

INDIRECT MONETARY POLICY REFORMS AND INFLATION DYNAMICS: EVIDENCE FROM NIGERIA

Gideon G. Goshit

Department of Economics University of Jos, Nigeria

E-mail: gideonqoshit@yahoo.com

Abstract

The maintenance of price stability is one of the principal objectives of macroeconomic management. Since the mid 1980s, Nigeria has embarked on monetary policy reforms, especially in respect of the instruments of monetary policy to improve the macroeconomic performance of the economy. This paper examines the impact of reforms in indirect monetary policy instruments on inflation trend in Nigeria between 1986 and 2012 using a multiple regression model. The result indicated that although changes in indirect monetary policy instruments were important determinants of inflation trend in Nigeria during the reform period, money supply and the banking sector's credit to the economy were the only effective and significant determinants of inflation trend. The study revealed that inflation trend was determined largely outside indirect monetary policy instruments in Nigeria during the reform period. This is an indication that inflation is not only a monetary phenomenon in Nigeria but also a combination of fiscal and structural factors. The paper therefore recommends that to improve the effectiveness of monetary policy in controlling inflation in Nigeria, Serious and adequate attention should be paid to the quantity of money supplied in the economy at all times by monetary authorities, monetary authorities need to develop an all-inclusive policy to have firm control over the money supply in the economy and Strengthen the regulatory and supervisory organs of the CBN in order to control the excess liquidity effectively in the economy.

Keywords: Indirect Monetary Policy, Reforms, inflation dynamics.

Introduction

Inflation is a social malady as well as a pervasive economic process whose effects are felt, to some degree, by every citizen and in all sectors of the economy. It is a problem that has often proved difficult to tackle largely because any meaningful attempt at combating it would entail a trade-off among other important macroeconomic and social objectives such as increased employment, economic growth and social safety nets. The achievement and

maintenance of a reasonable level of employment, an efficient use of resources, a tolerable balance of payments position, sustained economic growth and relatively stable prices constitute the main goals of macroeconomic policy. Among these goals of macroeconomic policy however, the one which directly impinges on the standard of living of the average individual is the goal of stable prices (Adeoye, 2007).

For most economies, the maintenance of price stability continues to be overriding objective of monetary policy. The emphasis given to price stability in the conduct of monetary policy is with a view to promoting sustainable growth and development as well as strengthening the purchasing power of domestic currency amongst others. The aggressive use of monetary policy as an instrument of economic management in Nigeria in recent years has raised a number of very important issues associated with the efficacy of monetary policy in a depressed economy. Monetary policy has been conceived in the last three years as a major management instrument in Nigeria. Therefore, the need to understand the dynamics of inflation is central to the success of monetary policy to ensure the achievement of price stability. The notion that monetary policy should affect inflation dynamics is an old one, dating at least to Friedman's dictum that inflation is always a monetary phenomenon. However, the causes of inflation vary from countries to countries. The serious concern about inflation in both developed and developing economies is primarily rooted in the general presumption that countries experiencing high inflation suffer low living standards (Adebayo, 2008). Therefore, every modern government strives to achieve low and stable inflation without inordinately sacrificing economic growth or destabilizing the economy. More so, there is growing evidence that high inflation could have disastrous effect on living standards especially in low-income economies like Nigeria where most people live on fixed incomes. Inflationary pressures as reflected in persistently rising prices have been an issue of concern in Nigeria over the years.

Prior to the introduction of Structural Adjustment Programme (SAP), the main instruments of monetary policy in Nigeria were

direct control instruments which comprised the imposition of credit ceilings on individual banks, interest rate regulation, and sectoral credit allocation, supplemented to varying degrees by cash liquidity ratio and requirements (Oduyemi, 1993). However, following the liberalization of the economy in 1986, monetary policy was largely changed from direct to indirect (market-based) instruments. The major indirect monetary policy reforms embarked upon since 1986 as highlighted by Odozi (1995), Oke (1995) and Mailafia (2007) among others include the Bank Rate (Credit Policy Reforms); the cash reserve requirement policy reform; the Liquidity Ratio Policy Reforms; the interest Rate Deregulation policy; Open market Operation Reforms; and the monetary policy rate (MRR) Reforms.

The objective of this paper is two-fold. First, to find out the causal relationship between money supply and inflation rate; and the direction of the causality. Second, to investigate empirically, the impact of these indirect monetary policy instruments on price stability (inflation rate) in Nigeria during the reform period (1986 -2012). To achieve these objectives, this paper has been structured into six sections with the introduction as section one. Section two is the theoretical and empirical review. Section three specifies the methodology of the study and the sources of data. Section four is the model specification and estimation. Section five is the presentation and discussion of the research findings. Section six forms the concluding part of the paper.

Theoretical and Empirical Review

Monetary policy refers to a combination of measures designed to regulate the value, supply and cost of money in an economy, in line with the expected level of economic activity. Typically, monetary management

deals with the control of money stock which is the intermediate target of policy. This broad objective may be translated into specific objectives such as price stability, sustainable economic growth, high level of employment and balance of payments equilibrium. These objectives are achieved through the use of appropriate instruments whose composition may vary from country to country, depending on the level of development of the economy (Ogwuma, 1997). Monetary policy influences the level of money stock and/or interest rate, that is, availability, value and cost of credit in consonance with the level of macroeconomic activity. Macroeconomic aggregates such as output, employment and prices are, in turn, affected by the stance of monetary policy through a number of ways including interest rate or money; credit; wealth or portfolio; and exchange rate channels (Akhtar, 1997 and CBN, 2011). The ultimate goal of monetary policy is to ensure the achievement of a consistency between the expansion in domestic liquidity and government's macroeconomic objectives of price and exchange rates stability, higher output growth, full employment of resources, balance of payment equilibrium, promotion of a sound financial system and sustainable growth and development. The achievement of this balance is paramount in the design of monetary policy, as an excess or shortage in the supply of money could either induce excess aggregate demand, resulting in higher inflation rate or induce stagnation thus retarding economic growth and development.

The primary objective of monetary policy is the realization of stable non-inflationary growth. This gives citizens confidence in the future value of their money, so that they can make sound economic and financial decisions. Low and stable inflation also helps to prevent inflationary boom and bust cycles that could

result in a recession and higher unemployment (CBN, 2011). Among the central issues in macroeconomics is the nature of short-term inflation dynamics. This matter is also one of the most fiercely debated, with few definitive answers available after decades of investigation (Gali and Gertler, (1999). In response to this challenge, important advances have emerged recently in the theoretical modeling of inflation dynamics. Nigeria has experienced all manner of inflationary episodes from creeping to moderate and from high to galloping. A considerable attention has been paid to providing explanations for the causes of this phenomenon. Theoretically, two main schools of thought exist in providing explanation for inflationary process. These are monetarist and structuralist school of thoughts. While the former holds that inflation is purely monetary phenomenon, the latter opines that inflation results mainly from government fiscal operations and from the gap between potential output and aggregate demand. Most empirical studies have followed this dichotomization with slight modification in providing empirical evidence for inflation in various countries.

Recent studies on inflation in Nigeria (e.g. Oyejide, 1972; Oke and Nwade, 1975; Ajaji and Teriba, 1982 and Fakiyesi, 1980) among several others, broadly agree on the key factors influencing the rate of inflation: money growth, income growth, and exchange rate movements but they do not concur on the relative importance of each of these factors as determinants of inflation. A study by Oyejide (1972) constitutes a pioneering attempt at providing an explanation of the causes of inflation in Nigeria, most especially from the structuralist perspective. Specifically, he examined the impact of deficit financing in propagating the inflation process in Nigeria and came out with the conclusion

that there was a very strong and direct relationship between inflation and various measures of deficit financing that were in use between 1957 and 1970. A corroborative study, with respect to the impact of monetary policy on inflation in Nigeria, was carried out by Oke and Nwade (1975). They fitted a single regression equation of money supply for monthly data for the period 1973-1977. Their result showed that an increase of N100 million in money supply led to 6.3 per cent increase in price level. Another study by Adeyeye and Fakiyesi (1980) regressed prices on money stock and government expenditure. They concluded that the evidence supports their thesis that inflation in Nigeria was due to the factors of money supply and government expenditure.

A more general study has been carried out by Ajayi and Teriba (1982) covering the period 1960-1972. Their result showed that income, measured by real GDP, provides the best explanatory evidence for changes in the price level. Thus, while they found a positive relationship between the GDP and price changes, they indicated that the speed at which the impact of changes in money supply that was felt on the price level was very slow.

To underscore the importance of understanding the inflationary process in Nigeria, a conference on the Nigerian inflationary process was organized by the Nigerian Institute of Social and Economic Research (NISER) Ibadan, in 1974. In general, the findings of some of the key presentations suggested that neither monetary nor structural phenomena alone explain the Nigerian Inflation (Olamola, 2009). One striking conclusion from this conference was that a combination of both factors precipitates the inflationary process in Nigeria. Other interesting studies on Nigeria's inflation include Adeyeye and

Fakiyesi (1980), and Ojowu (1994). Specifically, Ojowu(1994) used the modern time series econometric technique of co-integration and error correction mechanism (ECM). The study showed that the Nigerian inflation seems to find explanation in both monetary and structural factors and that official and parallel market exchange rates exert an upward pressure on the general price level.

Ajayi (1984) and Asogu (1998) used simple econometric model to determine the relative effects of monetary factors and structural elements on the general price level. The variables included in the model were money supply, real output and exchange rate (official). The authors concluded that the excess domestic demand, generated by expansionary fiscal and monetary policies, has been the principal factor underlying the rising inflation rate in Nigeria. Ojowu (1994) also made a preliminary investigation on the influence of domestic money supply and exchange rate on the rate of inflation in Nigeria. A simple monetarist's model of inflation which captured growth in money supply (M_1), real output (measured by real GDP), expected rate of inflation and exchange rate changes as variables were employed. The results of the study indicated that money supply has a strong impact on price inflation. The overall conclusion from this study was that a combination of monetary factors and structural influences determine price movement in Nigeria.

On the whole, all these empirical studies on inflation in Nigeria have not addressed the issue of the impact of indirect monetary policy reforms on inflation in Nigeria. Specifically, the extent of the impact of the monetary policy reforms (indirect monetary policy instrument changes) on inflation has not been determined in Nigeria. This paper therefore

seeks to fill this gap, by investigating the impact of indirect monetary policy instrument changes on inflation rate in Nigeria since the adoption of the SAP in 1986.

Methodology and Sources of Data

Monetarists regard inflation as a purely monetary phenomenon, originating from, and sustained by expansionary monetary and fiscal policies. The control of inflation, therefore, requires as a necessary and sufficient condition, the control of money supply. To measure the impact of relevant explanatory (monetary policy variables) on inflation rate, the study adopts the Harberger's pure monetarist model of inflation developed in 1963 with modifications in line with Nigerian economy. The Ordinary Least Squares (OLS) method is employed in the estimation of the model to measure the impact of indirect monetary policy instruments on inflation rate in Nigeria from 1986 to 2012. Procedurally, the unit root test was carried out to obtain results of the stationarity of the variables and the Augmented Dickey- Fuller (ADF) was used to test for the presence of unit root or stationarity of the data employed in this analysis. The causality test was also conducted to find out the causal relationship between the dependent (inflation rate) and the independent variables (monetary policy variables) and the direction of the causality. The data for this study were sourced from the Central Bank of Nigeria (CBN), National Bureau of Statistics (NBS), the Nigerian Institute for Social and Economic Research (NISER) and the Nigerian Economic Society (NES) publications.

Model Specification, Estimation and Discussion of Results

The achievement of macroeconomic goal of price stability or low inflation in an economy could be through the adoption of restrictive or dear monetary policy in order to lower aggregate consumption and investment by increasing the cost and availability of bank credit. The Central Bank might do so by selling government securities in the open market, raise reserve requirements of Central Bank, raise the discount rate, and control consumer and business credit through selective measures. This measure increases the cost and availability of credit in the money market and thereby controls inflationary pressures (Nzekwu, 2006). Thus price stability in an economy could be expressed as a function of monetary policy variables such as the open market operation (OMO), money supply, interest rate, the Central Bank reserve requirements, the central bank discount rate and the banking sector's credit to the economy. Thus mathematically it is expressed as:

$$\text{INFR} = f(\text{MS}, \text{INTR}, \text{OMO}, \text{CBRR}, \text{CBDR}, \text{BLQR}, \text{BSCE},) \dots \dots \dots (1)$$

Where;

INFR = inflation Rate

MS = Money Supply

INTR = Interest Rate

OMO = Open Market Operation

CBRR = Central Bank Reserve Requirement

CBDR = Central Bank Discount Rate

BLQR = Bank Liquidity Ratio

BSCE = Banking Sector's Credit to the Economy

But we know that open market operation constitutes part of the money supply in the economy. Therefore, the price stability equation can be modified, thus;

$INFR = f(MS, INTR, CBRR, CBDR, BLQR, BSCE, \dots) \dots \dots \dots (2)$

This function can be expressed in a log-linear form as:

$$INFR_t = \beta_0 + \beta_1 \log MS_t + \beta_2 \log INTR_t + \beta_3 \log BARR_t + \beta_4 \log CBDR_t + \beta_5 \log BLQR_t + \beta_6 \log BSCE_t + u_t \dots \dots \dots (3)$$

The a priori signs of the parameters are; $\beta_1, \beta_6 > 0$; $\beta_2, \beta_3, \beta_4, \beta_5 < 0$. That is, increase in money supply (Ms) and banking sector's credit to the economy (BSCE) equally leads to increase in inflation rate in the economy.

On the other hand, interest rate (INTR), bank reserve requirement (BARR), central discount rate (CBDR) and bank liquidity ratio (BLQR) are inversely related to inflation rate in the economy.

Presentation of Empirical Results

Unit Root (Stationarity) Test Results

The time series behaviour of each of the series using Augmented Dickey-Fuller (ADF) is presented in table 2 below.

Table 2: ADF Unit Root Test Results

SERIES	ADF STATISTIC	CRITICAL VALUES	ORDER OF INTEGRATION
MS	27.89808	-3.769597***	I(0)
$\Delta INFR$	-3.048815	-3.012363**	I(1)
INTR	-4.601828	-3.711457***	I(0)
CBDR	-2.952757	-2.629906*	I(0)
BARR	-2.705110	-2.642242*	I(0)
$\Delta BLQR$	-5.621599	-3.724070***	I(1)
BSCE	4.585171	-3.808546***	I(0)

NOTE: (i) *** 1%, **5%, *10% Significant level

(ii) Δ Represent the first difference Operator

Source: Author's computation from Eviews Version 7.0

The time series data were tested for stationarity using the ADF test and the result showed that MS, INTR, CBDR, BARR and BSCE were integrated of order I(0) while INFR and BLQR were integrated of order I(1). This means that MS, INTR, CBDR, BARR and

BSCE are stationary at level, while INFR and BLQR are stationary after first difference.

The Johansen co-integration test was also conducted to obtain the number of co-integrating equations and the result is presented in table 3 below.

Table 3: Johansen Co-integration Test Results

HYPOTHESIZED NUMBER OF EQUATIONS	EIGEN VALUE	TRACE STATISTICS	5% CRITICAL VALUE	PROB**
$r = 0^*$	0.994221	284.1093	125.6154	0.0000
$r \leq 1^*$	0.922741	155.2728	95.75366	0.0000
$r \leq 2^*$	0.816405	91.25819	69.81889	0.0004
$r \leq 3^*$	0.655700	48.88263	47.85613	0.0399
$r \leq 4$	0.484027	22.22660	29.79707	0.2861
$r \leq 5$	0.198235	5.684102	15.49471	0.7325
$r \leq 6$	0.006404	0.160620	3.841466	0.6886

Trace test indicates 4 co-integrating equations at 5% significant level

*denotes rejection of the hypothesis at the 5% significance level

**Mackinnon-Haug-Michelis (1999) p-Values

Source: Author's Computation from Eviews Version 7.0

The above table shows that there are four co-integrating equations at 5% significance level. This result implies that there exist a long-run relationship between inflation rate (price level) and indirect monetary policy instruments in the economy. The variables included in the co-integrating vector were INFR, MS, INTR, CBDR, BARR, BLQR and BSCE.

Causality Test Result

Accordingly, Granger causality tests were conducted to find out if, indeed, changes in money supply (MS), interest rates (INTR), Central Bank Reserve requirement (CBRR), Central Bank discount rate (CBDR), bank liquidity ratio (BLQR), and the banking sector's credit to the economy (BSCE) have, each been a cause of changes in the general price level (inflation rate) during the reform period in Nigeria or inflation rate was the cause of changes in these monetary policy variables. The Granger causality test result is presented in table 4 below.

Table 4: Pair-wise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
MS does not Granger Cause INFR	25	0.55289	0.0234
INFR does not Granger Cause MS		0.61071	0.9768
CBDR does not Granger Cause INFR	25	4.21794	0.0296
INFR does not Granger Cause CBDR		1.69835	0.2083
BSCE does not Granger Cause INFR	25	0.61982	0.5481
INFR does not Granger Cause BSCE		0.35776	0.7036
BLQR does not Granger Cause INFR	25	1.59046	0.2286
INFR does not Granger Cause BLQR		0.42595	0.6589

The OLS Regression Result of the Model

The model was estimated to determine the impact of indirect monetary policy instruments on price stability (inflation rate) in Nigeria during the reform period (1986-2012). The OLS result of the estimated model is presented in table below 5.

Table 5: OLS Regression Results of the Model

Dependent Variable: LOG(INFR)

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.397807	4.131398	0.822435	0.4205
LOG(MS)	0.732265	0.344481	2.125704	0.0462
LOG(INTR)	-1.028745	0.684480	-1.502959	0.1485
LOG(CBDR)	-0.163165	0.706436	-0.230970	0.8197
LOG(BSCE)	0.778126	0.386418	2.013693	0.0577
LOG(BARR)	-0.246255	0.253754	-0.970447	0.3434
LOG(BLQR)	-1.335719	0.842566	-1.585300	0.1286
R-squared	0.528145	Mean dependent var		2.732104
Adjusted R-squared	0.386589	S.D. dependent var		0.754431
S.E. of regression	0.590874	Akaike info criterion		2.003987
Sum squared resid	6.982651	Schwarz criterion		2.339945
Log likelihood	-20.05383	Hannan-Quinn criter.		2.103885

F-statistic	1.730985	Durbin-Watson stat	1.89289
Prob(F-statistic)	0.111830		

Source: Author's Computation from Eviews Version 7.0

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.397807	4.131398	0.822435	0.4205
LOG(MS)	0.732265	0.344481	2.125704	0.0462
LOG(INTR)	-1.028745	0.684480	-1.502959	0.1485
LOG(CBDR)	-0.163165	0.706436	-0.230970	0.8197
LOG(BSCE)	0.778126	0.386418	2.013693	0.0577
LOG(BARR)	-0.246255	0.253754	-0.970447	0.3434
LOG(BLQR)	-1.335719	0.842566	-1.585300	0.1286
R-squared	0.528145	Mean dependent var		2.732104
Adjusted R-squared	0.386589	S.D. dependent var		0.754431
S.E. of regression	0.590874	Akaike info criterion		2.003987
Sum squared resid	6.982651	Schwarz criterion		2.339945
Log likelihood	-20.05383	Hannan-Quinn criter.		2.103885
F-statistic	1.730985	Durbin-Watson stat		1.89289
Prob(F-statistic)	0.111830			

Source: Author's Computation from Eviews Version 7.0

Discussion of Results

The causality result shows that money supply (MS) granger causes inflation (INFR) given the probability statistic 0.0234 compared to the F-statistic 0.55289. It also indicates that central bank discount rate (CBDR) granger causes inflation rate (INFR) at 5% level of significance given the values of F-statistic and probability as 4.21794 and 0.0296 respectively. However, it is clear from the table that there is no causal relationship between banking sector credit to the economy and inflation rate; and between bank liquidity ratio and inflation rate during the reform period. Therefore the direction of the causal relationship that exist between inflation rate and indirect monetary policy instruments is from money

supply to inflation rate, and from central bank discount rate to inflation rate. This means that there is a one-way causality that exists between the variables. These are shown as;

MS → INFR

CBDR → INFR

The regression result shows that all the variables are appropriately signed. That is, they all agree with their respective a priori expectations. However, it is glaring from the result that it is only money supply and banking sector's credit to the economy that were statistically significant at 1%. This implies that both money supply and banking sector's credit to the economy were important determinants of price stability in the economy during the reform period. The

positive coefficient of money supply means that a unit increase in money supply led to a 73% increase in inflation rate in the economy. The positive coefficient of the banking sector's credit to the economy implies that a unit increase in the banking sector's credit to the economy led to 78% increase in inflation rate in the economy during the reform period. The negative coefficients of Central Bank discount rate, interest rate and bank reserve requirements implies that a unit increase in Central Bank discount rate, interest rate and bank reserve requirements led to 16%, 10% and 25% reduction respectively in inflation rate. The negative relationship between inflation rate and interest rate; and bank reserve requirements is also consistent with economic theory. The positive coefficient of bank liquidity ratio also implies that a unit increase in bank liquidity ratio also led to a 13% reduction in inflation rate in the economy. The measure of goodness of fit (Adjusted R-Squared) shows that the model performed

poorly. The adjusted $R^2 = 0.386589$, implying that only about 39% variation in inflation rate were explained by the changes in the independent variables. This means that there could be other variables outside this model that could account better for price stability in the economy during the reform period. The result also revealed that the variables were jointly statistically insignificant at 1% level given the value of probability (F- statistic 0.111380). The Akaike information Criterion (AIC), Schwarz Bayesian Criterion (SBC) and Hannan-Quinn Criterion (HQC) were all at their minimum. Therefore the model is said to be properly and adequately specified. The Durbin Watson statistic (1.89289) also showed the absence of serial autocorrelation. The plots of the stability test results (CUSUM) is given in figure 1. The CUSUM plotted against the critical boundary of 5% significance level showed that the model is stable over time.

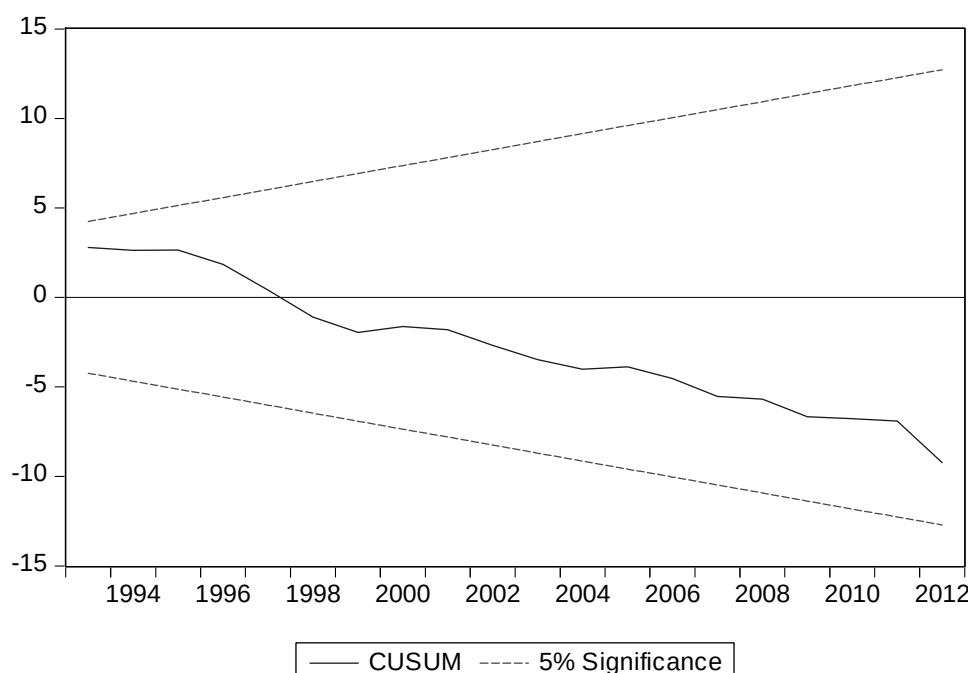


Figure 1: Stability Test Result for the Price Stability Equation

The stability test for the price stability equation revealed that the CUSUM is within the bound at 5%. This implies that the estimated model is stable and reliable for future forecast.

Conclusion and Recommendations

The findings from this study has revealed that money supply and banking sector's credit to the economy were the major determinants of price stability during the reform period. It was also found that interest rate, central bank discount rate, bank reserve requirements and bank liquidity ratio, plays an insignificant role in maintaining price stability. In view of these developments, the paper recommends the following:

- i. Serious and adequate attention to be paid to the quantity of money supplied in the economy at all times by monetary authorities. The estimated model has evidently shown that money supply is an active determinant of inflation rate in Nigeria during the reform period. Therefore, the government needs to reassert control over money supply in the economy. By implication, the conduct of monetary policy in the economy must take into consideration the importance of money supply at all points in time in controlling economic recession and inflationary situations in Nigeria. The conduct of monetary policy therefore, should give adequate attention to the quantity of money supplied to the economy so that it does not have an over bearing effect or limited effects on macroeconomic performance indicator in Nigeria.
- ii. Monetary authorities need to develop an all-inclusive policy to have firm control over the money supply in the economy. This study has shown that the monetary authorities could not control excess liquidity effectively in the economy through the bank reserve and liquidity ratio. That is, bank reserve and liquidity ratio were found to be ineffective in influencing inflation rate in the economy. It is therefore imperative for the monetary authorities to recognize the existence of the huge volume of money outside the control of the formal financial and banking sectors, large informal credit and exchange markets in Nigeria. The existence of large informal credit in Nigeria has a lot of implications on the transmission mechanisms of monetary policy. For instance, in the short run, a chain of speculative activities, invariably undermine the efficiency of monetary policy instruments. It is therefore imperative for the monetary authorities to develop an all-inclusive policy that would effectively bring the activities of the informal financial money lenders and institutions under the control of the monetary authorities. It is also recommended that such a policy or policies should have direct effect on the lending ability of individuals and institutions that operate as informal money lenders in the economy. This would enhance the potency of reserve requirements and the liquidity ratio.
- iii. Strengthening of the regulatory and supervisory Organs of the CBN. In order to control the excess liquidity effectively in the economy, there is also need for the CBN to strengthen its regulatory and supervisory organs to be proactive in

overseeing the activities of the commercial banks in terms of compliance with CBN banking rules and regulations. There should be strict and close monitoring of the commercial banks in terms of compliance with CBN's directives on reserve requirements and liquidity ratio. The CBN should be able to sanction commercial banks that flawed the CBN's directive in that direction. This is hoped to make the bank reserve requirements and bank liquidity ratio more effective as indirect instruments of monetary policy in the economy.

Conclusion

The paper has provided evidence on the impact of indirect monetary policy reforms of on inflation rate in Nigeria using time series data for period between 1986 and 2012. The paper discovered that while money supply and the banking sector's credit were effective in determining inflation trend in Nigeria during the reform period the rest of the variables included in the model were not effective. The paper notes that there could be other determinants of inflation trend outside the model indicating that inflation is not only a monetary phenomenon in Nigeria but also fiscal and structural factors.

References

- Adebayo, S.A. (2008). Nigerian Recent Inflationary Experience: Implications for Policy Approaches. *International Journal of Economic and Development Issues*. Vol.7, No. 1. Pp.84-87.
- Adeoye, B. W. (2007). Impacts appraisal of monetary policy and fiscal policy reforms on macroeconomic performance in Nigeria, *Union Digest*, 11 (3 & 4) 9:4-96.
- Adeyeye, E.A. & Fakiyesi, T.O. (1980). Productivity Prices and Incomes Board and Anti Inflation Policy in Nigeria. In the Nigerian Economy under Military, *Proceedings of the 1980 Annual Conference of the Nigerian Economic Society*, Ibadan.
- Ajayi, S.I. & Teriba, O. (1980). Inflation in Nigeria: Domestic or Imported. Commissioned Paper for Productivity, Prices and Incomes Board, January.
- Ajayi, S. I. (1984). An Econometric Case study of the Relative importance of Monetary and Fiscal policy in Nigeria. *Bangladesh Economic Review* vol.2 (2): 559 – 576.
- Asogu, J. O. (1998). An Econometric Analysis of the Relative Potency of monetary and fiscal policy in Nigeria. *CBN Economic and Financial Review* vol. 36 (2): 32 – 48.
- Ojowu, O. (1994). Exchange Rate depreciation and the structure of Sectoral Prices in Nigeria under an alternative Pricing Regime, 1986-89. AERC Publications: Research Paper No.25
- Akhtar, M.A. (1997). Understanding Open Market Operations, Public Information Department, Federal Reserve Bank of New York .
- Central Bank of Nigeria (2011). Monetary Policy Review. July – Dec 2010. Pp.64-65.
- Central Bank of Nigeria (2011). Understanding monetary policy Series, Series No.1: what is Monetary Policy? Central Bank of Nigeria, Abuja. January. Pp. 4-14.
- Fashoyin, T. (1984). *Incomes and Inflation in Nigeria*. Longman Nigeria Limited. Pp.44-45
- Gali, V. S. and Gertler, J. T. (1999). *Inflation in the developing countries: An Uno Approach*. London. 451-452.
- Mailafia, O. (2007). Sustaining Nigeria's Macroeconomic Policy Reforms. In: Akande S.O. and Olomola, A.S. (ed); *Consolidating and sustaining the Gains of Reforms in Nigeria. Proceedings of a workshop, Nigerian Institute of Social and Economic Research (NISER)*.
- Nzekwu, G. (2006). Exchange Rate stability and Poverty Reduction in Nigeria. *CBN Bullion* vol.30 (3): 56.
- Oduyemi, O. S. (1993). Open Market Operations as an Instrument of monetary Policy in Nigeria: Administration, Problems and Prospects. *CBN Economic and Financial review* vol.31(1) : 4 – 6.
- Odozi, V. (1993). Current Monetary and Banking Policies in Nigeria and the Prospects in the third Republic. *CBN Economic and financial Review* vol.21(3): 34 – 35.
- Oke T. & Nwade F. (1975). An Econometric Analysis of the effectiveness of monetary in Nigeria. *CBN Economic and Financial Review* vol. 12(2): 32 – 40.
- Ogwuma, P. (1997). An effective Monetary Policy for Nation Building. *CBN Bullion*, Vol. 21 No.3, July/September. Pp. 3-4.
- Oke, B.A. (1994). Open Market Operations (OMO): Principles, Mechanism and Operation Guidelines. Paper Presented at the Open Market Operations Course Organized by the Financial Institutions Training Center at Gateway Hotel, Ota, 5-8th April.
- Olamola, P.A. (2009). The persistence of Inflation in Nigeria: A Fractionally Integrated (ARFIMA) Approach. In: A. Adenikinju, D. Busari & S. Olofin (eds), *Applied Econometrics and Macroeconomic Modeling in Nigeria*. Ibadan University Press. Pp.196-197.
- Oyejide, T.A. (1972). Deficit financing, inflation and capital formation: An analysis of the Nigerian experience, 1957-1970. *Journal of Economic and Social Studies*. 27-43.