MONETARY POLICY IMPACT ON PRIVATE SECTOR PERFORMANCE IN NIGERIA

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ABSTRACT
This paper investigates the monetary policy impact on private sector performance in Nigeria. The study applies Autoregressive Distributive Lag (ARDL) method. The ARDL Bounds test shows that a long-run relationship exists among the variables. The ADF and PP Unit Root tests on the variables show that all the variables are I(1) process, with exception of real exchange rate which is I(0) process. The study uses annual time-series data from 1981-2021 on four variables – credit to private sector as a percentage of economic growth, broad money supply, real interest rate and real exchange rage. The result shows that the broad money supply has a significant positive impact on the private sector performance both in the short run and long run. The real interest rate and real exchange rate have a significant negative impact on private sector performance both in the short run and long run. The study recommends that the government should maintain the expansionary monetary policy that allows for the injection of optimal money supply into the system. The interest rate should be reduced to allow for the flow of more financial resources from the financial sector to the private sector, thereby promoting the private sector performance. The government should halt its continued devaluation policy and embrace more diversification commitments to bridge the forex scarcity, thereby improving the value of the Naira against the value of other currencies. Finally, the study concludes that monetary policy impact improves the private sector performance since money supply is the core determinant of monetary policy.
Keywords: Monetary Policy, Private Sector Performance
JEL Classification: E52, E22

1. INTRODUCTION

In recent years, developing countries have attached serious priority to improving the performance of the private sector. This commitment has been attributed to the fact that the private sector has remained a good source of economic growth and development in most emerging economies. The private sector is the driver of economic growth and development because it produces and distributes goods and services that meet the aggregate demand in the economy. The effectiveness of monetary policies could be assessed based on the private sector performance. Andabai (2017) emphasised that the private sector affects economic growth positively through its capacity building, employment generation and income-generation opportunities in the economy.

In most developed countries, debt-private-sector ratio is over 100% due to the fact that their economies rely on private sector loans. Thus, higher private sector debt-to-GDP ratios imply the economy is expanding through the aid of loans a situation economists called financialization. According the National Bureau of Statistics (NBS, 2020), Nigeria's private sector credit to GDP rose to 13.5% as of the third quarter of 2020, a sharp increase from 11.8% as reported at the end of 2019. The total loans stood at ₦19.86 trillion as a private sector loans as compared to the GDP of ₦146.69 trillion. Of this figure, 25.8% went to the oil and gas sector, while other sectors like the real estate, education and information and communication got 3.4%, 0.4%, and 8.4% respectively. The sharp rise above reflected an increase in lending by deposit banks despite the pandemic and fall in the crude oil prices. Since July 2019, the Central Bank of Nigeria (CBN) introduced tough monetary policy measures such as increase

in minimum loan to deposit ratio – Loan to Deposit Ratios (LDR) of the deposit money banks from 58.5% to 60% to compel them to increases lending the private sector. Similarly, the directive came with a penalty of additional cash reserve requirement – Cash Reserve Ratios (CRR) of 50% of the lending shortfall of the target loan to deposit ratio for banks that might fail to comply with the directives. Also, another in September 2019, another circular from the CBN increased the minimum loan to deposit ratio from 60% to 65% with stiffer penalty for non-compliance. Thus, all these measures have forced the commercial banks to increase lending to the private sector.

Despite the above-stated increased lending at the end of the third quarter, it was still lower than the 13.7% recorded in 2015 and 15.7% in 2016. This cyclical nature of the ratios reflected the lack of correlation between the private sector lending and the driving economic expansion for the country. Moreover, according to the NBS (2022), in developing economies like Nigeria, the debt-to-GDP ratio is lower than 20% because most sectors of the economy are informal and do not have access to banking sector credit, the 2017 data revealed. Similarly, less than 0.5% of borrowers owe over 82% of loans. Therefore, Nigeria's low private-sector loans to the GDP ratio means that there is a room for growth in terms of lending to the private sector since it falls below the threshold of 50%. Similarly, despite reducing the Monetary Policy Rate (MPR) from 14 to 13.5 points in 2018 and 2019 respectively, the policy action has not stimulated private sector performance; also, reducing the MPR by a point from 12.5 to 11.5 in 2021 has not strengthened the private sector performance through increased access to capital (NBS, 2022).Therefore, this study intends to confirm this condition by assessing the monetary policy impact on the private sector performance in Nigeria.

2. LITERATURE REVIEW
This section presents conceptual literature, theoretical literature and empirical literature related to the monetary policy and private sector performance.

2.1 Conceptual Literature
Monetary Policy: This a deliberate and precise measures taken by the monetary authorities of a country to regulate the costs of credits and their availability in the economy based on fundamental macroeconomic objectives. These regulations are in pursuance of the existing legal framework with which financial practices of financial institutions are regulated.

Credit to Private Sector: This refers to the provision of financial resources to the private sector through the financial institutions. These financial resources could be in the forms of loans, acquisition of non-equity securities, trade credits and other accounts receivable that have claims for payments. Financial institutions that provide these financial resources include commercial banks, merchant banks, non-interest banks and other financial institutions. In other words, private sector debt to GDP which is used in this study compares the total number of bank lending to the private sector with the GDP of Nigeria.

2.2 Theoretical Literature
The IS-LM Model: The IS-LM model is the foundation of short-run macroeconomics which was first introduced by Hicks (1937) in his notable article 'Mr Keynes and the Classics: A suggested Interpretation'. While the IS curve represents the goods market equilibrium, investment (I) equals saving (S). The LM curve represents the money market equilibrium, demand for money (L) equals supply for money (M). The IS-LM framework represents a suitable model that examines the effectiveness of monetary and fiscal policies. As a downward sloping curve, the IS curve indicates that a decrease in the interest rate would increase the level of investment spending transpiring in an increase in aggregate demand and the level of output. At the equilibrium level, an increase in government spending would expand the level of aggregate demand thereby increasing output to address the heightened demand. Therefore, the new equilibrium increases the output from the rise in the interest

rate since the demand for investment funds rises. Consequently, the interest rate rises in response. At this level, the upswing in government spending would lead to a rise in the interest rate. This would decrease the amount of investment spending by the private sector. As such, the increase in government spending would crowd out the level of private sector investment, thereby reducing the performance of the private sector. Similarly, if the interest rate were to remain unchanged, government spending would lead to an increase in output, and a new equilibrium level. Thus, when the goods market were at equilibrium, the money market would be at disequilibrium because the level of income would increase, and the amount of money to be demanded would be higher, leading to an increase in excess demand. As such, the interest rate would be compelled to rise unless there occurred a complementary increase in the money supply. Therefore, this suggests that monetary policy is accommodative of fiscal policy because the increase in the money supply stops the interest rate from surging.

Monetarist Theory: This theory was championed by Friedman (1959) who emphasised the importance of controlling the supply of money to control inflation and aggregate demand. The foundation of this theory is rooted in the Quantity Theory of Money. The theory argues that expansionary fiscal policy is the root of inflation, and it crowds out investment. Thus, it conjectures that fiscal policy is needless, adding that the market forces are more effective if allowed to operate freely. Therefore, it sees government intervention as a source of economic distortions. In this theory, money supply is treated as an exogenous variable that could be used to restore disequilibrium in the economy by increasing or decreasing it. The theory also believes that money and income are correlated. Monetary changes affect the long-run stock of real capital and aggregate output. Hence, fluctuations in money and national income are caused by the monetary policy. In all, the monetarists' position can be reached without the LM curve because it moves continuously, and it affects aggregate income and output in the long run, unlike the IS curve which shifts in once for all in the short run. Thus, to monetarists, the demand for money is stable than the Keynesian consumption function.

2.3 Empirical Literature

Kanu and Nwadiub (2021) used annual time-series data from 1990-2019 and applied multiple regression analysis to investigate the impact of commercial bank loans on the performance of small and medium scale enterprises in Nigeria. The result showed an insignificant negative relationship between commercial bank loans and the output growth of the SMEs in Nigeria. Egbe, Ikpa, Udopia and Olatunbosun (2015) used primary data from Nigerian Stock Exchange Factsbook, 2009, by applying Ordinary Least Squares multiple regression and investigated the impact of monetary policy on corporate investment. The result showed that the interest rate has no significant positive effect on private investment, while a weak relationship existed between the cost of capital and interest rate.

Adewole and Aderemi (2021) utilised annual time-series data from 1992-2019 and applied multiple regression and Granger causality to examine the relationship between private sector financing and sustainable economic growth in Nigeria. The result revealed that credit to private sector has a significant positive influence on economic growth. Also, unidirectional causality was found between the broad money supply and economic growth, and one-way feedback runs from GDP to commercial bank loans to small scale and medium enterprises. Bello, Abraham and Kabir (2021) used annual time-series data from 1986-2017 and applied Autoregressive Distributive Lag method to investigate the impact of bank credit on Manufacturing sector in Nigeria. The result showed that bank credit has a significant positive influence on manufacturing sector output in Nigeria. Mark (2021) used annual secondary data spanning from 1992-2020 and applied Toda-Yamamoto methods to investigate the impact of commercial bank credit to micro, small, medium enterprises in Nigeria. The result showed that commercial bank credit did not cause expansion in output of MSMEs in Nigeria.

Hassan (2015) used annual time-series data from 1986 to 2013 and applied Ordinary Least Squares methods to examine the impact of monetary policy on private capital formation in Nigeria. The result

revealed that money supply and exchange rate have a significant positive impact on private investment. Also, the result demonstrated that the economic growth rate did not induce an increase in private sector investment. Shuaib and Ndidi (2015) utilised annual time-series data from 1980 to 2022 and applied the Autoregressive Distributive Lag approach to investigate the impact of monetary policy on private capital formation in Nigeria. The finding from the study indicated that monetary policy has a significant positive impact on private capital formation. Specifically, the result showed monetary policy rate and exchange rate have a significant positive effect on private capital formation.

Ayodeji and Oluwole (2018) used annual time-series data from 1981 to 2016 and applied the Johansen Cointegration and Vector Error Correction mechanism to explore the impact of monetary policy on economic growth in Nigeria. The result confirmed that money supply and exchange rate have a positive insignificant effect on economic growth, while interest rate and liquidity ratio have a significant negative effect on economic growth. Okumoko and Akarara (2016) utilised annual time-series data from 1960 to 2016 and applied Vector Autoregressive (VAR) method to examine the impact of monetary policy on the rate of saving and investment in Nigeria. The findings indicated that an increase in the monetary policy rate has a significant positive impact on saving and investment rates both in the short-run and long-run.

Dang, Pham and Tran (2020) used Vietnam's provincial data and applied the Generalised Method of Moments (GMM) and examined the impact of monetary policy on private performance in Vietnam. The result indicated that monetary policy through a broad money supply, domestic credit and interest rate have a significant positive influence on private investment, while the exchange rate has no significant impact on private investment. Andabai (2017) used annual time-series data from 1990 to 2017 and employed the Ordinary Least Squares method to examine the impact of monetary policy on economic growth in Nigeria. The findings of the study showed that the treasury bills, liquidity ratio and monetary policy rate have a significant positive impact on economic growth. Lubo and Bigbo (2021) used annual time-series data from 1981-2018 and applied the Vector Error Correction Mechanism (ECM) technique to examine the impact of monetary policy on domestic private investment in Nigeria. The results indicated that money supply, government domestic savings and interest rate have a significant negative impact on domestic private investment in the long run, while government domestic debt and consumer price index have a significant positive impact on domestic private investment in the long run.

Bakare (2011) used annual time-series data from 1978 to 2008 and applied the Ordinary Least Squares multiple regression method to investigate the consequence of exchange rate reforms on the performance of a private domestic investment in Nigeria. The results revealed that the exchange rate has a significant negative impact on private domestic investment. Nazar and Bachini (2012) used quarterly time-series data from1998-2008 and applied bivariate Generalised Autoregressive Conditional Heteroskedasticity (Bivariate GARCH and investigated the relationship between the real exchange rate uncertainty and private investment in Iran. The result showed that the exchange rate uncertainty has a significant negative impact on private domestic investment.

Tobias and Manbo (2012) utilised quarterly time-series data from 1996 to 2009 and applied Vector Error Correction Model (VECM) to investigate the dynamic effect of monetary policy on private sector investment in Kenya. The result revealed that government domestic debt and treasury bills were inversely related to private sector investment, while money supply and domestic savings have a positive relationship with private sector investment, which is consistent with the IS-LM model. Ndikumana (2014) employed panel data from 1982-2012 and applied Panel Vector Error Correction Model to investigate the implications of monetary policy for credit and investment in Sub-Saharan African countries. The findings of the study showed contractionary monetary policy has a significant negative effect on domestic private investment both directly (through the internet rate or cost of the capital channel) and indirectly (through the bank lending or quantity channel).

Olanrewaju (2015) used annual time-series data and applied the Ordinary Least Squares (OLS) multiple regression method. The result indicated that the economic growth rate stimulated domestic private investment. Lucky and Uzah (2017) used annual time-series data from 1981 to 2015 and applied the Granger Causality test and Johansen Cointegration in Vector Error Correction Model (VECM) in Nigeria. The result indicated that credit to the private sector as a percentage of growth domestic product (CPS/GDP), maximum lending rate, net domestic credit and saving rate have a significant positive relationship with real domestic investment, while the exchange rate prime lending rate and treasury bills rate have a significant negative relationship with real domestic investment.

Sesay and Abdullahi (2017) utilised annual time-series data from 1980 to 2014 and applied Johansen Cointegration and Error Correction Model (ECM) to study the monetary effect on the private sector investment in Sierra Leon. The result indicated that the money supply and the gross domestic savings have a significant positive effect on private sector investment, whereas the treasury bills rate, inflation and gross debt have a significant negative effect on private sector investment. Elem-Uche, Omekara, Okereke and Modu (2019) used annual secondary on core monetary policy variables and applied Vector Error Correction Model to forecast the response of real output in Nigeria based on monetary policy execution. The result showed that monetary policy measures have a significant positive impact on private sector performance.

Herradi and Leroy (2019) used cross-sectional data and employed a Panel Vector Autoregressive technique on twelve advanced countries which included Australia, Canada, Germany, France, Italy, Denmark, Japan, United Kingdom, Sweden, Netherlands, Norway and United States to examine the impact of monetary policy on the real sector growth. The result revealed that expansionary monetary policy increased the real sector growth, while contractionary monetary policy depressed the real sector growth

3. METHODOLOGY
3.1 Theoretical Framework
This paper is anchored on the IS-LM model because it presents an explicit description on how increase in the interest rate would depress investment, thereby reducing the private sector performance and vice versa. It also explains how the money supply affects the aggregate demand and output, thereby affecting the overall private sector performance. Similarly, it explains how the level of government spending affects the interest rate investment as well as the overall performance of private sector. The study has adopted and modified the work of Sesay and Brima (2017) to allow for the inclusion of the real exchange rate as a control variable.

3.2 Nature and Sources of Data
The paper utilises secondary annual time-series data from 1981 to 2021. The data were collected on four macroeconomic variables – Credit to Private Sector (CPS) as a percentage of Real Gross Domestic Product (RGDP), Real Inflation Rate (RIR), Real Exchange Rate (REXR) and Broad Money Supply (BMS). Of these variables, CPS is the dependent variable, while RIR, REXR and BMS are independent variables. REXR is used as a control variable. CPS was collected from the World Development Indicators (WDI), while RIR, REXR and BMS were sourced from the Central Bank of Nigeria (CBN). All the series have been logged to linearise their movements through time, so as to allow for the interpretations of the coefficients as elasticities.

3.3 Techniques of Data Analysis
To do away with spurious regression while using time-series data, Augmented Dickey-Fuller and Phillip Perron tests were conducted on the data to check on the presence of unit root in the data. After conducting the unit root tests, the long-run relationship amongst the variables was examined through

the Bound test. Thereafter, the Autoregressive Distributive Lag (ARDL) model was applied to estimate the long-run and Error Corrections model equation. Akaike Information Criterion (AIC) was used to check the optimal lag length structure of the variables in the study. Finally, diagnostic and stability tests were carried out to determine the robustness of the model adopted and the stability of the parameters respectively.

3.4 Definition and Measurement of Variable

Credit to the Private Sector as a percentage of Real Gross Domestic Product refers to financial resources that have been provided to the private sector and are measured as a proxy for the private sector performance (Lucky & Uzah, 2017). Real Interest Rate refers to the payment annually charged on the borrowed funds, and it is measured by the monetary policy rate as a proxy for the bank lending rate (Ogunsakin, 2014). The real Exchange Rate is the value of the Naira in terms of the Dollar, and it measures the exchange rate fluctuations (Adesete & Jokosenumi, 2018), while the Broad money supply refers to the aggregate that measures the amount of money in circulation (Seysay & Abdullai, 2017.

3.5 Model Specification

The study relies on the Keynesian IS-LM model. Based on this model, the money supply is the key determinant of private sector performance and other variables. Therefore, the study has adopted and modified the work of Sesay and Brima (2017) to allow for the inclusion of the real exchange rate as a control variable. The mathematical function is written as:

$$Y = f(Q, Z) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Where:

$Y =$ Private sector performance

$Q =$ Vector of monetary policy instruments

$Z =$ Vector of other control variables

Based on the above function, Q represents the broad money supply and real interest rate, while Z represents the exchange rate. Thus, it becomes:

$$CPS = f(BMS, RIR, REXR) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$

To make the above function estimable, it is transformed into a stochastic form below:

$$lnCPS_t = \beta_0 + \beta_1 lnBMS_t + \beta_2 lnRIR_t + \beta_3 lnREXR_t + \mu_t \dots\dots\dots\dots\dots\dots\dots (3)$$

Where:

$\beta_0, \beta_1, \beta_2, \beta_3 =$ Coefficients of the independent variables

$lnCPS_t =$ Credit to private sector as a percentage of real Gross Domestic Product

$lnBMS_t =$ Broad money supply

$lnRIR_t =$ Real interest rate

$lnREXR_t =$ Real exchange rate

$ln =$ Logarithm

$\mu_t =$ Error term

Therefore, based on the equation (3) above, the following ARDL model is specified and estimated to test for the cointegration relationship among the variables of interest in the below equation. The technique was first developed by Pesaran and Shin (1999), and it was later improved by Pesaran, Shin and Smith (2001) to deal with single cointegration and could be applied to data irrespective of whether the series is the I(1) or I(0) process (Temidayo, Kehinde, & Abiodun, 2022). The method is also more efficient in the case of small and finite sample data sizes. Further, it gives unbiased estimates of the long-run model (Richard, Nkechinyere, & Chizoba, 2022). Thus, the ARDL formulation of the model for this study is specified as:

$$\Delta LnCPS_t = C_0 + \delta_1 lnCPS_{t-1} + \delta_2 lnBMS_{t-1} + \delta_3 lnRIR_{t-1} + \delta_4 lnREXR_{t-1} +$$
$$+ \sum_{i=0}^{q} \emptyset_5 \Delta lnCPS_{t-1} + \sum_{i=0}^{q} \emptyset_6 \Delta lnBMS_{t-1} + \sum_{i=0}^{q} \emptyset_7 \Delta lnRIR_{t-1} + \sum_{i=0}^{q} \emptyset_8 \Delta lnREXR_{t-1} +$$
$$ECM + \mu_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (4)$$

Where:

$\Delta LnCPS_t$ = Dependent variable (a proxy for private sector performance)

$lnBMS_{t-1}, lnRIR_{t-1}, lnREXR_{t-1}$ = Independent variables of the model

C_0 = Constant term

$\delta_1, \delta_2, \delta_3, \delta_4$ = Short-run dynamic coefficients of the respective variables

$\emptyset_5, \emptyset_6, \emptyset_7, \emptyset_8$ = Long-run coefficients to be estimated

ECM = Error correction term which measures the speed of adjustment

μ_t = Error term

t = Time trend which consists of years spanning from 1981 to 2021

i = Lag indicator

Δ = The first difference operator

Based on the intuition behind the economic theory, it is expected that $\emptyset_5$ and $\emptyset_6$ should be positive (>0), while $\emptyset_7$ and $\emptyset_8$ should either be positive (>0) or negative (<0).

4. RESULTS AND DISCUSSION OF FINDINGS

Table 1: Stationary Tests Results for Variables

	ADF Test			PP Test		
Variable	Level	1st Diff.	Remark	Level	1st Diff.	Remark
$lnCPS_t$	-1.177691^n	-5.463563^{**}	I(1)	-1.485782^n	-10.19715^{**}	I(1)
$lnBMS_t$	-0.932485^n	-7.253839^{**}	I(1)	-0.298939^n	-6.133770^{**}	I(1)
$lnRIR_t$	-2.713101^n	-5.381104^{**}	I(1)	-3.601813^n	-9.256328^{**}	I(1)
$lnREXR_t$	-5.381104^{**}	-2.113464^{**}	I(0)	-3.133753^{**}	-8.857381^{**}	I(0)

Source: Author's compilation using Eviews 10 (2022)

Note: *, ** and *** represent significance levels at 10%, 5% and 1% respectively. The letter n denotes no significance. The table 2 indicates that all the variables are integrated at order one with exception of interest rate which happens to be stationary at level. This condition warrants the application of ARDL methods which accommodates series that are either I(1) or I(0) process or the mixture of both. The stationarity tests are necessary to guard against spurious regression and to ensure no variable is integrated of order two. The tests were based on Augmented Dickey Fuller and Phillip Perron tests which were based on Akaike Information Criterion (AIC) which was selected automatically.

Table 2: ARDL Bound Test of Cointegration Results

Model	F-Statistic	K	Critical Values			Decision
$lCPS = f(lBMS,$ $lRIR, lREXR)$			%	Lower Bound I(0)	Upper Bound I(1)	If H$_0$ is rejected, cointegration exists.
	18.57684	3	1%	4.29	5.61	

2.5%	3.69	4.89
5%	3.23	4.35
10%	2.75	3.77

Source: Author's compilation using Eviews 10 (2022)

Table 2 shows that long-run relationships exist among the variables of the study because the F-Statistic (18.57684) is greater than the lower I(0) and upper I(1) bounds of the critical values at 5% critical value

Table 3: ARDL Long-run Estimated Results

Variables	Coefficients	Std. Errors	t-Statistics	Probability
$lBMS$	0.217166	0.022671	9.578959	0.0000
$lRIR$	-0.160702	0.042128	-3.814569	0.0007
$lREXR$	-0.184178	0.034860	-5.283417	0.0000

Source: Author's compilation using Eviews 10 (2022)

Table 3 above shows that in the long run, if all other things were held constant, the broad money supply ($lBMS$) has a significant positive impact on the private sector performance proxied by credit to the private sector. A unit increase in broad money supply would increase the private sector performance by about 22%. For the real interest rate ($lRIR$), it has a significant negative influence on the private sector performance. This means that a unit increase in the real interest rate would decrease the private sector performance by about 16.1%. Similarly, the real exchange rate ($lREXR$) has a significant negative influence on the private sector performance. A unit increase in the exchange rate would decrease the private sector performance by 18%.

The findings above aligned with some of the empirical studies reviewed. The broad money supply has a significant impact on private sector performance. This result is consistent with the findings of Hassan (2015); Ayodeji and Oluwole (2018); Dang et al. (2020); Lubo and Bigbo (2021). The real interest rate has a significant negative influence on the private sector performance. This result corresponds with the finding of Ndikumana (2014). The real exchange rate has a significant negative influence on the private sector performance. This result supports the findings of Bakare (2011); Nazar and Bachini (2012); Lucky and Uzah (2017).

Table 4: Short-run Estimated Results (3, 2, 1, 0)

Variables	Coefficients	Std. Errors	t-Statistics	Probability
$\Delta(lCPS(-1))$	0.264002	0.132880	1.986764	0.0568
$\Delta(lCPS(-2))$	0.120340	0.144156	0.384788	0.4109
$\Delta(lCPS(-3))$	-0.348628	0.124524	-2.799678	0.0092
$\Delta(lBMS)$	0.013205	0.016782	0.786854	0.4380
$\Delta(lBMS(-1))$	1.034295	0.198853	5.201292	0.0000
$\Delta(lBMS(-2))$	-0.838090	0.193885	-4.322622	0.0002
$\Delta(l\text{RIR})$	0.016707	0.029865	-0.559418	0.5803

$\Delta(l\text{RIR}(-1))$	-0.138256	0.031200	-4.431325	0.0001
$\Delta(l\text{REXR})$	-0.177600	0.036194	-4.906826	0.0000
$ECM(-1)$	-0.964287	0.106323	-9.070219	0.0000

Source: Author's compilation using Eviews 10 (2022)

From the table 4 above, if all things were held unchanged, the short-run result shows that credit to private sector as a proxy for the private sector performance has insignificant positive influence on itself up to lag 2; while at lag 3, it has a significant negative influence on itself. The broad money supply has insignificant impact on itself. At lag 1, it has a significant negative impact on itself, while at lag 2 it has a significant negative influence on itself. The real interest rate has no significant influence on itself. But, at lag 1, it has a significant negative influence on itself. And, the real exchange rate has a significant negative impact on itself throughout. On average, short-run results are in tuned with the long-run results.
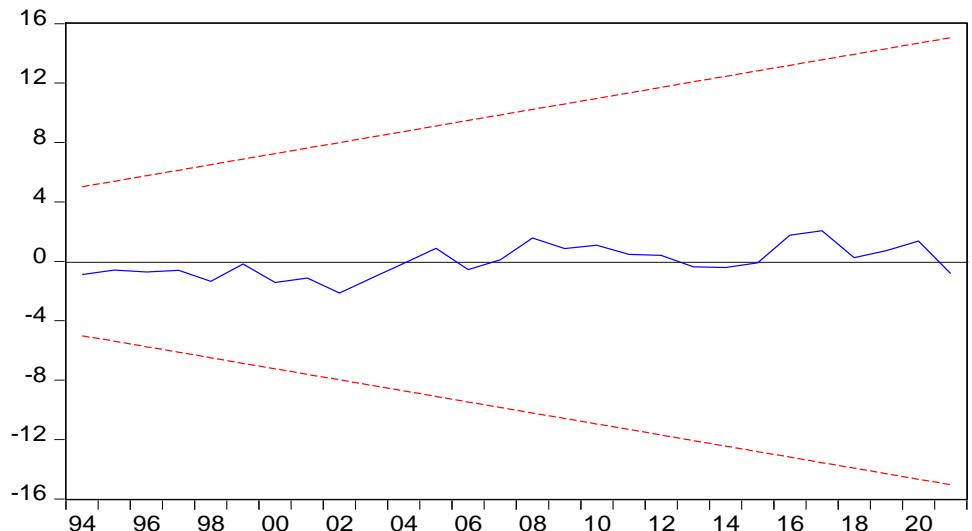
Table 5: Short-run Diagnostic Test results

Test	Null Hypothesis	F-statistics	Prob. Value
Beusch Godfrey Serial Correlation LM Test	No Serial Autocorrelation	2.367889	0.0714
Breusch-Pagan Godfrey	No Hetroscedasticity	1.028283	0.4426
Jarque-Bera	There is normal Dist.	0.562393	0.7548
Ramsey Reset	No Misspacification	0.015040	0.9033
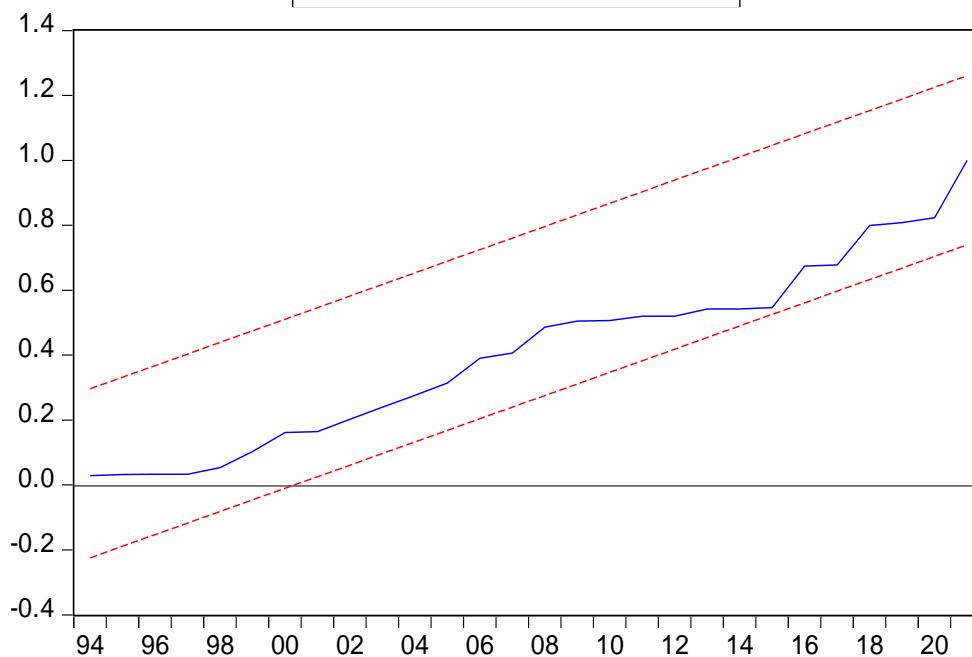
Source: Author's compilation using Eviews 10 (2022)

From table 6 above, to confirm the validity or the opposite of the estimates, the model is subjected to serial correlation test. The null hypothesis is that there is no serial correlation in the residuals up to a specified lag order. The above results show that the null hypothesis cannot be rejected because the p-value is greater than the 5% significance level. Thus, the model does not suffer from serial correlation. To test whether the variance of the disturbance term is not the same for all the observations, the heteroscedasticity test has been conducted. The null hypothesis of this test is that the there is no heteroskedasticity. Therefore, the null hypothesis cannot be rejected since the p-value of the chi-square statistics is greater than 5% significance value. Hence, the model is homoscedastic.

Ramsey reset test holds that the F-statistic and the t-Statistic test the hypothesis that the coefficients on the powers of the fitted values from the regression are jointly zero. Therefore, the null hypothesis cannot be rejected since the probability values are greater than 0.1. This implies that the model used in this study is well-specified.

The above CUSUM and CUSUM of Square plots fall within the critical bounds at 5% significance level. This suggests that the model is structurally stable based on the sample used in the study and the findings from this study could be relied upon

5. CONCLUSIONS AND POLICY RECOMMENDATIONS
This paper investigates monetary policy impact on the private sector performance by using annual time series data spanning from 1981-2021. The paper uses the IS-LM model that captures components of core monetary policy variables – the broad money supply, the real interest rate and a certain control variable – the real exchange rate. The study employs the ARDL approach to cointegration. Findings from this study reveal that that in the long and short run, the broad money supply has a significant

positive impact on the private sector performance. However, the real interest rate and the real exchange rate have a significant negative impact on the private sector performance.

Based on the above findings, the study recommends that the Federal Government through the Central Bank of Nigeria (CBN) should maintain the on-going efforts of promoting real-sector friendly financial system by enhancing the financing of private sector investment and improving the accessibility of credit flow to the sector. Similarly, the expansionary monetary policy should be maintained to allow for the injection of optimal money supply into the system. The interest rate should be reduced to encourage access to credit from the financial sector to the private sector, thereby promoting the private sector performance. The government should halt its continued less impactful devaluation policy and embrace more diversification commitments to acquire more forex and bridge its scarcity, thereby improving the value of Naira against the value of other currencies. Finally, the study concludes that monetary policy impact improves the private sector performance in Nigeria.

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