

Impact of Monetary Policy Targets on Capital Market Development in Nigeria

¹Abdulkarim, Musa, ²Uwaleke, Uche & ³Nwala, M. Nneka
^{1,2&3}Department of Banking and Finance,
Nasarawa State University

Article DOI: 10.48028/iiprds/ijiretss.v8.i1.09

Abstract

This study empirically examines the impact of monetary policy targets on capital market development in Nigeria from 1986-2018. Time series data and econometric tools were used to test for the stationarity and causality effect. The Auto-Regressive Distributed Lag Model (ARDL) and Error Correction Model (ECM) techniques were used to examine the short-run and long-run impact and relationship between Monetary Policy and Capital Market Development in Nigeria. The study revealed that both in the long run and short run Exchange Rate (EXCHR), Inflation Rate (INFR), and Interest Rate in Nigeria (INTR) were negatively related to Capital Market Development (CAMKTD) in Nigeria and they were statistically insignificant in explaining changes in Capital Market Development (CAMKTD) in Nigeria. On the other hand, in the long run, Money Supply was positively related to Capital Market Development (CAMKTD) in Nigeria and was statistically significant at a 5% level significant while Money Supply (M2) was positively related to Capital Market Development (CAMKTD) in Nigeria both in the long run and short-run and was statistically significant at 5% level of significance. Therefore, the study recommends that government should improve the efficiency and effectiveness of the money supply in Nigeria since it was statistically significant in determining the improvement of Capital Market Development (CAMKTD) in Nigeria.

Keywords: *Monetary Policy, Capital Market, Interest Rate, Inflation Rate, Exchange Rate*

Corresponding Author: Abdulkarim, Musa

Background to the Study

Globally, economic activities particularly financial markets are influenced by monetary policies in different ways and various forms. However, contractionary monetary policies and expansionary policies cause different reactions to the financial market (Kuttner and Posen 2000). A company's total expenditures and balance sheet is affected by the implementation of monetary policies in different ways. With the application of expansionary monetary policies, there will be increases in the prices of stocks which will lead to an increase in the value of the firm (Jhingan, 2004). This is because, moral hazard and adverse selection is reduced, and there will be increases in credit which is expected to lead to an increase in the investment expenditures and also the expansion of total expenditures.

The monetary policy impact on capital and commodity markets is connected to three main macro variables which include; inflation, interest rate and exchange rate (Onyeiwu, 2012). The Keynesian IS-LM model and also Classical Monetarism explain the impact of the interest rate. With regards to the expansionary monetary policy implementation, credit demand is increased as a result of the relaxation of interest rate, while aggregate demand is increased by the increases in the investment demand in the capital market. With the adoption of expansionary monetary policy interest rate falls with time. With the marginal efficiency of capital is higher than the interest rate, the investment demand is expanded by the marginal productivity of capital. A multiplier effect is created by the expansion in investment which leads to the expansion of total demand which is reflected in the stock market. With the increase in the demand for the stock, there will be pressure on its prices. This, therefore, causes prices and stock to rise as a result of a low-interest rate (Danjuma, 2013).

In Nigeria, the government and the regulatory agencies have initiated various policies to stabilize the macroeconomic variables which are expected to have an impact on the Nigerian capital market and the CBN Act of 1958 mandated the promotion and the maintenance of monetary stability an effective financial system in the country. The rule-based technique and the market-based technique is used by CBN to implement its monetary policy programs (Chuku, 2009). With the adoption of rule-based technique in the implementation of monetary policy, the direct instrument is adopted by the CBN which may include direct regulation, selective credit control of moral suasion and interest rate. An indirect instrument such as discount rate, Open Market Operation and reserve ratios is adopted while implementing monetary policy with the market-based approach.

Since the establishment of CBN, it has in several ways combined these two monetary policy techniques with an emphasis on one. The Nigerian evolution of monetary policy can be classified into two phases; the first phase is the era of Direct Controls (1959 to 1986) and secondly the Market Based control era (1986 to date). With the aim of achieving stability, there is constantly the challenge of adopting the correct strategy which will lead to the required goals and objectives. The most accepted and popular strategies are monetary targeting, exchange rate targeting, capital market targeting, inflation targeting, and nominal GDP. Inflation targeting can be regarded as the process of structuring controlled discretion within which inflation targeting is the constraint and discretion is the flexibility and the scope taking account of economic and other relevant considerations (Kutter and Posen 2000).

Irrespective of all these performances, the capital market in the economy still has a significant setback. This may be due to the fact that the performance of the capital market is affected by the inflation rate, exchange rate, and interest rate in Nigerian. Therefore, the study is to examine the impact of monetary policy targets on the capital market in Nigeria using the appropriate technique in the analysis. To achieve this, the rest of the study comprises of the following which includes; review of relevant literature, research methodology, data presentation, analysis and conclusion, and relevant recommendations.

Literature Review

Conceptual Review

The concept of monetary policy was defined by CBN (2008) as a policy measure that has been structured by the government through the central bank to manage credit supply, its availability, and cost. Monetary policy is regarded as the tool which can be used to execute the responsibility of monetary stability and also price stability in the economy. In the same vein, monetary policy can be regarded as a program of action which is carried out by the relevant authorities particularly by the central bank in order to regulate and control the money supply in the economy and the credit flow with the aim of achieving set out macroeconomic goals and objectives.

Also, Oyejide (2003) is of the view that monetary policy is only relevant to economies that are highly monetized. When an economy is observed to be highly not monetized potency of the policy will be poor. For example, less developed economies are characterized by a subsistent level of manufacturing, this economy money supply is expected to be independent. The economy won't be managed effectively with monetary policy. On the other hand, according to Lu Zhou and Kou (2013), the capital market is regarded as the market where trade is carried out on long-term and medium-term debt instruments. Long-term funds are sourced by the industries in the capital market at a significantly low rate if it is compared with the banking credit system. While Namni and Nasab (2015) observed that the capital market is an economic symbol that stands as the collective economic activities in a particular state hence the different variables influencing the market should be observed for significant investments to occur in the economy.

Empirical Review

Studies on monetary policy and some economic variables are quite much especially the role of monetary policy on economic growth. Therefore, the study shall review some current empirical studies on monetary policy and other economic variables like the capital market in Nigeria, for instance, Chukwu (2009), carried out a study on the effect of monetary policy innovations in the country. This topic was approached with the Structural Vector Auto-Regressive method to examine the impact of monetary policy shocks on the prices and output. It was equally observed in the study that alternative instrument of policy was analyzed, this includes minimum rediscount rate, the real effective exchange rate, and Money supply. It was discovered in the study that monetary policy has a nominal and real impact on economic variables and this depends on policy instruments that are adopted. Monetary policy and fiscal policy in Nigeria was also studied by Adefeso and Mobolaji (2010) through the adoption of the Johansen Maximum likelihood cointegration method. The study discovered that a long-

run relationship exists between degrees of openness, growth, expenditure of the government and money supply.

Similarly, Onyeiwu conducted a study on the effect of monetary policy in Nigeria. The method adopted in the study was the Ordinary Least-squares. It was discovered in the study that monetary policy which is proxied in the study by money supply has a positive effect on the growing GDP and also payment balance but on the other hand, a negative effect on the inflation rate was observed. In the study, the conclusion is that monetary policy by CBN is relevant in the regulation of the monetary liquidity in the economy which is believed to have a significant effect on the macroeconomic variables in the economy. More recently the work carried out by Owolabi and (2014), studied the monetary policy effect on the growth of industries in Nigeria. Multiple regression was adopted in the study so as to analyze the relationship between output from the manufacturing sector, lending, and deposit, rate of discount, and industrial growth. It was discovered in the study that the variables adopted in the study have a significant effect on industrial growth. On the impact of monetary policy and capital market, we review the work of Chude and Chude (2013), who investigated the broad money supply impact on stock market returns. The study conducted the test of stationarity, the test of cointegration, and the equally error correction method. It was observed in the study that a long-run relationship exists between stock market returns and the broad money supply, also that the broad money supply has been high and has a significant positive effect on the stock market returns in the country.

Furthermore, Nwakoby and Bernard (2016), investigated the impact of monetary policy on the performance of the stock market in Nigeria (1986 – 2013). The study adopted the Johansen test of cointegration, the OLS, and the casualty test. The study revealed through its OLS result that the performance of the stock market is significantly explained by the monetary policy up to about 53%. Nevertheless, the monetary policy rate was observed to have a positive and significant impact on the All Share Index (ASI), positive and significant relationships exist between Lending Rate and ASI. In addition, the Liquidity ratio and Treasury Bill Rate have a negative and insignificant impact on ASI; and deposit rate (DR) has a negative and significant impact on ASI in Nigeria. Finally, the review shows the monetary policy effect on some economic variables especially, economic growth and capital market in the country. The studies on capital market and monetary policy used some econometric techniques in the analysis which are not sufficient in analyzing dynamic variables under studies. Therefore, the study used the ARDL in analyzing the selected variables.

Theoretical Framework

The theoretical framework of this study is the classical theory on monetary policy. The quantity theory of money is the foundation of classical economist theory. This theory is mostly discussed with regards to the Fisherian equation of exchange. This equation is given by $MV=PY$. In the equation M represents money supply which is controlled by the federal government; V in the equation represents the circulation velocity which is defined as the average number of times particular money is used in the purchasing of final good over a year. P in the equation stands as the price level. Thus PY in the equation stands as the nominal GDP. The exchange equation, therefore, is an identity that stipulates the current market value of

services and goods should be the same as the money supply which is multiplied by the amount of time money is utilized for transactions in a particular period.

It is believed by the classical economist that the economy is constantly at the natural level of real GDP. Hence, in the short run, it is assumed that Y in the expression of exchange is constant. It is further argued by the classical economist that the money velocity of circulation seems to be constant. V , therefore, can equally be regarded as fixed. Since V and Y are constant, it, therefore, means that if the apex bank were to switch to expansionary policy, this will bring an increase in the supply of money (M). This, therefore, means that expansionary monetary policy will lead to inflation in the economy; contractionary on the other hand will lead to the deflation of the market price level. Therefore, influencing the activities of the financial market especially the capital market.

Methodology

Data Sources and Method of Analysis

Annual time series data which ranged from 1986 - 2018 was adopted in the study. These data were collected from the CBN statistical bulletin December 2018. The Total Annual Market Capitalization in the Nigerian Stock Market was a proxy for capital market development in Nigeria. While, the Exchange rate, Money supply, the Inflation rate in Nigeria, and interest rate were used as the monetary policy targets in Nigeria. see regression data in table 4.1 and Appendix I. the ARDL and ECM techniques were used in examining the short term and long term impact and relationship between monetary policy targets and Capital Market development in Nigeria.

Model Specification

The study objective is to examine the impact of monetary policy tools on capital market development in Nigeria, in order to achieve this, the model of the work of Chude and Chude (2013) was adopted and modified for the study. The instruments to linked relationships and examine the impact of monetary capital tools on capital market development are Total Annual Market Capitalization in the Nigerian stock market, money supply, inflation rate, exchange rate, and interest rate in Nigeria. The model is specified below:

$$\text{CAMKTD} = \alpha_0 + \beta_1 M2 + \beta_2 \text{EXCHR} + \beta_3 \text{INFR} + \beta_4 \text{INTR} + U_t \quad (1)$$

Where: U_t is the error term and $\beta_1 - \beta_4$ represents the various parameters. While CAMKTD is the Capital Market Development, which is composed of Total Annual Market Capitalization in the Nigerian Stock Market in Nigeria. $M2$ is the Money Supply, EXCHR is the Exchange Rate, INFR is the inflation rate in Nigeria and INTR is the interest rate in Nigeria.

The Autoregressive Distributed Lagged (ARDL) model that will be used in this study is specified as follows:

$$\begin{aligned}
\text{CAMKTD} = & \alpha_0 + \sum_{g=1}^l \alpha_{1i} \Delta \text{CAMKTD}_{t-1} + \sum_{h=1}^m \alpha_{2i} \Delta \text{M2}_{t-i} + \sum_{i=1}^n \alpha_{3i} \Delta \text{EXCHR}_{t-i} + \sum_{j=0}^o \alpha_{4i} \Delta \text{INFR}_{t-i} \\
& + \sum_{k=0}^p \alpha_{5i} \Delta \text{INTR}_{t-i} + \alpha_6 \text{CAMKTD}_{t-1} + \alpha_7 \text{M2}_{t-1} + \alpha_8 \text{EXCHR}_{t-1} + \alpha_9 \text{INFR}_{t-1} \\
& + \alpha_{10} \text{INTR}_{t-1} + \varepsilon_t \quad (2)
\end{aligned}$$

Equation (2) will be adopted to examine the long-run relationship between monetary policy targets and capital market development.

The Error Correction Model (ECM) is formulated as follows:

$$\begin{aligned}
\Delta \text{CAMKTD} = & \alpha_0 + \sum_{g=1}^l \alpha_{1i} \Delta \text{CAMKTD}_{t-i} + \sum_{h=1}^m \alpha_{2i} \Delta \text{M2}_{t-i} + \sum_{i=1}^n \alpha_{3i} \Delta \text{EXCHR}_{t-i} + \sum_{j=0}^o \alpha_{4i} \Delta \text{INFR}_{t-i} \\
& + \sum_{k=0}^p \alpha_{5i} \Delta \text{INTR}_{t-i} + \text{ECM}_{t-1} + \varepsilon_t \quad (3)
\end{aligned}$$

In the above model, adjustment is done until the estimation of the ECM is observed to be negative. This negative sign shows the statistical significance of the equation with regards to the associated t-value and probability value.

Presentation and Discussion of Results

Descriptive Result

Table 1: Descriptive Analysis of Variables

	CAMKTD	M2	EXCHR	INFR	INTR
Mean	5814.086	6100.532	105.1667	20.66818	22.56667
Median	764.9000	1505.960	118.5000	12.90000	21.55000
Maximum	21904.04	27068.58	362.3000	72.80000	36.09000
Minimum	6.800000	23.81000	1.800000	5.400000	12.00000
Std. Dev.	7480.200	8161.254	93.71303	18.79891	4.674678
Skewness	0.918261	1.206235	0.949744	1.636838	0.633509
Kurtosis	2.297058	3.151137	3.611880	4.328793	4.062513
Jarque-Bera	5.317039	8.033922	5.475875	17.16363	3.759622
Probability	0.070052	0.018008	0.064704	0.000187	0.152619
Sum	191864.8	201317.6	3470.500	682.0500	744.7000
Sum Sq. Dev.	1.790009	2.130009	281028.2	11308.76	699.2837
Observations	33	33	33	33	33

Source: Output from E-views 9.0 (2019)

From table (1) above the study reveals the nature of the data collected for the study. From the table, it can be seen that the mean, median, deviation, and also the skewness and Kurtosis measures of interest rate are shown. The mean values of CAMKTD, M2, EXCHR, INFR, and INTR are 5814.086 billion Naira, 6100.532 billion Naira, 105.1667 Naira, 20.6 percent,

and 22.57 percent respectively. Their respective standard deviations are 7480.2 billion Naira, 8161.3 billion Naira, 93.7 Naira, 18.8 percent, and 4.7 percent respectively. This is therefore shown by the various insignificant Jarque-Bera statistics of the relevant variables.

Test of Stationarity

Table 2: Augmented Dickey-Fuller Test

Variable	ADF Statistics	Critical Value	Stationary Status
CAMKTD	-5.313781	-2.967767(5%)	I(1)
M2	-5.048826	-2.996263(5%)	I(0)
EXCHR	-4.907381	-2.971853(5%)	I(0)
INFR	-3.119725	-2.963972(5%)	I(1)
INTR	-4.287887	-2.963972(5%)	I(1)

Source: Output from E-views 9.0 (2019)

Table 2 reveals the stationarity results and the Capital Market Development (CAMKTD), Inflation Rate (INFR), and Interest Rate (INTR) were stationary at first difference while Money Supply (M2) and Exchange Rate (EXCHR) were stationary at level. This means that the variables are suitable and fit to be used for the estimation of regression analysis.

Co-integration ARDL Bounds Test

Table 3: ARDL Bounds Test of Co-integration

Null Hypothesis: No long-run relationship exist		
Test Statistic	Value	K
F-stat	21.64745	4
Critical Value Bound		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: Output from E-views 9.0 (2019)

Since it was observed that the variables are stationary in a different order the study adopted the ARDL bound test. The above table, therefore, depicts the F-statistics which is obtained from the bound test and it is 21.6477. When compared with the value of the f-statistics it can be observed that it is higher than both the 2.68 and 4.01 for 1 (0) and 1(1) respectively. With this, it can be concluded that the variables adopted in the study are cointegrated. Using the ARDL Bound test with the critical value from Narayan (2005), the variables were co-integrated at a 1 per cent level of significance since the Wald F- statistics is greater than the critical lower and upper bound.

Discussion of Regression Results

Table 4: Long-Run Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
M2	0.948773	0.077650	12.218624	0.0000
EXCHR	-0.096436	8.283173	-0.011642	0.9908
INFR	-4.889517	19.245644	-0.254058	0.8019
INTR	-57.28967	71.465268	-0.801644	0.4317
C	1445.862996	1827.616743	0.791119	0.4377

Source: Output from E-views 9.0 (2019)

Long run regression results shown in table 4 can be interpreted as follows; a unit increase in the supply of money (M2) with other variables constant will bring about a 0.948- unit increase in the capital market development. While a unit increases in exchange (EXCHR), inflation rate (INFR) and Interest Rate with other things being equal will bring about a 0.096436, 4.889517, and 57.28967-unit decrease in the capital market development in Nigeria respectively. Finally, based on the probability value, the money supply was significant in explaining the variation in CAMKTD, while Inflation, exchange, and interest rate in Nigeria were statistically insignificant in explaining the variation in the CAMKTD in Nigeria.

Table 5: The Error Correction Model Results

Variables	Coefficient	Std. Error	t-Stat	Prob.
D(CAMKTD(-1))	0.531035	0.236048	2.249692	0.0353
D(M2)	1.206584	0.335479	3.596599	0.0017
D(EXCHR)	-0.122640	10.541096	-0.011634	0.9908
D(INFR)	-6.218151	24.473581	-0.254076	0.8019
D(INTR)	-72.857063	89.153980	-0.817205	0.4230
ECM(-1)	-0.1304621	0.034294	-3.804224	0.0010

Source: Output from E-views 9.0 (2019)

Short-run regression output shows that the variables are cointegrated. This implies a long-run equilibrium relationship exists between the study variables. It is also important to test for a short-run relationship. The above table (5) shows that the error correction parameter is negative and equally significant as it is observed to be -0.1304621. This implies that 13 percent disequilibrium in the past period is corrected in the current period to restore equilibrium. It has therefore been shown that cointegration exists among the variables and equally has a short-run relationship as seen from the model of the error correction. Also, capital market development at Lag one and money supply at the current period were positively related to the Nigerian capital market development while exchange, interest and inflation rates in Nigeria at the current period were negatively related to capital market development in Nigeria. Finally, given the probability of capital market development in Nigeria at lag one and Money Supply (M2) at the current period were significant in explaining the variation in capital market development in Nigeria while the Exchange Rate (EXCHR), Inflation Rate (INFR), and Interest Rate in Nigeria (INTR) at current period were statistically insignificant in explaining the variation in capital market development in Nigeria.

These findings and results agreed with the work of Chude and Chude (2013), who investigated the effect of broad money supply on the stock market returns in Nigeria because both studies agreed that money supply is positively related and statistically significant to capital market development in Nigeria. Finally, this implies that an increase in the money supply in Nigeria will have a positive impact on capital market development in Nigeria.

Conclusion and Recommendations

In conclusion, it is revealed in the study that both in the long run & short run, Exchange Rate (EXCHR), Inflation Rate (INFR), and Interest Rate in Nigeria (INTR) were negatively related to CAMKTD in the country but they were statistically insignificant in explaining changes in Capital Market Development (CAMKTD). On the other hand, in long run, the Supply of Money was positively related to capital market development and was statistically significant at a 5 percent level of significance while the Supply of Money (M2) was positively related to capital market development in Nigeria both in the short run & long run and was significant at 5 percent level of significance. Based on the findings the study recommends the following policies.

- i. The government should improve the efficiency and effectiveness of the money supply in Nigeria since it was statistically significant in determining the improvement of capital market development in Nigeria.
- ii. The government should manage the activities relating to Exchange Rate (EXCHR), Inflation Rate (INFR), and Interest Rate (INTR) through targeting policies in order to encourage capital market development in Nigeria.

References

- Abeng, M. O. (2006). Financial sector reform outcomes in Nigeria: A quantitative evaluation. *CBN Bullion*. 30 (2), 53-69.
- Adefeso, H. & Mobolaji, H. (2010). The fiscal–monetary policy and economic growth in Nigeria: Further Empirical Evidence, *Pakistan Journal of Social Sciences*. 7 (2), 137-142.
- CBN (2008). Central Bank of Nigeria (CBN). *Monetary policy department series 1*, 2008.CBN/MPD/Series/01/2008. www.cbn
- Chuku, C. A. (2009). Measuring the effects of monetary policy innovations in Nigeria, *African Journal of Accounting, Economics, Finance and Banking Research*. 5 (5), 141-153
- Chude, N. P. & Chude, D. I. (2013). Effect of money supply on the stock market returns in Nigeria, *Journal of Business and Organizational Development*. 5 (2), 135 – 150.
- Danjuma, B. F. (2013). An empirical analysis of the balance of payments as a monetary Phenomenon: Nigeria's Experience, *Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB)*, 1 (2)107-128.
- Jhingan, M. L. (2004). *Monetary economics, 6th edition*, Vrinda Publication Limited.
- Kuttner, K. & Posen, S. (2000). *Inflation, monetary transparency, and G3 exchange rates volatility*, Institute for International Economics Working Papers 006 Washington DC.
- Lu, X., Zhou, Y., & Kou, M., (2013). The impact of monetary policy surprises on Australian, *Financial Futures Markets*. Australia
- Namini, T. N., & Nasab, Z. T., (2015). The impact of monetary and fiscal policies on Iran's stock market: An SVAR approach, *Journal of Applied Environmental and Biological Science*. 5 (1), 767-775.
- Nwakoby, C., & Bernard, A. U., (2016). Effect of monetary policy on Nigerian stock market performance, *International Journal of scientific research and management (IJSRM)*. 4(9), 4530-4542.
- Onyeiwu, C. (2012). Monetary policy and economic growth of Nigeria, *Journal of Economic and Sustainable Development*. 3 (7), 62-70.
- Owalabi, A. U. & Adegbite, T. A. (2014). Impact of monetary policy on industrial growth in Nigeria, *International Journal of Academic Research in Business and Social Sciences*. 4 (1), 18-31.

Oyejide, T. (2003). The challenges of monetary management in an environment of fiscal dominance, *Third Annual Monetary Policy Conference Proceedings on Issues in Fiscal Management: Implications for Monetary Policy in Nigeria*, 11-12 December 2003. Lagos, Central Bank of Nigeria Publications.

APPENDIX I

YEAR	CAMKTD	M2	EXCHR	INFR	INTR
1986	6.8	23.81	1.8	11.6	12
1987	8.2	27.57	4	67.47	19.2
1988	10	38.36	4.5	22.9	17.6
1989	12.8	45.9	7.4	45.8	24.6
1990	16.3	52.86	8	7.5	27.7
1991	23.1	75.4	9.9	13	20.8
1992	31.2	111.11	17.3	44.5	31.2
1993	47.5	165.34	22.1	57.2	36.09
1994	66.3	230.29	22	57	21
1995	180.4	289.09	21.9	72.8	20.79
1996	285.8	345.85	21.9	29.3	20.85
1997	281.9	413.28	21.9	8.5	23.32
1998	262.6	488.15	21.9	10	21.34
1999	300	628.95	92.3	6.6	27.19
2000	472.3	878.46	101.7	6.9	21.55
2001	662.5	1,269.32	111.2	18.9	21.34
2002	764.9	1,505.96	120.6	12.9	30.19
2003	1,359.30	1,952.92	129.2	14	22.88
2004	2,112.50	2,131.82	132.9	15	20.82
2005	2,900.10	2,637.91	131.3	17.9	19.49
2006	5,120.90	3,797.91	128.7	8.4	18.7
2007	13,181.70	5,127.40	125.8	5.4	18.36
2008	9,563.00	8,008.20	118.5	11.5	18.69
2009	7,030.80	9,411.11	148.9	12.6	22.62
2010	9,918.20	11,034.94	150.3	13.8	22.51
2011	10,275.30	12,172.49	154.7	10.9	22.42
2012	14,800.90	13,895.39	157.5	12.2	23.79
2013	19,077.40	15,160.29	157.3	8.5	24.69
2014	16,875.10	17,679.29	158.6	8	25.74
2015	17,003.40	18,901.30	192.4	9	26.71
2016	16,185.70	21,607.68	362.3	18.27	26.3
2017	21,123.90	24,140.63	305.7	10.71	17.78
2018	21,904.04	27,068.58	306.0	13.0	16.44

Source: Central Bank of Nigeria Statistical Bulletin, December 2018