the period 2007 to 2013. The study employed quarterly data and co-integration analysis techniques, and included broad money supply (M_2), Treasury bill rate, monetary policy rate, exchange rate level as monetary policy instruments and consumer price index as proxy or inflation. The study showed that broad money supply growth rate and exchange rate level have positive and significant impact on inflation rate, while monetary policy rate and Treasury bill rate do not have significant impact on inflation. They recommended controlling the growth rate of broad money supply as a strategy of managing inflation in Nigerian economy.

Raymond (2014) used ordinary least square (OLS) regression analysis method to examine the effect of monetary policy on inflation in Nigerian economy from 1980 to 2010. He regressed broad money supply, monetary policy rate, cash reserve ratio, liquidity radio and exchange rate, as monetary policy variables, on consumer price index. The analysis revealed that liquidity ratio, monetary policy rate, and exchange rate are effective instruments for controlling inflation in Nigerian economy.

Chuku (2008) studied the effectiveness of monetary policy in Nigeria. He used quarterly data from 1990 to 2008 and Structural Vector Auto-Regressive (SVAR) analysis method for the analysis. He found broad money supply shocks as a significant cause of inflation in Nigerian economy. He therefore recommended the control of money supply growth rate as the most effective strategy for combating inflation in Nigerian economy.

Ujuju and Etale (2016) examined the role of monetary policy in controlling inflation in Nigeria. They used annual time series data from 1982 to 2011 and multiple regression analysis techniques. Monetary policy rate, minimum rediscount rate, liquidity ratio and cash reserve ratio represented monetary policy instruments; while inflation rate as measured by consumer price index proxy inflation rate. The study found that interest rate, minimum rediscount rate, liquidity ratio and cash reserve ratio have no significant effect on inflation rate in Nigeria. They therefore, recommend the shift from monetary targeting to inflation targeting in Nigeria.

Okwu, Obiakor, Falaiye and Owolabi (2011) analysed the effect of monetary policy shocks on price stability in Nigerian economy. They used quarterly data and Structural Vector Auto-Regression (SVAR) method. The main intermediate policy target was broad money and monetary policy rate, and consumer price index was the ultimate target. Their result shows that monetary policy rate and broad money have positive and significant effect on price stability in Nigeria.

Ahiabor (2012) studied the effect of monetary policy on inflation in Ghana from 1985 to 2009. He used a multiple regression model which has inflation rate as the dependent variable, and money supply, interest rate, and exchange rate as proxies for monetary policy. His result shows that there is a long run relationship between money supply growth rate and inflation in Ghanaian economy.

The effectiveness of monetary policy for controlling inflation was examined by Ngeregbo (2016) in Nigerian economy. The study used annual time series data from 1985 to 2012 and a multiple regression model which has broad money supply, narrow money supply, monetary policy rate, prime lending rate, maximum lending rate, and Treasury bill rate, as monetary policy instruments and consumer price index as policy target. The study observed that maximum lending rate, prime lending rate, minimum lending rate, net domestic credit and treasuring bill rate have no significant effect on inflation, while growth rate of broad, and narrow money, and credit to the public sector have significant effect on inflation rate in Nigeria. The study recommended controlling monetary aggregate growth rate as a strategy for controlling inflation in Nigeria.

Commodore (2016) investigated the effect of monetary policy on inflation in Ghana using annual time series data from 1980 to 2014 and Auto- Regressive Distributed Lag (ARDL) model analysis method. Monetary policy was proxy by monetary policy instrument of broad money supply M_2, narrow money M_1, M+, monetary policy rate, exchange rate and interest rate. The result shows that there is a significant relationship in both long run and short run, between monetary aggregates and inflation rate in Ghana.

Uduakobong (2014) studied the relationship between inflation and money supply in Nigeria between the period 1970 to 2011. He used Vector Error Correction Model (VECM) approach and annual time series data. The study revealed that there is a positive and significant relationship between money supply and inflation in Nigerian economy. He recommended controlling the supply of money to reduce inflationary pressure in Nigerian economy. Cevik and Teksoz (2013) carried out a study to determine the factors behind inflation dynamics in Libya. Their study used quarterly data and co-integration analysis techniques. The multiple regression models have government spending, exchange rate, imposition and removal of sanctions, world inflation rate, and money supply growth rate as the independent variables. The result indicated that money supply growth rate, among other things, is a significant cause of inflation in Libya. In Uganda, Kabundi (2012) investigated the relationship between monetary policy, proxy as changes in monetary aggregate level and inflation. He employed the Quantity Theory equation of exchange and co-integration techniques for the data analysis. His result revealed that inflation in Uganda is caused by money supply growth rate.

Empirical study of the relationship between inflation and money supply was conducted by Bozkurt (2014) in Turkey. The study used secondary data which consist of quarterly data from 01 1999 to 04 2012 and Johansen co-integration test for the data analysis. The model has as its explanatory variables money supply, M_2, GDP, and velocity of money supply and GDP deflator as the dependent variable. The result shows that money supply growth rate, and the velocity of money is the principal determinants of inflation rate in Turkey. In a related study, Koyuncu (2014) study the impact of money supply growth rate on inflation in Turkey. He used annual time series data from 1987 to 2013 and co-integration analysis techniques, and Granger causality analysis. The result revealed that there is a positive and significant relationship between money supply and inflation. The Granger causality test shows that there is no causality from inflation to money supply, but from money supply to inflation.

3. METHOD OF THE STUDY

This section describes the method employed for the collection and empirical analysis of the study data. The section would be organized into four subsections as follows:

3.2 Model Specification

Based on the foregone, a simplified model of the relationship between monetary policy variables and monetary policy objectives variables could be expressed as an implicit model as follows:

PS= f(MS2, GDP, MPR EXR) 3.1

Where

PS is price stability variable which is monetary policy objective variable MS2 is broad money supply growth rate, MPR is monetary policy rate, and EXR is exchange rate. These last three are monetary policy variables

Examining the impact of monetary policy on monetary policy objectives necessitates specifying a model which will allow isolating the impact of policy intervention or changes in any of the policy variable on the ultimate target objective variables. The model should tell us how a change in any of the model perimeters is linked to monetary policy variable or action. Again, target objective might be subject to several non-policy variables. Some parameters designating or representing monetary policy actions may appear as argument in the monetary policy reaction function and or as explicit variable in the ultimate target function. Thus, the variables are interdependent and affect one another via expectation. This implies that there is no complete exogeneity between monetary policy variables and monetary policy ultimate target variables. The policy variables affect the target objective variables; likewise, the target objective level affects the level of the policy variables There is simultaneity among the variables. Therefore, any model which attempts to specify the impact of monetary policy variable on policy objective must acknowledge this phenomenon. Any effort to predict the impact of monetary policy variables on monetary policy target objectives by changing any of the policy instruments or equations and holding other equations in the model constant, which is exactly what the implicit functions specified in equation 3.1 above implies, will fail, because other variables and equations will change if the policy variables or any of the policy variables changes (Lucas' Critique) (Lucas,1976).

The Vector Autoregressive (VAR) model developed by Sim (1980) is the most appropriate model for specifying the type of interactive relationship between monetary policy variables and monetary policy objectives The VAR model provides a clearer and better insight into the dynamics of the system and therefore avail us the opportunity to observe the feedback mechanism among the variables of the model. We examine the impact of the policy variables shocks on the ultimate target objective variables and how the target influences the policy variables. The VAR has the important advantage of being simple with high predictive power (Sim, 1987).

Again, the VAR is a-theoretic because it uses less prior information and the researcher is relieve of the problem of specifying endogenous and exogenous variables because all the variables are as considered endogenous (Gujarat, 2004). The VAR model has become popular in contemporary literature on monetary policy research. The model has achieved important height in data description and in forecasting. However, the model has not overcome the Lucas' Critique, and is less suitable for forecasting out of sample. Choosing the appropriate lag length, and the challenge of weather to specify in level or in first difference are the major drawback of this model. Using VAR model consumes a lot of degree of freedom and so may lead to the problem of multi-co- linearity and inefficient estimates.

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However, the emphasis of the study is not to estimate the parameters of the model, but on analysing the impact of monetary policy shocks on the endogenous variables; that is, how changes in monetary policy instruments or monetary policy actions affect the policy ultimate target objectives. For this type of analysis, the VAR model is a better choice. A general vector autoregressive (VAR) model is represented as:

$$Y=\lambda_0 + \lambda_1 Y_{t-1} + + v_1 \qquad 3.1$$

Where

$$Y_t=\begin{bmatrix} PS_i \\ GDP_i \\ MS2_i \\ MPR_i \\ EXR_i \end{bmatrix}, \lambda_1 = \begin{bmatrix} \lambda_{10} \\ \lambda_{20} \\ \lambda_{30} \\ \lambda_{40} \\ \lambda_{50} \end{bmatrix}, \lambda_1 = \begin{bmatrix} \lambda_{11} & \lambda_{12} & \lambda_{13} & \lambda_{14} & \lambda_{15} \\ \lambda_{21} & \lambda_{22} & \lambda_{23} & \lambda_{24} & \lambda_{25} \\ \lambda_{31} & \lambda_{32} & \lambda_{33} & \lambda_{34} & \lambda_{35} \\ \lambda_{41} & \lambda_{42} & \lambda_{43} & \lambda_{44} & \lambda_{45} \\ \lambda_{51} & \lambda_{52} & \lambda_{53} & \lambda_{54} & \lambda_{55} \end{bmatrix} \lambda_{t-1}=\begin{bmatrix} PS_{t-1} \\ GDP_{t-1} \\ MS2_{t-1} \\ MPR_{t-1} \\ EXR_{t-1} \end{bmatrix}$$

$$v_1 = \begin{bmatrix} v_1 \\ v_2 \\ v_3 \\ v_4 \\ v_5 \end{bmatrix},$$

$$\phi_1=[\phi_1 \quad \phi_2 \quad \phi_3 \quad \phi_4 \quad \phi_5],$$

For a VAR model to provide relevant information on monetary policy, it must include monetary policy objective variables such as price level indicator, output and the external sector performance indicators, and monetary policy variables as indicator necessary to provide the market for interbank reserves (Christiano, Eichenbaum & Evans, 1996; Bernanke & Mihov, 1998). That is, a good VAR model for monetary policy analysis must contain a measure of price changes, output changes, monetary policy instrument, interest rate or volume of trade and the monetary policy rate.

3.2. Definition and Measurement of Variables in the Model

This section explains the variables employed to represent monetary policy framework in Nigerian economy. The variables were selected based on the latest monetary policy framework of the Central Bank of Nigeria. Specifically, the model has policy and objective variables. The five variables depict the relationship between monetary policy variables and policy objective in Nigerian economy. The five variables are classified into two categories of variables. The first category consists of the ultimate/objective target variables of monetary policy and also represent non-policy variables. The variable in this category is price stability. The second type of variables consists of policy variables. The variables in this category are broad money aggregate (MS_2) and the exchange rate which are the intermediate variables and represents the transmission from the interest rate and the exchange rate channels, and the Monetary Policy Rate (MPR) which represent the operating target.

A. Policy Objective Target Variable

Price Stability: Price stability is a situation where the change in the general price level is small and predictable. Price stability is a core objective of monetary policy in Nigeria. If the annual rate of change of the general price level is between 0 and 3%, then price is stable. Price stability is measured as changes in inflation rate and proxy by annual change in the consumer price index. In estimating price expectation, economic agent makes use of all information available to the agents at the time of decision making. The information includes the past period performance of the economy, expected future performance level, and future policies that are likely to have impact on the expected variable. Past inflation level, output gap and expected inflation gap are key variables that are most likely to have effect on expected price level. Hence, economic agents would build their rational expectation about inflation in any period based on the current inflation level, expected inflation gap, expected output gap and random component of macroeconomic policy represented by the growth of money supply (monetary shocks) (Prestoris, 1994).

B. Policy Variables

Broad Money Supply (MS_2): broad monetary aggregate is the intermediate target variable in the central bank monetary policy framework. The intermediate variable is the variable which is not in direct control of the monetary authority, but which it can influence indirectly. The intermediate target variable in Nigeria's monetary policy framework is the broad monetary aggregate MS_2. Broad monetary aggregate is made up of currency in circulation plus demand deposit. Plus, small denomination time deposits, foreign denominated deposit (CBN, Monetary Policy Department, 2006; Ezirim, 2004). The Central Bank of Nigeria adopted monetary targeting using broad money as the intermediate target in 1986. Changes in this target affect the level of the ultimate targets

Monetary Policy Rate (MPR): The monetary policy rate is an interest rate that the monetary authority (i.e. the central bank) sets in order to influence the evolution of the main monetary variables in the economy (e.g. consumer prices, exchange rate or credit expansion, among others). The policy interest rate determines the levels of the rest of the interest rates in the economy, since it is the price at which private agents-mostly private banks-obtain money from the central bank. These banks will then offer financial products to their clients at an interest rate that is normally based on the policy rate (Focus Economics,2019)

Different central banks have different monetary policy interest rates. The most common are the overnight lending rate (interbank lending rate), discount rate (minimum rediscount rate) and repurchase rate (of different maturities). Normally, central banks use the policy interest rate to perform contractionary or expansionary monetary policy. A rise in interest rates is commonly used to curb inflation, currency depreciation, excessive credit growth or capital outflows. On the contrary, by cutting interest rates, a central bank might be seeking to boost economic activity by fostering credit expansion or currency depreciation in order to gain competitiveness.

The monetary policy rate can be thought of as a mathematical equation that determines the appropriate level for the central bank's policy instrument as a function of one or more economic variables that describe the state of the economy. The Central Bank of Nigeria monetary policy rate (MPR) is operating instrument of monetary policy in Nigeria. It is the interest rate for lending to the deposit money and for the buying and selling of reserves. The ruling interest rate is the interbank rate. The interbank rate is the operating instrument of the Central Bank in the monetary policy framework and the monetary policy rule or instrument rule defines the level of the operating instrument (operating target) as a function of some economic variables. The instrument rule or Change in the operating target is expected to have definite effect on the level and structure of broad money (intermediate target).

Exchange Rate (EXR): Exchange rate is the rate at which a country's currency exchanges for another or is converted to another. Exchange rate stability implies that the movement of the exchange rate of the domestic currency is small and predictable. It forecloses wide swings or extreme volatility in the external value of the domestic currency (Dornbush, 1985). Exchange rate of naira to the U.S dollars was used because Nigeria conduct about 40% of her international trade in oil with the United States and the naira is pegged to the dollars (Owoye & Onaforuwa, 2007).

The data for the study is secondary in nature and consist of quarterly time series data of the of the variables in the model. All data were collected from 1st quarter 1986 to 4th quarter 2017

Data for real gross domestic product, inflation rate, broad money supply, exchange rate and monetary policy rate were collected from the Central Bank of Nigeria (CBN) Statistical Bulletin (various issues) and from the National Bureau of Statistics (NBS). Supplementary materials were sourced from the World Bank Development Indicator (WDI) on the internet ,International Monetary Fund Country Specific Financial Statistics and text books.

3.3 Method of Analysis

This section explains the method employed for the estimation of the VAR model. In the use and estimation of VAR model, there are basic issues that must be addressed. The important issues addressed in estimation of VAR model are:

- Variable Stationarity
- Co-integration
- VAR Model Stability Test

- Residual Diagnostic Analysis
- Impulse Response Function Analysis
- Forecast Error Variance Decomposition, and
- Granger Causality/Wald Block Exogeneity Analysis

4. EMPIRICAL RESULTS AND DISCUSSION

The empirical results and discussion of the findings are presented in this part of the paper

4.1Descriptive Statistics

In empirical studies, it is important to examine the statistical properties of the data employed in the model. This will reveal the behaviour of the data and the likely chance of any problem in the data. The descriptive statistics of the data are shown in Table 4.1 below.

Table4.1: Descriptive Statistics of Variables in the model

	GDP	PS	MS2	MPR	EXR
Mean	5882677.	202.2836	5947.327	13.84073	99.00510
Median	1762243.	112.1000	1550.700	13.50000	117.6600
Maximum	29169069	1741.330	24996.41	26.00000	306.7900
Minimum	15874.40	16.00000	26.10000	6.000000	0.182800
Std. Dev.	8014013.	287.7906	7707.324	3.859833	78.65513
Skewness	1.371925	3.234324	1.125311	0.686961	0.605742
Kurtosis	3.468250	14.42710	2.853253	4.615556	3.108496
Jarque-Bera	40.03118	890.8472	26.28199	23.23803	7.643894
Probability	0.000000	0.000000	0.000002	0.000009	0.021885
Sum	7.29E+08	25083.17	737468.6	1716.250	12276.63
Sum Sq. Dev.	7.90E+15	10187281	7.31E+09	1832.492	760955.5
Observations	128	128	128	128	128

Source: E-view computer output.

The table above shows the descriptive statistics of variables in the regression model. From the table, there are 128 observations. During the period under review, the Monetary Policy Rate (MPR) had a minimum of 6%. The maximum value of this variable was 26%; while the mean and median of the monetary policy rate were 13.80% and 13.500% respectively. Also, during the period under investigation, price level, measured by consumer price index, reached the minimum of 16.00; while it achieved the maximum value of 1741.33. The general price level averaged 196.31 during the period under review. In the 128 quarters, which is a period of 32 years, broad monetary aggregate (MS2) averaged ₦5,947.327 billion naira per quarter? The highest value during the period was ₦24,996.41 billion; while the minimum value per quarter was #26 .10 billion. Gross Domestic product (GDP) had an average of ₦58,877 billion. The maximum and minimum values of the GDP were ₦291,690.69 billion and ₦15,874.6600 billion respectively. The maximum and minimum values of the exchange rate were ₦306.7900 and ₦0.182800. The mean value of the exchange was ₦99.005**.**

The Skewness values for all the variables, apart from Monetary Policy Rate (MPR) and exchange rate (EXR) are greater than 0.00. This implies that the distributions of these variables are positively skewed. The Skewness values for monetary policy rate (MPR) and Exchange Rate (EXR) are very close to zero, and so the distributions of these variables could be taken as central. The Kurtosis values for MPR, PS, GDP, and EXR are greater than 3.000. Thus, they have excess kurtosis and are leptokurtic, that is, their distributions have tops that are more pointed than the normal distribution. The kurtosis value for MS_2 is less than 3.00. This mean that the distribution of has flatter top than the normal distribution. They are platykurtic. The Jacque-Bera (JB) test of normality for the variables shows that the distributions of all the are not normal. The P-value of the JB statistics for all the variables are less than the critical 0.05

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4.2 Correlation Matrix

Table 4.2: Correlation Matrix of Variables in the Model

	GDP	PS	MS2	MPR	EXR
GDP	1.000000				
PS	0.728686	1.000000			
MS2	0.955849	0.812902	1.000000		
MPR	-0.200457	0.019070	-0.237138	1.000000	
EXR	0.793900	0.806252	0.861576	-0.265200	1.000000

Source: E-view computer printout

Table 4.2 shows the VECM correlation matrix for the variables in the model. From the table, none of the pair-wise correlation coefficient is greater than .90. Thus, there is no reason to suspect the problem of multi-co linearity in the model (Gujarati, 2005, P.254). Therefore, the variables can be combined in a meaningful economic model without fear of multi-co linearity.

4.3 Unit Root Test Results

The tests of unit root results are presented in Table 4.3 below. The unit root test employed both the Augmented Dickey – Fuller (ADF) and the Phillips- Perron (PP) approaches at 5% probability level.

Table 4.3: Unit Root Test Results

Augmented Dickey-Fuller (ADF)			Phillips- Peron (PP)		
Variable	**Level**	**First Difference**	**Level**	**First Difference**	**Order**
GDP	- 2.1887	-3.0333	- 0.2139	- 13.4213	I(1)
INF	- 1.9629	-3.7105	- 2.9027	-4.2954	**I(1)**
EXR	- 1.3593	- 8.9100	-1.2259	- 8.7884	**I(1)**
MS_2	.1.4860	-16.1308	. 1.9947	-16.6124	**I(1)**
MPR	-1.3652	-5.9924	-2.8018	-12.0351	**I(1)**
	1% = -3.4829		**5% = –2.8848**	**10% = -2.5790**	

Source: E-view computer output

The results of both the ADF and the PP test show that all the variables were not stationary at level. That is, all the variables have unit root. After first differencing, all the variables became stationary. Hence, they are first difference stationary or I (1) series, because they were differenced once to make them stationary. Having seen the order of integration of the variables, and the indication that the model would be built using the difference of the variables, that is built using the first difference of the variables, it is important to select the optimal lag length of the model. Selecting the optimal lag length is the next step in the estimation process.

4.4 Co-integration Rank Test Results

Having seen that the variables in the model are integrated of order one, that is, the variables are I(1) series, it becomes necessary to examine whether they are co-integrated. There are many procedures for testing co-integration among integrated variables. But the Johansen (1988) method seems to have gained upper hand for testing the co-integration rank of VAR model. The Johansen method is popular because of its Gaussian assumptions and the shortcomings in other methods. The Johansen approach has been found to have good asymptotic properties even in cases where the data generating process (DGP) is not Gaussian (Lutkepohl, 2006). The results of the Johansen co-integration tests are shown below.

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Table 4.4a: Co-integration Rank Test Results (Trace Statistics)

Hypothesized No. CE	Trace Statistic	5% Critical
r≤0	216.2091*	125.6154
r≤1	139.7329*	95.7536
r≤2	96.2793*	69.81889
r≤3	58 .5467*	47.85613
r≤4	24.67563	29.79707
r≤5	7.422710	15.49471

Source: E-view computer output

Table 4.4b: Co-integration Rank Test Results (Maximum Eigen Value)

Hypothesized No. CE	Maximum Eigen Value	5% Critical
r≤0	76.47624*	46.23142
r≤1	43.45354*	40.07757
r≤2	37.73348*	33.87687
r≤3	33.87025*	27.58434
r≤4	17.25292	21.13162
r≤5	7.338392	14.26460

Source: E-view computer output

From the results, both the Trace and maximum Eigen value statistics show that there are at least four(4) co-integration rank equations in the model. It therefore implies that the model should be re-parametized and estimated as a Vector Error Correction Model (VECM) and in first difference to capture the co-integration among the variables.

Before estimating the impulse response and the forecast error variance decomposition, it is important to examine the stability of the VECM, serial correlation, heteroskedasticity, and residual normality.

4.5 VAR Stability Test

In estimating the VECM model, two basic assumptions with regards to the data and the underlying VECM model were made. The first assumption is that the data are stationary. The second assumption is that the VECM model is stable. Phillips (1998) showed that impulse responses that are generated from unrestricted VECM with unit roots or roots that are near unity have long period estimated impulses that are inconsistent asymptotical. Policy implications from unrestricted VECM in the presence of unit roots are predominantly uncertain, even asymptotically. It is important that a VECM model is stable before proceeding to estimating the Impulse Response Function or the Variance Decomposition. A non -stable VECM model will diverge to infinity or explode. It is no possible to derive a valid impulse response from an unstable VECM. Phillips (in bid, p.21) also observed that the forecast error variance decompositions are equally inconsistent, even asymptotically, if the VECM model is not stable. Thus, unstable VECM gives wrong estimates of the error variances at long span and, most times, underestimates the forecast error variance. Thus, the stability condition must be met before one can validly carry out impulse response analysis (Glaister, 1984).

To guide against the possibility of inconsistency in the impulse response and forecast error variance decomposition or the under estimation of the true error variance, the stability of the VECM model was examined using the graph of the inverse roots of the characteristic polynomial. In a multivariate VECM model, Lutkepohl (1993) proved that the stability of the VECM model requires that all the inverse root of the characteristic polynomial must be less than unity or lie within the

unit circle. Thus, the necessary and sufficient condition for stability is that all the inverse roots of the characteristic polynomial lie within the unit circle. The E-view computer output of the graph is presented in Figure 4.1 below.

From the figure above, it is clear that all the inverse roots are within the unit circle. This implies that the necessary and sufficient requirements for stability of the VECM model are met. Therefore, it is safe to conclude that the empirical VECM model is stable. Another very important implication of the VECM stability condition is that valid and consistent impulse response function and error variance decomposition can now be estimated.

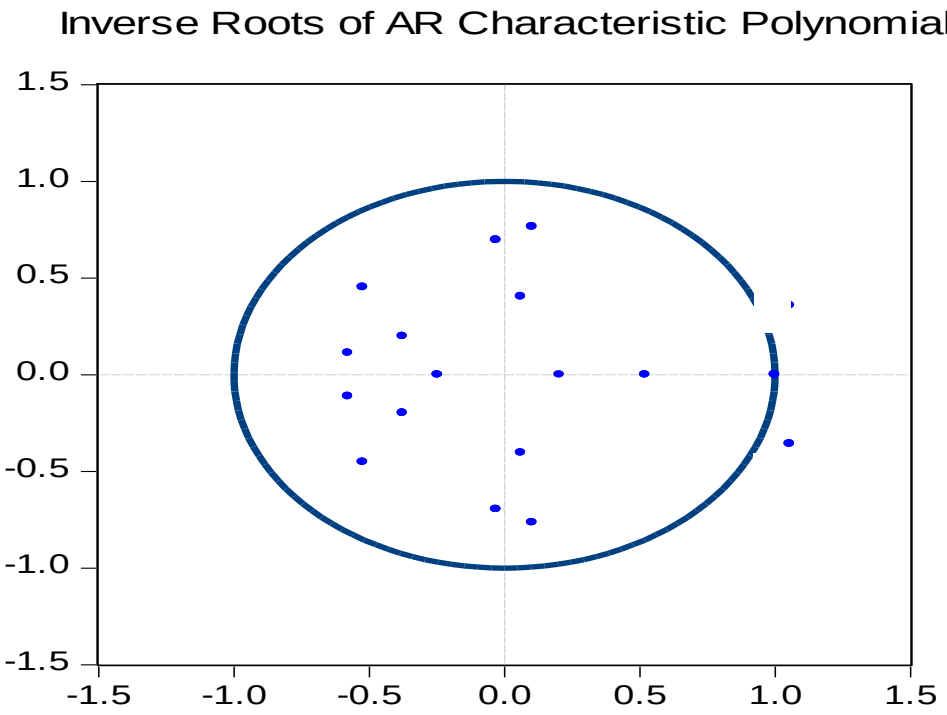

Figure 4.1: VEC Residual Heteroskedasticity Tests

Table 4.5: Residuals Heteroskedasticity Test Result

Chi-sq	Df	Prob.
21.5496	405	0.0831

Source: E-view computer output

The result of the heteroskedasticity test is shown in Table 4.6 above. From the tablet, there is no sufficient evidence to drop the null hypothesis that the error terms are homoscedastic. The probability value of the empirical Chi-square statistic is greater than the critical value of 0.05Therefore, the null hypothesis is accepted at 005 levels of significance.

2. Serial Correlations

Table 4.6: serial correlation LM Test Result

Lags	LM-Stat	Prob
1	124.2130	0.0000
2	31.90187	0.2979

3	16.26443	0.1621
4	29.42538	0.1590
5	25.52847	0.2501
6	21.49995	0.6644
7	11.27200	0.9915
8	18.51091	0.8199
9	12.87341	0.9780
10	14.43691	0.9536
11	8.784967	0.9989
12	21.26121	0.6780

Source: E-view computer output

The possibility of serial correlation in the estimated residuals was examined using the Lagrange Multiplier approach at lag 12 under the null hypothesis of no serial correlation (Breusch -Godfrey, 1978). The results support the acceptance of the null hypothesis at 5% probability levels up to 12 lags. Apart from the first lag, all other lags show no evidence in support of rejecting the null hypothesis. Since, the lag chosen for estimating the model is greater than 1 it can be accepted that there is no statistically significant evidence to suspect the problem of serial correlation among the variables.

3. Residual Normality

Table 4.7: Jacque-Bera Normality Test Result

Component	Jarque-Bera	Df	Prob.
1	2 .2874	2	0.0145
2	1 .6097	2	0.0601
3	0 .6850	2	0.2100
4	6 .2309	2	0.1970
5	2 .8524	2	0.0560
Joint	13.6654	10	0.0561

Source: E-view computer output

Result of the Jacque-Bera test of normality result is presented in Table 4.8 above. The table revealed that there is evidence to support the rejection of the null hypothesis at 0.05 levels of significance. The empirical Chi-square statistic is less than the critical Chi-square value at 10 degree of freedom and 5% probability level. Therefore, the null hypothesis is maintained at 0.05 levels of significance. It therefore implies that the residuals distribution is normal.

Having seen that the VAR model is stable, and there is no evidence of serial correlation or heteroskdasticity, the analysis proceeded to estimate and analyse the impulse response function and forecast error variance decomposition. The results are presented graphically as follows:

4.6 monetary policy operating target and monetary policy intermediate target

In this section, the impulse response of the intermediate target, the broad monetary aggregate to Cholesky one standard deviation shock from the operating target was analysed and presented. Likewise, the variance decomposition of the policy intermediate variable due to shocks from the operating instrument and other policy variables, and the objectives are presented and also analysed below.

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Accumulated Response to Cholesky One S.D. (d.f. adjusted) Innovations

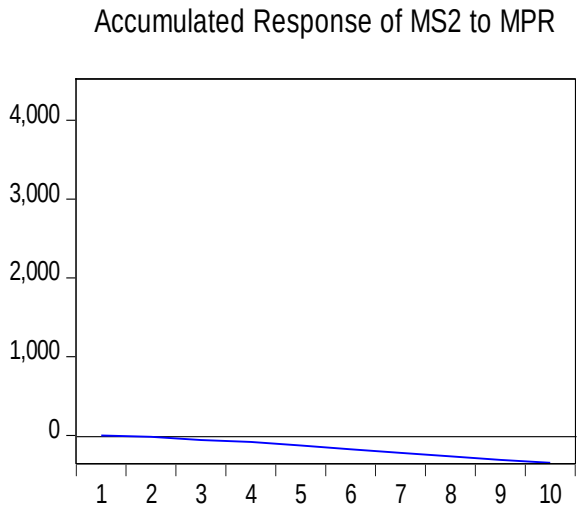

Figure 4.2

The figure shows that the response of the intermediate target, broad monetary aggregate, MS2 to one standard deviation innovation(shocks) in monetary policy rate (MPR) is significant after 3 quarters. From the figure, there is no noticeable impact of monetary policy operating instrument on the intermediate target instrument in the first and second quarters. It became significant after the 4th quarter. It shows that positive shocks, that is increase in the policy rate, will lead to fall in broad monetary growth rate, all things being equal after 3 quarters. This implies that the monetary policy operating target instrument has strong, lag influence on the intermediate variable. There is, therefore, a strong connection between the operating target and the intermediate target instrument. But the impact lag is too long.

In this case, using monetary policy rate, which is the operating instrument of the monetary authority, to target broad monetary growth rate may be ineffective in the short. The instrument, probably, will meet the target variable in the long run. The response is significantly below the zero line. In the 1st quarter, MS2 remain unchanged , but falls and continues decreasing throughout the 12 quarters

Table 4.8: Variance Decomposition of Monetary Policy Intermediate Instrument

Period	S.E.	GDP	PS	MPR	MS2	EXR
1	809.2553	3.972450	0.444011	0.266429	88.59456	0.000000
2	965.1988	4.727277	7.752419	0.189565	77.51933	0.000907
3	1146.593	5.015625	11.05247	0.162139	67.34785	0.165388
4	1315.246	6.639431	10.97266	0.123276	62.88423	0.197088
5	1484.775	8.546111	10.16253	0.114296	58.66989	0.224518
6	1668.106	11.09457	9.094029	0.110205	52.90059	0.278890
7	1867.608	14.02511	7.575308	0.102390	47.20463	0.339306
8	2083.360	17.27362	6.101072	0.094493	42.02146	0.323714
9	2319.345	20.67348	4.988873	0.084547	37.10279	0.281693
10	2576.854	24.07294	4.401123	0.072458	32.54566	0.235527
11	2854.171	27.23698	4.421792	0.060359	28.52468	0.192051
12	3148.010	30.02606	5.012167	0.049665	25.07320	0.165583

Source: E-view computer output

The table shows the variance decomposition of the monetary policy intermediate target instrument, the broad monetary aggregate, MS2. From the table, monetary policy rate, the operating instrument of the monetary policy strategy, MPR has very weak influence on the intermediate target variable, MS2. That is, MS2 is weakly endogenous or that the operating target instrument is strongly exogenous (the influence of the operating target on the intermediate target is weak). Another important and notable trend in the impact of the operating target on the intermediate target is that the influence fluctuates and faded in the long run. In the first period, the influence was 0.266%. It decreased to 0.189% in the second period; to 0.162% in the third period, and to 0.123% in the 4th period and continue till the 12th quarter when it became 0.049%. Thus, apart from being weak, the influence of the monetary policy operating instrument on the intermediate target is unstable and diminishes with time. This implies that with time, the operating target instrument losses impact on the intermediate variable

The effect of the past values of the monetary policy intermediate target on itself is strong, but unstable. The impact takes effect almost immediately, but fades slowly. It does not die out fast like the influence of the operating target on the intermediate target. The impact dies out as we go further. Price level variable, that is, Inflation has significant influence on the monetary policy intermediate target instrument. However, the influence is variable, and peaks after 3 quarters. It starts falling after the third quarters. GDP, that is, output, has strong impact on the intermediate target. Its impact is without lag and increases as the time periods increases. It increases throughout the twelve quarters. Thus, output gap has least exogeneity effect on the instrument. Exchange rate has insignificant impact on the intermediate variable.

4.7 Monetary Targeting Strategy and Price Stability

In this section, the impulse response of the monetary policy objectives due to Cholesky one standard deviation shock from the intermediate policy target instrument, that is, broad monetary growth rate, was analysed and presented. In addition, the fluctuations in the policy ultimate objective variables due to the policy variables and the other objective variable are presented and also analysed below. The emphasis here is on the variance of the policy objective variables caused by fluctuations in the monetary policy intermediate variable, MS2.

Accumulated Response to Cholesky One S.D. (d.f. adjusted) Innovations

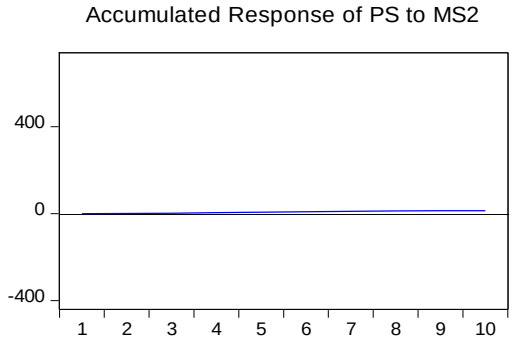

Figure 4.3

This figure presents the response of price inflation to monetary policy shocks. Price stability is the prime objective of monetary policy in Nigerian economy. The basic assumption of the monetary authority is that there is a stable relationship between monetary aggregates and macroeconomic variables, and therefore, monetary policy through shocks from monetary aggregate will produce a definite and predictable change in the price level. The blue colour in figure 4.3 shows the response of price level (PS) to monetary shocks. It reveals that monetary shocks have no significant influence on price level. The effect is not noticeable even after eight (8) quarters. It remains low throughout the ten (10) quarters. This signifies the presence of impact lag in monetary policy in Nigeria. Monetary policy shocks have no noticeable impact on price stability in both the short and long run. Therefore, using the strategy of monetary targeting to aim at controlling price level is not an optimal policy strategy for price stability. The presence of impact lag will render the strategy ineffective. The strategy has failed the second test of achieving price stability by its ineffectiveness on the monetary policy objective target of price stability.

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Table 4.9: Variance Decomposition of Price Stability Variable (LOGPS)

Period	S.E.	GDP	PS	UNEM	BOP	MPR	MS2	EXR
1	30.72943	13.67682	86.32318	0.000000	0.000000	0.000000	0.000000	0.000000
2	52.21401	24.35200	74.70355	0.071407	0.847780	0.003051	0.004596	0.017618
3	78.47404	26.07775	70.30294	0.212540	3.329848	0.007192	0.053145	0.016588
4	108.0927	27.00865	66.86514	0.208496	5.486380	0.011421	0.082076	0.337846
5	140.7195	27.09247	65.32506	0.126366	6.696459	0.035820	0.077392	0.646434
6	175.7343	26.80275	64.34411	0.165522	7.610416	0.064946	0.063156	0.949098
7	211.5577	26.02144	63.67861	0.431885	8.464610	0.097634	0.054910	1.250913
8	247.6716	24.78382	63.17487	1.035248	9.204289	0.138035	0.046831	1.616907
9	283.2743	23.28269	62.69939	2.048539	9.736214	0.185898	0.038988	2.008280
10	317.8988	21.58368	62.08883	3.572707	10.09763	0.236983	0.031803	2.388368
11	350.9483	19.75065	61.22511	5.645649	10.31013	0.289024	0.026139	2.753307
12	382.1117	17.84495	60.01971	8.293733	10.37257	0.341368	0.022285	3.105385

Source: E-view Computer output

Table 4.9 shows the forecast variance decomposition of price stability objective variable (LOGPS). From the table, one could see that price stability variable is affected more by past value of inflation gaps and output Inflationary gap or inflationary expectation is strongly endogenous to price stability. Inflationary gap has strong impact on price stability in Nigerian economy. The impact of inflationary gap on price stability is without lag and relatively stable throughout the ten periods. On the average, the impact is 61% per period. Output gap has weak exogeneity on price stability. This implies that output gap has strong influence on price stability. The impact of output gap on inflation is strong and stable at above 20% after the 1st quarter till the 10th quarter. The influence started declining after the 8th quarter. The variance of price stability variable due to output gap is variable, and smaller relative to the variance due to price expectations.

The monetary policy intermediate variable (MS2) has weak impact on price stability variable. Again, it has 0% impact in the 1st quarter and the impact fluctuates, reaching the maximum of 0.08% in 4th quarter. Exchange rate (EXR) and the monetary policy rate (MPR) instrument have strong exogenous influences on price stability. This implies that the contributions of these instruments to price stability variable variations are weak. These monetary policy instrument variables do not account for significant variations in the level and changes in price inflation in the economy

4.8. Granger Causality/ Block Exogeneity Test

The Granger Causality/Block Exogeneity Wald test was adopted to analyse the causal relationship between the four monetary policy objectives and monetary policy intermediate target instrument (MS2) variables. The causality examination is carried out individually by variable and then an equation for each one of our four objectives is analysed, and, one by one, they are used as the dependent variable of the equation, which is reliant on the other three independent variables. First, two hypotheses are checked, if the coefficient of each of monetary policy intermediate instrument is equal to zero and also if the joint-coefficients of all the independent variables are equal to zero. For both hypotheses' tests, we look at their p-values. If these are less than 5%, then there is a causality relationship among the variables under analysis.

In this study, the Granger causality/Wald Block Exogeneity test was employed to examine if shocks from the monetary intermediate instrument have any significant influence on changes in the level of the monetary policy ultimate target objective variables. That is, whether changes in monetary aggregate can bring about change in price stability, sustainable economic growth, balance of payment, and full employment level. Secondly, whether changes in the monetary policy operating target can bring about changes in the monetary policy intermediate target, broad monetary aggregate (MS_2).

That is, whether there is any significant relationship between the operating target and the intermediate target. The results of Granger Causality/Wald Block Exogeneity tests are presented as follows:

Dependent variable: D(MS2)

Excluded	Chi-sq	Df	Prob.
D(GDP)	4.789915	2	0.0912
D(PS)	11.85574	2	0.0027
D(BOP)	9.251725	2	0.0098
D(UNEM)	11.50980	2	0.0032
D(MPR)	**1.231381**	**2**	**0.5403**
D(EXR)	0.068162	2	0.9665
All	25.48157	12	0.0127

Dependent variable: D(PS)

Excluded	Chi-sq	Df	Prob.
D(GDP)	2.866340	2	0.2386
D(BOP)	10.07161	2	0.0065
D(UNEM)	0.426732	2	0.8079
D(MS2)	**1.564224**	**2**	**0.4574**
D(MPR)	0.903265	2	0.6366
D(EXR)	2.076488	2	0.3541
All	19.46043	12	0.0780

The causal relationship between monetary policy intermediate instrument (MS2) and the monetary policy objective of price stability is presented in Table. The result shows that the intermediate target instrument does not have any causal effect on price stability. This implies that the past values of the instrument do not have any predictable effect on price level in the economy. Likewise, all the other variables, apart from balance of payment do not have any influence on price stability in the economy. All the variable in the price stability model are not significant in predicting changes in the general price movement.

5. CONCLUSION

The study examined the Central Bank of Nigeria monetary policy operating strategy and the effect on the monetary policy objective of price stability. The aim of the study was to ascertain if the Central Bank of Nigeria monetary policy operating strategy is appropriate for achieving monetary policy objective of price stability in Nigerian economy.

The results from the analysis showed that the intermediate variable, broad monetary aggregate, responds marginally to shocks from the operating target. The response of the intermediate variable to the policy operating target is not noticeable and insignificant in the first quarter. From the variance decomposition, variation in the value of the operating target could account for less than 0.1 % variation in the value of the intermediate target after 12 quarters lags. It was also noticed that that the impact varies, beginning from slow but positive value until it thins off. To complete the transmission channel, the impacts of the intermediate target variable on the monetary policy ultimate target objective of price stability was examined There was no noticeable impact on price stability. In order words, the basic line of action, the connection between the operating instrument and the intermediate target is strong and stable, and the policy intermediate variable does not have any noticeable effect on of price stability variable.

The results from the analysis of the study data has proved that t monetary authority operating strategy, using monetary policy rate as the operating target and broad monetary aggregate as the intermediate, is not effective for achieving the monetary policy objective of piece stability in Nigeria. The operating target variable has lost its influence on the intermediate target which in turn lacks stable and significant effect on the monetary policy objective of price inflation.

Therefore, changing the monetary policy operating instrument, the monetary policy rate, will not produce any definite and predictable influence on price inflation. Using monetary policy rate to target the growth rate of broad monetary aggregate will not produce the targeted outcome. It becomes evident to conclude that monetary targeting strategy is no longer an optimal strategy for achieving price stability objective in Nigerian economy.

Several reasons were adduced earlier as the likely causes of the break in transmission from the operating instrument to the target instrument. One of the reasons is the increasing application information and communication technology in the financial system. This has indeed reduced transaction cost and made it easy and fast to substitute from one instrument into another. The opportunity cost of capital, the cost of waiting, which of course, is the interest rate, has fallen. Thus, the relationship between interest rate and monetary aggregate has reduced drastically. Using interest rate to target a particular monetary growth rate is misleading and ineffective as a strategy of achieving monetary policy objectives.

The magnitude of innovation in the financial system is another cause of the breakdown in transmission from the operating target instrument to the intermediate variable. Innovations in the financial system have expanded the monetary aggregate so much so that the traditional measure is no longer valid. Targeting monetary aggregate in the old measure will be narrow and ineffective. It therefore implies that monetary policy, even under certain controlled environment, may not achieve price stability. Achieving the controlled conditions is the basic challenge of using monetary targeting strategy to manage price volatility. Apart from the issue of stability of the money demand function, there are other issues such as efficiency of the financial system, time inconsistency, independency of the monetary authority, and transparency. These issues make the use of monetary targeting strategy for price stability a challenging exercise. In addition, these issues are sometimes, mutually exclusive. For example, should the monetary authority follow active or non –active rule? Following active rule will lead to missing the long-term price stability target. None active rule may be disastrous to the economy. Off course, the monetary authority will intervene to cushion the effect of some shocks in the economy. This little by little intervention will veer the monetary policy object from its long-term target. It puts the long-term objective at variance with the short-term reality. Again, we cannot have an independent monetary authority. This puts the choice of instrument, the instrument rule, and the operating strategy in danger of being suboptimal. Lastly, can we say have an efficient financial system to transmit monetary policy stimuli? Where these set of institutions are not in place, monetary targeting strategy becomes ineffective strategy (Taylor, 2003)

The conclusion from the analysis so far is that there is a break in the transmission of monetary policy shocks from the operating instrument to the intermediate target and intermediate target instrument cannot achieve the main objective of monetary policy in Nigeria. The current operating strategy is not appropriate for achieving price stability in Nigerian economy. Therefore, Central Bank of Nigeria should change its current operating strategy of monetary targeting to inflation targeting and be committed to maintaining price stability as its core objective of monetary policy in Nigeria.

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