Effect of Monetary Policy Instruments on the Performance of Nigeria's Financial Market

Sakariyahu, Ola Rilwan *
oladejiridwanullahi@yahoo.com; +234-7039295417
(Corresponding Author)

Ibrahim, Wasiu Oluwatoyin *
wasbro@gmail.com; +234-8082199768

&

Abdulmumin, Biliqees Ayoola
bilbash62@gmail.com +234-8063092997
*Department of Finance, University of Ilorin, Ilorin, Nigeria

Abstract

A significant tool for economic management is the monetary policy. The monetary policy of any nation is a combination of packages channelled towards achieving certain macroeconomic objectives. These objectives include economic growth, full employment, price stability and favourable balance of payment. The achievement of these objectives however depends on the strength and depth of the nation's financial market. This study examines the effect of monetary policy of the Nigerian government on its financial market. Secondary data between 1981 and 2016 were used and the dependent variables adopted are all share index and credit to private sector (CPS), both standing as a proxy for money and capital markets respectively while the independent variables used are monetary policy rate, broad money supply (M2) and liquidity rate; the trio representing monetary policy instruments. The findings of the study show that monetary policy instruments of the Nigerian government have varying degrees of impact on the performances of both the money and capital markets. Based on the findings, the study recommends that government through the regulatory authorities should cautiously avoid discretionary policies that might affect lending rate; otherwise investors' apathy would mar the developmental strides already witnessed within the market.

Keywords: Monetary policy, money market, capital market, economic management, regulators

JEL Classification: E44, E52

1.0   Introduction

Nations world over, are majorly concerned with the efficient management of their economies. A significant tool adopted in this regard is the monetary policy; which involves the use of monetary instruments to direct and control economic activities within the country. These instruments are geared towards achieving two motives: expansionary or contractionary motive. An expansionary policy includes the reduction of interest rate with the aim of rapidly increasing total supply of money in the economy. This process is principally initiated by the central bank through the purchase of government securities from existing holders, thereby creating surplus funds within the

economy, encouraging investment and thus generating employment (Ajie & Nenbee, 2010). Contractionary policy on the other hand is aimed at gradually reducing total money supply by increasing the interest rate. This action is also conducted by the central bank by selling government securities to raise funds from the general public, thereby decreasing total money in circulation and thus combating inflation (Francis, 2010).

Generally, the formulation and implementation of monetary policy are conceived from the angles of money supply and availability of credit in the economy. Masha (2004) observed that the traditional and developmental functions of central bank are effectively carried out through the deposit money banks with the aid of the instruments of monetary policy. The reserves of the banks are influenced by the Central Bank through the use of open market operations, cash reserve requirement and liquidity ratio. These instruments affect the credit operations of the banks and ultimately influence the cost and availability of funds available for lending.

Primarily, the monetary policy of any nation is a combination of packages channelled towards achieving certain macroeconomic objectives. These objectives include: economic growth, full employment, price stability and favourable balance of payment. The achievement of these objectives however depends on the strength and depth of the nation's financial market. The financial market is a well-defined complex environment structured for the sale and purchase of financial securities. Such financial securities may be issued or subscribed to by both government and private institutions. Financial market is made up of money and capital markets,

both designed for short and long term securities respectively.

On a quarterly basis, monetary authorities review existing guidelines or formulate new ones that are geared towards efficient management of the economy. The policy variables are designed in a way as to ensure optimal performance of all sectors, particularly the financial sector of the economy. However, analysts have observed that policy guidelines of monetary authorities create conflicting objectives and performances between the components of the financial market (that is money and capital market operators). For instance, Ezinne (2012) explains that the effect of monetary policy (e.g. interest rate) on investment securities such as equity prices and asset valuation ultimately transmits to other sectors of the economy. When the central bank adjusts monetary policy rate, it affects market determined interest rates in the money market and asset prices in the capital market. If the interest paid by banks to depositors is increased, it will increase patronage as investors will save more with the banks at the expense of the capital market. Furthermore, it will lead to a decrease in foreign portfolio investment in the economy while promoting domestic investments channelled through savings mobilization.

Although several researches and debates have been conducted on the performance of monetary instruments towards economic growth, only little efforts have attempted to show its impact on the Nigerian financial market. For instance, Sourial (2002) opines that the response of the financial markets towards monetary policy depends on market efficiency and the degree of development of both financial institutions and equity culture in the market while Francis (2010)

concludes that monetary policy instruments influence activities of the financial institutions in the capital market. The inconsistent outcomes of these few studies have made this current study imperative in a bid to bridging the gap of disparity in economic literature on the effects of monetary policy instruments on financial market performance in Nigeria.

2.0 Literature Review

This section of the study discusses the interplay between monetary policy instruments and financial market development from the angles of related concepts, theories and available empirical evidences.

2.1 Conceptual Issues: Monetary Policy and Financial Market

Adekanye (2010) describes policies as a set of deliberate actions or guidelines providing solutions to some existing or potential problems. Monetary policy can thus be described as those devices employed by monetary authorities to provide solutions to economic issues. These solutions are designed around factors influencing money supply, allocation and cost of credit to the economy (Adekanye, 2010); while the economic issues include unemployment, price instability and exchange rate.

According to Onyido (1993), monetary policy is applied to influence the availability and cost of credit in order to control the money supply policy. Generally, this action is taken by the Central Bank by using tools/instrument at its disposal to influence monetary conditions; particularly, the quantity and supply of money in the economy with the aim of achieving macroeconomic goals.

Central Bank of Nigeria (2011) defines monetary policy as a combination of measures designed to regulate value supply and cost of money in an economy in consonance with the level of economic activities. Furthermore, monetary policy can be described as those government actions deliberately designed to influence the behaviour and trends of variables within the monetary sector with a view to achieving predetermined macroeconomic goals.

According to Ezinne (2012), monetary policy refers to the aggregate steps and guidelines stipulated by monetary authorities to influence directly or indirectly both the supply of money and credit to the economy and the structure of interest rate for economic growth, price stability and balance of payment equilibrium. To further buttress his position, Ezinne (2012) asserts that the CBN is empowered by decree 25 of 1991 Act, to formulate and implement monetary policy in Nigeria, in consultation with the ministry of finance, subject to the approval of the President.

Historically, the macroeconomic objectives of monetary policy include full employment (or a low unemployment rate), economic growth (or a steady high output growth), price stability (or a low inflation rate), and favourable balance of payment (or a stable exchange rate). These goals are usually achieved by the monetary authorities of a nation (central banks) through the use of monetary policy instruments. These instruments, though different from country to country, usually include open market operations (OMO), changes in discount/bank rate (both of which determine the monetary base), and required reserves (the minimum reserves the commercial banks must hold against the public's deposit with them) (CBN, 2011). The attainment of these goals will result into the country achieving both

internal and external balance of trade and payment.

Jhingan (2012) also affirms that most countries align their monetary policies with the foregoing objectives while asserting that the foremost of these objectives is full employment. It is most important not only because unemployment leads to wastage of potential output, but also because self respect, esteem and social standing are lost in the face of unemployment. In fact, unemployment leads to and breeds poverty within the society.

Price stability is also a principal objective of monetary policy as it involves stabilizing the price level. Fluctuating prices are inimical to an economy and pose threats to investors. This is because when prices fall and rise intractably, they bring unnecessary loss to some and undue advantage to others (Jhingan, 2012). Hence, Central Bank of Nigeria pursues a monetary policy aimed at stabilizing prices in order to eliminate economic injustice, reduce income inequalities and attain economic stability (CBN, 2011). Jhingan (2012) opines that achieving a policy of price stability can be attained from two perspectives. First is to pursue a counter cyclical monetary policy in periods of recession and second is to adopt a stringent monetary policy during boom in order to forestall inflation.

Achieving economic growth is also a vital objective of monetary policy. This is achieved when a country experiences a steady increase in production over a long period of time such that its real per capita income improves. Essentially, economic growth is incomplete until it leads to improved standard of living of the people and even wealth distribution.

Balance of payment being a critical objective of monetary policy as explained by Adegbite (2007) occurs when a country accumulates more receipts than payments compared to its trading partners. This situation puts the country in a surplus position and helps to preserve the value of its currency in the international market. Moreover, a deficit in the balance of payment implies an outflow of monetary or material resources which affects the stability of the country's reserves.

A financial market is a platform for financial transactions. It is a system which provides an avenue for people to meet online, real time, to exchange financial valuables and securities at little transaction costs and at prices that reflect demand and supply (Fama, 1970). In other words, monetary authorities implement monetary policies by availing themselves of the existence of the financial market. Monetary instruments are channeled through the financial market with a view to controlling the quantum of money in circulation, the availability of loanable credits and the direction of investable funds. According to Kohn (1999), investors avail themselves of the numerous opportunities in the financial market by investing their money on a certain date in anticipation of future returns.

The Nigerian financial market can be specifically grouped into money and capital markets (Obademi, 2010). A platform which provides short term investment and trading opportunities to financial market dealers is the money market. Financial assets traded in this form of market usually span not more than a year. Such instruments are mostly created to cater for the liquidity needs of investors and dealers. They include

money at call, bills discounting, commercial papers, time deposits and treasury bills.

On the other hand, capital market is an avenue for trading financial instruments with long term maturity periods. Here, companies and government avail themselves of capital or loans that are repayable over a long period of time at little cost. Investors in this market therefore trade in varying maturity of financial instruments such as bonds, development stock, industrial loans, debentures, preference stocks and ordinary shares. According to Mbat (2001), capital market creates an enabling access to a variety of financial instruments that span for longer years based on investors' preference for risk and liquidity. Although monetary authorities do not directly channel monetary instruments via the capital market, implementation of monetary policies nonetheless has the potential to influence the activities of the capital market. Technically, the essence of the capital market is to compliment the functions of the money market. This is achieved by providing alternative long term capital source to existing and prospective investors while increasing the quantity and quality of investments within the economy. The capital market encourages savings by pooling funds from individuals and firms and channeling same to the users of funds at an agreed or market determined rate of return. Meanwhile, the money market renders similar opportunities for investors; in addition to an attractive rate of return, low or no risky atmosphere and within a shorter period. Hence, when monetary variables are adjusted by the monetary authorities, particularly the monetary policy rate, it ultimately impacts on the activities of the capital market.

2.2 Theoretical Framework

In this study, rational expectations theory and quantity theory of money are used to explain the relationship between monetary policy and financial market development.

2.2.1 Rational Expectations Theory

The theory of rational expectations was first espoused by John (1961) and later became influential when it was used by Lucas (1970). The theory suggests that individuals and institutions influence the current and future state of the economy based on information at their disposal, past experiences and rational outlook. Thus, information surrounding the monetary policy direction of authorities can be predicted and used to determine future investment outcomes. Hitherto, many classical economists, including John Maynard Keynes had postulated that government policies influenced people's decisions; however, John (1961) used the rational expectations theory to explain that economic outcomes depend largely on people's expectations. In principle, rational expectations theory assume that before monetary policy measures are taken by authorities, investors in the financial market would have adjusted and thereafter, react accordingly. Rational expectations theory therefore becomes germane for this study as it reflects the possible influence monetary instruments could have on the performance of the financial market.

2.2.2 Quantity Theory of Money (QTM)

This theory was initially propounded by Fisher (1911) and later comprehensively described and criticized by Keynes (1936). The theory explains the effect of money supply on changes in general price levels. In other words, QTM hypothesizes that general price level has a direct relationship between the quantity of money in an economy and the price level such that an increase in money supply could result to inflationary pressure on the prices of commodities.

QTM hypothesizes two facts; first and critical aspect is that it de-emphasizes the impact of interest rate on the demand for money, while the second aspect emphasizes that an increase in money supply does not necessarily translate to more economic output. Thus, rather than encourage increase in supply of money, the theory advocates a consistent adjustment in money supply in order to correct anomalies in the general price level. This implies that, the rate of inflation in the economy is entirely due to changes in the money supply. We therefore adopt this theory to ascertain whether changes in money supply would translate to improved performance in the Nigeria's financial system; an improved financial system ultimately leads to increased productive capacity, which is economic growth.

2.3 Empirical Evidences

A plethora of studies have delved into examining the relationship between monetary policy and capital market performance. Efforts are made under this section to examine some of the available empirical studies.

Mukherjee and Naka (1995) examined the relationship between stock prices and several macroeconomic variables which include exchange rate, money supply, inflation rate and interest rate using Tokyo stock market as a case study. The study used data ranging from January 1971 to December 1990; data were analyzed using vector error correction model and the result was that there exist a positive relationship for all other variables except for inflation and interest rate where a mixed relationship was obtained.

Thorbecke (1997) investigated the relationship between monetary policy and stock prices in the United States, using Vector Auto Regression (VAR) system of analysis. The study observed that monetary policy, measured by orthogonal innovation in the federal fund rate has a greater impact on smaller capitalization stocks; this is in line with the hypothesis that monetary policy affect firms' access to credit.

Udegbanam and Eriki (2001) conducted a research on the relationship between stock prices and inflation on the Nigerian stock market. Their results indicate evidence which support the preposition that inflation exerts a significant negative influence on the behaviour of stock prices. Their study also revealed that stock prices are strongly driven by the level of economic activities measured by gross domestic product (GDP), interest rate, money stock and financial deregulation.

Wu (2001) adopted a monetary approach in analyzing the asymmetric asset-price movements in Singapore. In explaining the pattern of asymmetry, the study used relative exchange-rate elasticity of real money demand and real money supply. The study concludes that fiscal revenues as well as fiscal

expenditures exert positive influences on stock prices.

Sourial (2002) examined the impact of monetary policy on the Egyptian stock market returns and whether the stock market could be alternate channel for transmitting monetary policy rather than the traditional money and credit channels. Bayesian VAR models were used in conducting the analysis consisting of four endogenous variables, four lags and a constant. The results of the study empirically showed the effectiveness of the credit channel in transmitting the monetary policy. Hence, it was concluded that monetary aggregates didn't have a significant impact on the stock market performance.

Ibrahim and Aziz (2003) examined the dynamic linkages between stock prices and macroeconomic variables in Malaysia. The study adopted co-integration and vector autoregression. The result of the study shows that there exists a a long-run relationship between the macroeconomic variables and the stock prices as well as the short-run interactions between them; although it was concluded that exchange rate had negative association with stock prices.

Banerjee and Adhikay (2009) investigated the dynamic effect of interest rate, weighted average interest on bank deposit and exchange rate (USD and BDT) changes of All Share Price Index (ASPI) of Dhaka stock exchange. They applied the Johansen–Juselis procedure and the vector error correction model (VECM) respectively to test the co-variable for the period of 1983 to 2006. The result of their study shows that interest rate and exchange rate changes affect the stock market in the long run and there is no significant influence in the short run.

Bredin, Stuart, Dirk and Gerard (2009) studied the impact of monetary policy on stock market according to predetermined changes in the United Kingdom, United States and Germany. Their study adopted Vector Auto Regression (VAR) and simultaneous equations model. According to the VAR model calculation, they concluded that the fiscal policy shock had less impact on the capital market in the United States and Germany, whereas it had a significant impact in the increase of stock price in the United Kingdom.

Pooja Talreja (2010) contributed to the literature by examining policy rate changes and the movement of stock market with special reference to nifty. The researcher adopted Pearson correlation and ANOVA in analyzing the data. The result of his study shows that the effect of Cash Reserve Ratio and Statutory Liquidity Ratio on nifty movement is negative as increase in these ratios means that banks have fewer funds available and money is sucked out of circulation, which affects the liquidity in the market and have ultimately negative impact on the stock market while the effect of Repo Rate and Reverse Repo Rate on nifty movement is positive.

Okpara (2010) analyzed the effect of monetary policy on the Nigerian stock market returns using Two Stage Least Square Method. The findings of the study show that monetary policy is a major determinant of long-run stock market returns in Nigeria. Also, the study revealed that interest rate exerts a positive and significant influence on the stock market returns.

Davoudizadeh (2011), examined the impact of monetary policies on the stock market, the researcher adopt the vector Auto-regression model on a monthly basis of April 1991 to September

2008. The study used liquidity as the monetary policy variable. The result of the study shows that there exists a negative relationship between monetary policy stock price index using the ARDL model; it was also shown that there is not a co integration relationship between monetary policy stock and long term stock price index. Therefore the basic assumption stating that monetary policy has no significant effect on the long term component of stock price was confirmed.

Akingunola, Adekunle and Ojodu (2012) assessed the impact of macroeconomic variables on capital market growth in Nigeria. The study adopted Ordinary Least Square multiple regression for data analysis and pooled data regression method to estimate specified equation models. The findings of the study show that macroeconomic variables have adverse effects on capital market growth.

Aminzadeh and Irani (2015) investigated the effect of monetary policies on the efficiency of private banks stock. Using panel data regression model, the study found that there exist a negative but significant correlation between interest rate and the stocks of the private banks.

Having examined some available empirical works, it is evident that previous researchers had used variables such as inflation rate, lending rate, interest rate, money and quasi money growth, exchange rate to measure monetary instruments' performance. However, for the purpose of this study, the variables used to measure the effect of monetary policy instrument on financial market are: monetary policy rate, broad money supply (M2), inflation rate and liquidity rate while all share index and credit to private sector are used to proxy financial market performance. The inclusion of credit to private sector makes this work unique

from others as no previous study had adopted the variable. More so, the period covered in this study is between 1981 and 2014 which reflects the performance of the Nigerian capital market pre and post SAP as well as the global meltdown.

3.0   Methodology

Descriptive and inferential research designs are adopted for the purpose of this study. The descriptive research is used for the purpose of describing and interpreting existing conditions and also to make discovery and explanation of past events. Inferential research is also utilized because it enables exploring relationships between two or more variables. Also, it is appropriate for testing the hypotheses of this study and helps to answer the research questions concerning monetary policy and financial market performance which are of crucial concern to this study.

The data used in this study were obtained mainly from secondary sources. The instrument used for the collection of secondary data is documentation. Documentary data were collected via the Nigerian Stock Exchange (NSE) bulletin, Security and Exchange Commission (SEC) bulletin and Central Bank of Nigeria (CBN) statistical bulletin. To capture the effect of monetary policy on financial market performance in Nigeria, the dependent variables used are all share index and credit to private sector (CPS), both standing as a proxy for capital and money markets respectively while the independent variables used are monetary policy rate, broad money supply (M2) and liquidity rate; the trio representing monetary policy instruments. The data covered the period of 1981 to 2014 and all variables were taken on annual basis from various issues of the regulatory

authorities. The model is based on the modification of the empirical model of Akingunola, *et al* (2012). Multiple linear regression model was adopted in the study which assumes the rate of change in share prices captured in the all share index as a function of rate of change in monetary policy variable. Their model was stated as:

ASI = f (INTRATE, EXR, INF)

However, for the purpose of this study, a new model was formulated which considered the variables of monetary policy as independent variables and the variables representing financial market performance as the dependent variables. This model is based on the prescriptions of the Quantity theory of money which suggests that changes in money supply have a linkage with general economic activities. In this model, each dependent variable is expressed as a function of the independent variables. The definitions of the variables that are used in the model are based on the regression model developed in the study. The two variables ASI and CPS represent financial market performance, while the variable MPR, MS2, INF and LR represent monetary policy.

Therefore, the functional relationship between the variables is expressed as follow:
The models for this study are specified as follows:

$$FMP = f(MP)$$

$$FMP = f(MPR, MS2, LR)$$

For hypothesis one:

$$ASI_t = \beta_0 + \beta_1 MPR_t + \beta_2 MS2_t + \beta_3 LR_t + \mu_t \dots\dots\dots\dots\dots (i)$$

For hypothesis two:

$$CPS_t = \beta_0 + \beta_1 MPR_t + \beta_2 MS2_t + \beta_3 LR_t + \mu_t \dots\dots\dots\dots\dots (ii)$$

Where: FMP= Financial Market Performance; MP = Monetary Policy; ASI = All share index; CPS = Credit to Private Sector; MPR = Monetary policy rate; M2 = Broad money supply; LRT = Liquidity ratio; t = time dimension; β_0 = is the constant; $\beta_1 - \beta_4$ = coefficient of the independent variables or parameters with unknown values; μ_t = error terms.

Decision rules: the null hypothesis should be rejected if the calculated p-value is less than 0.05 significant level, otherwise accept.

4.0 Method of Data Analysis

In order to validate the data obtained, a preliminary diagnosis was carried out using the Augmented Dickey Fuller (ADF) unit root tests. This was used in verifying the stationary state of the time series variables. Furthermore, Engle-Granger co-integration test was used to test the existence of long-run relationships among the variables and Ordinary Least Squares Regression Techniques was used to test the hypotheses.

4.1 Preliminary Analyses

Table 1: Descriptive statistics

	ASI	CPS	MPR	LR	MS2
Mean	7936.462	2.406969	12.93908	46.05673	2.670083
Median	6056.600	2.453079	13.00000	45.60000	2.652397
Maximum	33189.30	18.320520	26.00000	65.10000	4.247495
Minimum	0.000000	8.578970	6.000000	29.10000	1.160504
Std. Dev.	8562.244	1.275199	4.187864	9.471683	1.038917
Skewness	1.123873	0.050208	0.739931	0.288163	0.019710
Kurtosis	3.662478	1.546052	4.156848	2.654843	1.632601
Jarque-Bera	7.779260	3.009069	4.998407	0.639322	2.651057
Probability	0.020453	0.222121	0.082150	0.726395	0.265662
Sum	269839.7	105067.83696	439.9286	1565.929	90.78284
Sum Sq. Dev.	2.42E+09	53.66240	578.7607	2960.521	35.61850
Observations	36	36	36	36	36

Source: Author's computations (2017)

The table above highlights the descriptive statistic of the variables. Of great concern is the result of the normality test as revealed by Jarque-Bera which shows that some of the variables do not follow normal distribution.

Table 2: Result of Unit Root Test Augmented Dickey-Fuller (ADF)

Variables	t-statistics	5% Significance level	Order of integration
All share index (ASI)	-5.8407	0.0000	I(1)
Credit to Private Sector (CPS)	-4.3882	0.0015	I(1)
Monetary policy rate (MPR)	-2.9883	0.0464	I(1)
Liquidity rate (LR)	-3.0099	0.0443	I(1)
Money supply (MS2)	-3.3096	0.0228	I(1)

Source: Author's computations (2017)

Most often time series data are trended and therefore in most cases are non-stationary. The problem with non-stationary or trended data is that the standard OLS regression procedures can easily lead to incorrect conclusions. It is imperative therefore, to perform unit root test in order to avoid spurious regression and also to confirm their order of integration. Regression becomes spurious when both the dependent and independent variable (s) are not stationary at level. A spurious regression usually has a very high R^2, t statistics that appear to provide significant estimates, but the results may have no intuitive meaning whatsoever.

This is because the OLS estimates may not be consistent, and therefore the tests of statistical inference are not valid. To avoid the aforementioned problems, augmented dickey-fuller (ADF) unit root test was conducted in this study and the result is presented in the table above.

The result of ADF test indicates that all the variables ASI, CPS, MPR, LR and MS2 of the series are integrated of order one i.e. I(1). Based on this, the study is on the basis of the result of the ADF unit root test that all the variables series are stationary at first difference. This indicates that there is presence of short term variance among the variables.

However, as suggested by Engle and Granger (1987), there could be a form of long run relationship amongst variables in the model, even though they are first difference-stationary. This possibility informs the need to conduct the co-integration test, presented in Table 3.

Table 3: Johansen Co-integration Test: Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace statistic	0.05 Critical value	Prob
None	0.8008	146.18	111.78	0.0001
At most 1	0.7242	94.48	83.94	0.0070
At most 2	0.5663	53.27	60.06	0.1641
At most 3	0.3248	26.53	40.17	0.5539
At most 4	0.2695	13.96	24.28	0.5401
At most 5	0.0987	3.914	12.32	0.7232

Source: Author's computations (2017)

Table 3 shows the result of Johansen co-integration test among the variables, and the result shows that there is presence of co-integration among the variable at most 1. This implies that long term variance exist among the variables. At this point, it requires the use of co-integration regression techniques in testing of the hypotheses.

4.3 Regression Results and Hypotheses Testing:

Table 4: Monetary Policy and All Share Index (ASI)

Variable	Coefficient	Std. error	t-statistics	Prob.
Constant (C)	-19.771	6.693	-2.954	0.006
MPR	10.751	4.926	2.182	0.038
LR	15.497	10.883	1.424	0.166
MS2	7.879	1.023	7.706	0.000
R^2	0.698			
Adj R^2	0.654			
S.E regression	5.043			

Source: Author's computations (2017)

Table 4 shows the linear relationship between monetary policy instruments and all share index (ASI) with the use of fully modified least squares (FMOLS) regression analysis. The results obtained from the static model indicates that the overall coefficient of determination R-squared (R^2) shows that the equation has a good fit with 69.8 percent of variations in all share index explained by the variables in the equation. In terms of the sign of the coefficient that signify the impact of monetary policy instruments on all share index (ASI), it shows that the variables; monetary policy rate (MPR), liquidity rate (LR) and money supply (MS2) concur with Quantity theory of money which states that an increase in money supply stimulates development in the financial sector.

To achieve the first objective, the magnitude of the coefficient of monetary policy rate (MPR) and money supply (MS2) have significant effect on all share index (ASI) as indicated by coefficient (10.751 and 7.899) with probability (0.038 and 0.000) respectively at 5%

significance level. This implies that 1% change in monetary policy rate will induce 10.8% change in all share index and 1% change in money supply will induce 7.9% change in all share index. However, liquidity rate (LR) does not significantly affect all share index (ASI) as indicated by coefficient (15.49) with probability (0.166) at 5% significance level.

Overall, monetary policy instruments clearly have significant effect on all share index of the capital market arm of the financial market in Nigeria. This result can be buttressed with the fact that when MPR is increased, the propensity to borrow from the money market reduces because banks would have adjusted their lending rate upward, thus, leaving investors with no option but to avail themselves of the capital market. This situation ultimately improves the capital market indices and these findings agree with the work of Cassola and Morana (2004), Nishat (2004), Bredin, *et al* (2009) and Davoudizadeh (2011).

Table 5: Monetary Policy and Credit to Private Sector (CPS)

Variable	Coefficient	Std. error	t-statistics	Prob.
Constant (C)	-0.691	0.119	-5.807	0.000
MPR	-0.14	0.009	1.646	0.001
LR	-0.001	0.002	-0.538	0.009
MS2	1.244	0.018	68.432	0.000
R^2	0.693			
Adj R^2	0.591			
S.E regression	0.116			

Source: Author's computations (2017)

The above table shows the linear relationship between monetary policy instruments and credit to private sector with the use of fully modified least squares (FMOLS) regression analysis. The results obtained from the statistic

model indicates that the overall coefficient of determination R-squared (R^2) shows that the equation has a good fit with 69.3 percent of variations in market capitalization explained by the variables in the equation.

In terms of the sign of the coefficient that signify the impact of monetary policy instruments and CPS, it shows that the variables of monetary policy rate (MPR) and liquidity ratio have indirect relationship with credit to private sector (CPS), while money supply (MS2) has direct relationship. The magnitude of the coefficient of money supply (MS2) has significant effect on CPS as indicated by coefficient (1.244) with probability of 0.000 at 5% significant level. This implies that ₦1 change in money supply will induce ₦1.244billion change in financial deepening indicator. Also, monetary policy rate (MPR) and liquidity rate (LR) have significant effect on CPS as indicated by coefficient (0.014 and 0.001) with probability (0.001 and 0.009) respectively at 5% significance level. This position is consistent with the findings of Thorbecke (1997) and Francis (2010). Also, the findings are in tandem with the objectives sought to be achieved through the monetary instruments. By standard, when the CBN increases MPR and liquidity ratio, the purpose is to inhibit borrowers from accessing bank loans.

5.0   Conclusion and Recommendations

This study examined the effect of monetary policy instruments on financial market performance in Nigeria. From the findings of the study, conclusion can be reached that instruments of monetary policy have significant influence on the performance of the financial market. An upward increase in the variables of monetary policy such as MPR and liquidity rate will affect loan portfolios of the banks as many customers would be unwilling to access loan at high rate; although, this situation will shift attention of investors to the capital market as an alternative investment platform. In light of the foregoing, the study recommends that monetary authorities in Nigeria pay close attention to the relationship between monetary policy instruments and financial market in order to formulate policies that would lead to sustainable growth and stability of the market. The government through the monetary authorities should cautiously avoid discretionary policies that might affect lending rate; otherwise investors' apathy would mar the developmental strides already witnessed within the market. Market regulators and participants as well as the monetary authorities should synergize on how to foster the integrity and reputation of the market in order to encourage investors in the market. Finally, appropriate policies and incentives should be put in place by regulatory authorities to attract investors to borrow at low cost from the money market in order to inject into capital market.

References

Adekanye, F. (2010). *The Element of Banking in Nigeria (4th ed).* Lagos: The CIBN Press Limited.

Adegbite, E. (2007). "Essentials of Money and Banking". Lagos: Chumek Ventures.

Ajie, H. A., & Nenbe, S. G. (2010). An Econometric Analysis of Monetary Policy and Stock: 1986-2008. *International Journal of Economic Development Research, 191: 175-192.*

Akingunola, R.O., Adekunle, O.A. & Ojodu, H. (2012). Impact of interest rate on capital market growth in Nigeria. *Universal Journal of Management and Social Science*: 2(11), 1-24.

Banerjee, P., & Adhikary, B. (2009). Dynamic Effects of Interest Rate and Exchange Rate Changes on Stock Market Returns in Bangladesh. *Ritsumeikan Journal of Asia Pacific Studies, 119-133.*

Bredin, D., Stuart , H., Dirk , N., & Gerard , O. (2009). European monetary policy surprises: The aggregate and sectoral stock market response. *International Journal of Finance and Economics, 14(2), 156-171.*

Cassola, N., & Morana, C. (2002). Monetary policy and the stock market in the Euro Area. *European Central Bank, Working paper series, no 119.*

CBN (2011). Understanding Monetary policy, Series 4. *Central Bank of Nigeria Monetary policy framework, pp. 1-27.*

Davoudizadeh, F. (2011). Impact of monetary policy on Iran's stock market, monthly, from April 1991 to September 2008. *Master Thesis, Department of Economics and Social Sciences, University of Shahid Chamran.*

Ezinne, M. (2012). The Performance of Monetary Policy in the Nigerian Economy (1980-2010).

Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. . *The Journal of Finance, 25(2), 383-417.*

Fisher, I. (1911). *The Purchasing Power of Money.* New York: The Macmillian Company.

Francis, O. A. (2010). The Effects of Monetary Policy on Stock Market. *SSRN Electronic Journal.*

Hayek, F. (1931). Prices and Production. London:G. Routledge & Sons.

Jhingan, M. L. (2012). *Money, Banking, International Trade and Public Finance, (8th ed.).* Delhi: Vrinda Publications (P) Ltd.

John, F. M. (1961). Rational expectations and the theory of price movements. International Library of Critical Writings in Economics, vol. 19.

Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money,* Macmillan Cambridge University Press for Royal Economic Society.

Kohn, M. G. (1999). *Financial Institutions and Market.* New Delhi: McGraw Hill.

Masha, I. S., Essien, M. L., Musa, D., Akpan, B., & Abeng, M. O. (2004). Theoretical Issues in Financial Intermediation, Financial Markets, Macroeconomic Management and Monetary Policy. *CBN Financial Markets in Nigeria, 7-27.*

Mbat, D. O. (2001). *Financial Management.* Uyo: Domes Associates Publishers.

Mukherjee, K. T., & Naka, A. (1995). Dynamic Linkage Between Macroeconomic Variables and the Japanese Stock Market: An Application of a Vector Error Correction Model. . *The Journal Of Financial Research, 18(2), 223-237.*

Nishat, M., & Rozina, S. (2004). Macroeconomic Factors and Pakistani Equity Market. *Research Papers in Economics, The Pakistan Development Review, 43(4), 619-637.*

Obademi, O. (2010). "Money, Banking and the Economy". 1st edition,

Ibadan: Excellent Virtues Publishers

Okpara, G. C. (2010). Analysis of capital market performance and the growth of the Nigerian economy: A co-integration approach. *Global Journal of Human Social Science, 10(4), 9-14.*

Onyido, B. C. (1993). The Role of the Central Bank in the Management of the Nigerian Economy, with Emphasis on Monetary Policy. *Central Bank of Nigeria Bullion, 17(2), pp. 12-24.*

Pooja, I. & Tahreja, B. (2010). Policy rate changes and the movement of stock market (With special reference to nifty). *Asian Journal of Management research, 5(1), 91-100.*

Sourial, L. S. (2002). The future of the stock market channel in Egypt. *IJSER International Journal, (202), 916-991.*

Thorbecke, W. (1997). On Stock Market Returns and Monetary Policy. *The Journal of Finance, 52(2), 635-654.*

Udegbunam, R., & Eriki, P. O. (2001). Inflation and Stock Price Behavior: Evidence from Nigerian Stock Market. *Journal of Financial Management & Analysis, 20(4), 1-10.*