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Money Market Operations and Money Supply in Nigeria

[1]Prof. G. I. Anyanwu; [2]Dr. Duruechi, Anthony H.; & [3]Mr. Ike James;

[1&2]Department of Banking & Finance, Faculty of Administration and Management Sciences, Imo State University, Owerri, Imo State, Nigeria. [3]Department of Accounts, Judiciary High Court of Justice, Owerri, Imo State, Nigeria.

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Abstract

The study investigated the effect of money market operations and money supply in Nigeria from 2000 to 2024. Money market operations were disaggregated into treasury bills, certificates of deposit, commercial paper, and bankers' acceptance while broad money (m_2) was used as a proxy for money supply. The quasi-experimental research design was adopted where secondary data on the above-stated dependent and explanatory variables were sourced from the 2024 edition of the Central Bank of Nigeria (CBN) bulletin. The data generated were analyzed using the ARDL model. The study found that treasury bill (tb) has negative significant effect on money supply in Nigeria, certificates of deposit (cd) has positive insignificant effect on money supply in Nigeria, commercial papers (cp) has positive insignificant effect on money supply in Nigeria and bankers' acceptance (ba) has negative insignificant effect on money supply in Nigeria**.** It was therefore concluded that money market operations have a significant effect on money supply. The study recommended that there is need to increase the issuance of money market instruments in Nigeria since the money market operations have positive significant effect on money supply.

Keywords: Money Market, Operations, money supply

Introduction

The money market is one of the pillars of the global financial system that involves overnight swaps of large amount of money between banks and the government (Adams, 2025). The money market is an integral part of the Nigeria economy since it plays a vital role in the economic growth process of the country (Kehinde & Adejuwon, 2011). Specifically, it plays a key role in banks liquidity management and the transmission of monetary policy (Rigg & Zibell, 2009). Money markets play a key role in banks' liquidity management and the transmission of monetary policy by providing the appropriate instruments for liquidity trading. The money market also

allows the refinancing of short and medium term to facilitate and mitigate business liquidity and risk (Iwedi & Igbanibo, 2015); and control of money supply and demand-pull inflation and the determination of short-run interest rate (Ekmekcioglu, 2013). In normal times, money markets are among the most liquid in the financial sector. By providing the appropriate instruments and partners for liquidity trading, the money market allows the refinancing of short and medium-term positions and facilitates the mitigation of business liquidity risk. The banking system and the money market represent the exclusive setting monetary policy operations. Unarguably, a developed, active and efficient interbank market enhances the efficiency of Central Bank's monetary policy, transmitting its impulses into the economy best policy. Thus, the growth of the money market smoothes the progress of financial intermediation and boosts lending to the economy and thereby improving the country's economic and social welfare (Ochei & Osabuohien, 2012; Dabwor, 2009). Therefore, the growth of the money market is in all stakeholders' interests; the banking system itself, the Central Bank and the economy as a whole.

The existence of money market facilitates trading in short-term debt instruments to meet short term needs of large users of funds such as governments, banks, and similar institutions (Ehigiamusoe, 2013). Moreover, the level of development of money market serves as a barometer for measuring the level of development of the economy. The money market is one of the categorizations of the financial markets. The other category is the capital market. While the money market deals in short-term funds, the capital market deals in long-terms loanable funds (Anyanwu, 1996). The basis of distinction between the money and capital market lies in the degree of liquidity of instruments traded in each of the markets

In developing economies like Nigeria money markets are still underdeveloped. As such the absence of a well-developed money market in these countries poses a challenge in pooling funds large enough to fund private enterprises. In spite of the fact, that the Nigeria money market has witnessed robust reforms and expansion, there are still some problems and challenges which the market is confronted with. The Nigerian money market is still superficial when compared to her contemporaries in some advanced and emerging economies such U.S.A.; it is also characterized by immature secondary market, undiversified instruments, lack of proper coordination in the issuance of debt instruments, inadequate and deficient information flow among others. Can it be concluded therefore that money market operations hamper economic growth in Nigeria? This is the question that previous studies have not fully answered.

A critical characteristic of the money market is that it should be deep and broad so as to absorb large volume of transactions without significant effects on security prices and interest rate (Cvetanovic, Mitrovic & Jurakic, 2019). The characteristic requires that there exist active money active market participants such that the transactions of an individual investor will have only an infinitesimal effect on security prices and interest rates. The characteristic also requires that there are wide range varieties of securities so as to ensure that there are always alternative investment instruments available to satisfy the respective return-risk desires of investors in the market. A money market that has depth and breadth will be informational as well as operationally efficient and will contribute significantly to the growth of the economy. Money market constitutes the most important institution for creating liquidity for government, companies and individuals (Ochei & Osabuohien, 2022).

In Nigeria, the money market is inadequate and constrained by the absence of sub-markets and availability of adequate credit instruments required for the smooth operations of the market (Taiwo 2025). Despite the robust reforms in the market in recent times, the money market in Nigeria has remained underdeveloped. This is reflected in the inability of many programmes establish by government to achieve their targeted goals, resulting from poor local participation by the federal government established economic programmes, with hope to foster economic and financial development.

The money market in developing nations such as Nigeria has underperformed in terms of money supply to the economy thereby hampering economic growth by failing to provide necessary funds to investors (Tsimtop & Bala, 2023). It is therefore the crux of this study to examine the nexus between money market operations and money supply for economic activities.

Review of Related Literature

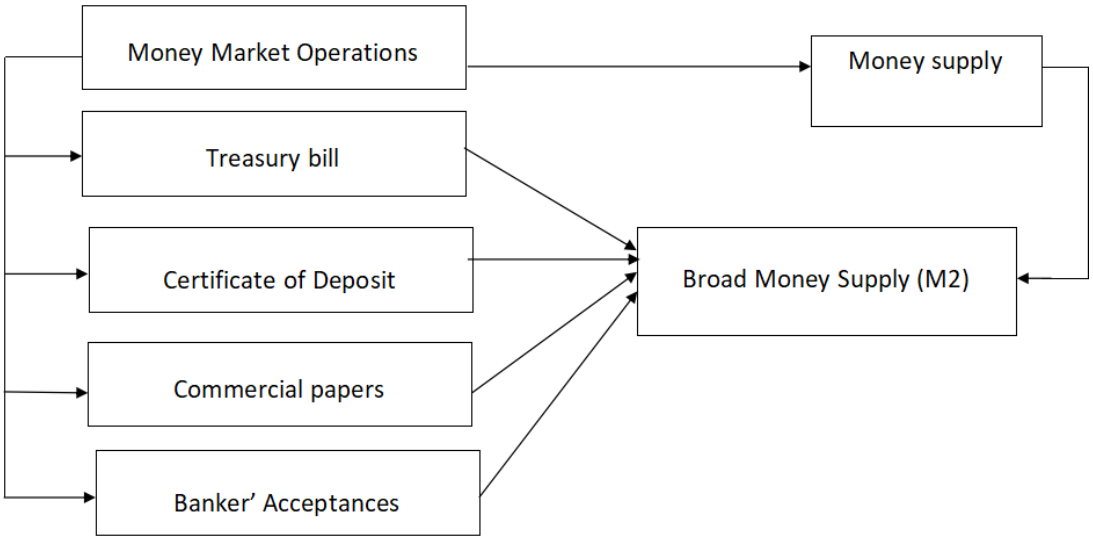


Fig 2.1 Operational Conceptual Framework Source: Researcher's Desk (2026).

Money market is a financial market that involves the trading of short-term credit instruments of high quality which includes treasury bills, treasury certificates, bankers' acceptances, commercial papers and certificate of deposits among others (Ndugbu, Duruechi & Ojiegbe, 2016).

The major participants in the money market include the deposit money banks, government, corporations, enterprises, money market mutual funds, the Central bank of Nigeria, pension managers among others (Ndugbu et al. 2016). Money market instruments play a vital role in banks' liquidity management and facilitate the re-distribution of resources from the surplus units (savers) to the deficit units (borrowers) and thus provide funds for investments.

The money market is the cornerstone of a competitive and efficient system of market-based intermediation and should normally be in good working order before a government bond market is developed. The money market stimulates an active secondary bond market by reducing the liquidity risk attached to bonds and other long/short term financial instruments and by assisting financial intermediaries in managing liquidity risk. The money market serves as the medium for government cash management and provides the first link in implementing monetary policy using indirect instruments (Hellmann, Kevin, & Joseph, 2023).

In the view of Maloney and Paddy (2022), There are three key conditions required to develop a well-functioning money market:

(i) Banks and other financial institutions must be commercially motivated to respond to incentives to actively manage risk and maximize profit;
(ii) The central bank must shift from direct to indirect methods of implementing monetary policy;
(iii) The government must have a good capacity for cash management, thereby giving the central bank greater freedom in setting its operating procedures. The design of the central bank's market

operating procedures has a significant impact on banks' incentive to actively manage the risk of running short of reserve money: the greater the incentive, the more banks will transact among themselves and the more liquid the market will become. On the other hand, a weak capacity for cash management by the government limits the extent to which the central bank can tighten incentives to actively manage the risk of running short of reserve money without causing excessive volatility in money market interest rates.

As regards money supply, Welch and Gerry (2016) observed that the currency in circulation in a country is the value of currency or cash (banknotes and coins) that has ever been issued by the country's monetary authority less the amount that has been removed. More broadly, money in circulation is the total money supply of a country, which can be defined in various ways, but always includes currency and also some types of bank deposits, such as deposits at call.

The easiest money demand shock to consider is to assume that suddenly people decide to carry more cash in their pockets. Given the monetary base, an increase in currency holding leads to a one-for-one reduction in the reserves available to the banking system, resulting in a decline in bank loans. Double entry bookkeeping and the assumption of no excess reserves tell us that as loans decline, so will deposits. Under a fractional reserve system, the decline in the deposits will be larger than the increase in currency holding by the private sector, which means that the quantity of transaction money MZM will decline, and so will the money multiplier (MZM divided by the monetary base).

To clear the credit and money markets in response to the aforementioned disturbance, the prices of credit and money have to change. First, we know that in equilibrium the price of money has to increase. The opportunity cost of holding money, for non interest bearing liquid assets, will increase. The price of money in terms of goods must increase too. This means that the price level and/or inflation rate will decline. In turn, higher interest payments on deposits will entice people to switch back to demand deposits. Under a competitive environment, the higher interest rates paid on deposits are the result of the higher interest rates charged on loans.

The changes in interest rates or market-clearing prices will result in a partial offset of the initial disturbance. To the extent that the initial disturbance is not completely offset, the new equilibrium will consist of a higher price of money or lower inflation rate, a higher price of credit, and a larger spread. These changes in turn will result in the new equilibrium quantities: a higher currency holding, a lower MZM and lower deposits and bank credit. This is the one-to-one mapping that we have in mind, linking the new equilibrium quantities of money and credit to the new market-clearing prices.

A shift in the demand for currency leads to a market-clearing equilibrium process that results in a negative relationship between the equilibrium quantity of currency and the inflation rate, as well as a negative relationship between the currency holding and the opportunity costs of holding noninterest bearing money. An increase in the supply of currency would result in the opposite correlation. This analysis suggests a simple way to determine the nature of the disturbances in the money and credit markets, examine the correlation between these aggregates and determine the relevant prices.

Theoretical Framework

Related theories of this work include the financial Intermediation theory, loanable fund theory of interest and the supply-leading theory. This study relied mainly on the supply-leading theory propounded by Schumpeter in 1911. According to the supply-leading theory, the financial market drives economic expansion. It posits that higher levels of savings and investments are made possible by the existence and growth of the financial market which also improves the effectiveness of capital

accumulation. This theory asserts that a well-developed financial institution will foster overall economic efficiency, expand capital accumulation, reallocate resources from traditional (non-growth) sectors to contemporary growth-inducing sectors, and foster a skillful entrepreneurial response in these contemporary sectors of the economy. The principle is grounded on the idea that no exchange between economic players is required if transaction, information, and monitoring costs were sufficiently high. The financial institutions and markets that make up the financial sector were created as a result of these desires. Akpotor and Egharevba (2022) noted that money market leads to economic growth, which implies that improvement in the efficiency of capital accumulation or an increase in the rate of savings enhances financial intermediation which, in turn, leads to economic growth.. Supporters of the supply-leading theory contend that, as entrepreneurs gain greater access to funds, their expectations rise and new opportunities/horizons materialize. This, they claimed, fuels economic growth because access to private sector credit, a key indicatore of the financial sector's deepening, fuels expectations and opportunities. Nwosu and Hamman (2008), stated that financial deepening does not significantly affect economic growth; rather, the question is whether as the economy expands, more financial institutions, financial products, and innovations enter the market in response to an increase in demand for financial services. One key argument against the supply-leading theory also centers on the prospect that the rise of the financial sector could impede economic expansion by increasing volatility and discouraging risk-averse investors from making investments. Financial innovation, in particular, permits risk mitigation and may lower precautionary savings and investment, slowing development. A strong financial intermediation promotes economic growth by facilitating savings mobilization, trading facilitation, and risk diversification. These crucial services encourage resource allocation that is more effective, the rapid accumulation of human and physical capital, and a faster pace of technical innovation, all of which eventually result in more rapid and sustained economic growth.

Empirical Review

Ele, Godwin, Ogadi, and Nwankwo (2025) studied money supply and inflation rate in Nigeria for the period 1985 to 2024. The specific objectives were to empirically examine the impact of broad money supply (M_2) on the rate of inflation in Nigeria, examine the impact of nominal money supply (M1) on the rate of inflation in Nigeria, and to empirically examine the impact of interest rate on the rate of inflation in Nigeria, The study adopted ex post facto method and employed the Generalized Method of Moments (GMM) techniques to analyze the data. The findings showed that Broad money supply (M_2) has significant positive impact on the rate of inflation in Nigeria; Nominal money supply (M1) has significant positive impact on the rate of inflation in Nigeria, while monetary policy rate has significant negative impact on the rate of inflation in Nigeria.

Roberta, Saranda, Adelina and Medain (2024) Analyzed the impact of money supply on economic growth: A panel regression approach for Western Balkan countries (2000–2023) the study used panel data analysis to investigate the relationship between economic growth and some selected macroeconomic variables such as the money supply, inflation, foreign direct investment (FDI), and government spending. The study used gross domestic product (GDP) as proxy for economic growth as dependent variable while broad money supply (M_2), inflation, foreign direct investment (FDI) and government spending were used as independent variables.

The study used Fixed Effects (FE), Random Effects (RE), and Generalised Method of Moments (GMM) estimations to emphasize the importance of these variables in driving economic growth. The Fixed Effects model indicates that the money supply (M2) has a positive and significant impact on economic growth (coefficient of 0.032, $p < 0.05$), while inflation has a negative impact (coefficient of −0.045,

$p < 0.05$). The Random Effects model shows comparable patterns, with money supply and inflation coefficients of 0.028 ($p < 0.05$) and −0.038 ($p < 0.10$), respectively. According to the RE model, FDI has a positive impact on growth (coefficient = 0.021, $p < 0.10$). However, government spending (GOVEXP) remains statistically insignificant in both scenarios. The GMM calculation confirms that money supply (0.027, $p < 0.05$) and inflation (-0.042, $p < 0.05$) have a significant positive and negative impact on economic growth, respectively. FDI contributes favourably with a coefficient of 0.024 ($p < 0.10$), while government expenditure is insignificant. Lagged GDP growth is a significant factor, with a coefficient of 0.215 ($p < 0.05$), indicating sustained economic expansion throughout time. The findings emphasize the importance of monetary policy, inflation management, and attracting foreign direct investment in encouraging long-term economic growth, while government spending appears to have less influence in the short run.

Tsintop and Bala (2023) examined the impact of money market activities on the economic growth of Nigeria 1981-2020. The study used gross domestic product (GDP) as proxy for economic growth with which is the dependent variable while Treasury bill, certificate of deposit, commercial papers and bankers' acceptance were used as a proxy for money market as the predictor variables. Data for the study were collected from national bureau of statistics and CBN statistical Bulletin; the data collected were subjected to regression analysis. The study revealed that the value of Treasury bill to GDP in Nigeria within the period under study shows a positive significant impact on the GDP. While value of commercial paper also shows significant impact to the GDP but does have significant effect on the economic growth and value of bankers' acceptance note also shows significant impact on the GDP.

Adediyan, (2020) examined the determinants of money supply in the Nigerian economy. variables such as income and money multiplier were employed. This research extends the literature on money supply determinants to include the influence of financial liberalization on money supply with a reference to Nigeria between 1980 and 2019. The study used broad money supply (M_2) as a proxy for money supply as the dependent variable while financial liberalization was proxied by income and money multiplier independent variables. Autoregressive Distributed Lag (ARDL) approach was used. The data used in the study were collected from the 2019 CBN Annual Statistical Bulletin. The study found that financial liberalization is an important factor in determining money supply in Nigeria, in addition to currency ratio, required reserve ratio and high-powered money. As a result, the extent of the liberalization of the financial sector matters in decisions on the regulation of money supply in the economy.

Okoro, Nwadike and Kalu (2017) examined interest rate and investment in money market instruments in a developing economy of Nigeria. Interest rate was used as the independent variable while money market instrument was proxied by treasury bill, commercial papers, certificate of deposit and bankers' acceptance as dependent variables. The study used the quasi-experimental and analytical method using secondary data drawn from the Central Bank of Nigeria statistical bulletin covering the period 1981 to 2014. Basic descriptive statistics were used to explore the data characteristics while linear association was tested using the bi-variate correlation metrics. Similarly, the ordinary least squares regression was used as estimation method. The finding indicates that interest rate was positive and significant on money market instruments like treasury bills and commercial papers.

Etale and Ayunku (2017) sought to investigate whether money market spurs economic growth in Nigeria through granger causality approach. The study used money market instruments like treasury bills (TBs), commercial papers (CPs) and bankers' acceptances (BAs) as proxies for money market while gross domestic product (GDP) was used as a proxy for economic growth. Time series data were collected from Central Bank of Nigeria statistical bulletin and the National Bureau of Statistics for the period 1989 – 2014. Estimation techniques used to analyze the data include the Augmented Dickey

Fuller (ADF) test, ordinary least square multiple regression and granger causality test. Findings indicate strong evidence that treasury bills and commercial paper had positive and significant influence on GDP, while bankers' acceptances (BAs) had positive but insignificant influence on GDP in Nigeria. The granger causality test results show no directional causality relationship between treasury bills, commercial papers and gross domestic product. A bi-directional relationship was observed flowing from commercial papers (CPs) to treasury bills (TBs) and bankers' acceptances (BAs) and was statistically significant at 5% level. The researchers recommend that for the money market to influence meaningful economic growth and development in Nigeria, appropriate policies should be employed to strengthen and deepen the market.

Pavtar (2016) examined the relationship between money market and economic growth in Nigeria using time series data for the period 1985 to 2014 collected from the Central Bank of Nigeria (CBN) statistical bulletin. The author used treasury bills (TBs), treasury certificates (TCs), commercial papers (CPs) and certificate of deposit (CDs) as proxies for money market while gross domestic product (GDP) was employed as proxy for economic growth. The research used the ex-post facto research design. The descriptive statistics and ordinary least square multiple regression technique were used to analyze the data. The study revealed that treasury bills (TBs), treasury certificates (TCs) and commercial paper (CPs) had no significant effect on gross domestic product but certificate of deposit (CDs) had significant impact on GDP.

Ajao and Festus (2011) undertook a study in two separate time periods, 2000 to 2005 and 2006 to 2009 involving the financial markets and money market instruments. Treasury bills (TBs), commercial papers (CPs), bankers' acceptances (BAs), certificate of deposits (CDs) were used as independent variable while the ratio of money supply to GDP was used as a proxy for financial deepening as the dependent variable. The study used the ordinary least square multiple regression technique to analyze the data. The findings revealed that the independent variables impact positively on financial market deepening in Nigeria.

Ndugbu, Duruechi and Ojiegbe (2016) examined the relationship between money market instruments and bank performance in Nigeria for the period 1990 to 2014. The study used Treasury bill, commercial paper and bankers' acceptance as proxy for money market instruments as independent variables while bank performance was the dependent variable. Based on the data from the Central Bank of Nigeria statistical bulletin, the ordinary least square multivariate regression method, granger causality test, the Johansen and Juselius co-integration test and the error correction mechanism method. Their results reveal that treasury bills, and commercial papers have positive and significant relationship with bank performance in Nigeria, while bankers' acceptances has a negative relationship with bank performance. The researcher deduced from the study that the influence of the money market instruments on bank performance promote bank ability to increase money supply through effective monetary policy of the monetary authority, enhance economic activities and by extension positively contribute to financial deepening. The study thus conjectures that money market instruments do not directly contribute to financial deepening in Nigeria.

Agbada and Odejimi (2015) examined the impact of money market instruments on economic viability of Nigeria for the period 1981 to 2011 using ordinary least square multiple regression technique to analyze the data. Treasury bills (TBs), treasury certificates (TCs); certificate of deposits (CDs), commercial papers (CPs) and bankers' acceptances (BAs) were used as explanatory variables. The study finding indicates a positive linear relationship between the dependent variable (economic viability) and independent variables.

Ehigiamusoe (2013) examined the connection between money market and economic growth in Nigeria employing data from 1980 to 2013 Money market was proxied by treasury bill, commercial paper, certificate of deposit and bankers' acceptance as independent variables while gross domestic product (GDP) was used as dependent variable and proxy for economic growth. Ordinary Least Square (OLS) method, Johansen Co-integration test and Vector Error Correction Model were employed, and it was found that while long-run relationship exists between money market and economic growth, money market had and significant effect on economic growth.

McDonald and Schumater (2007) investigated the role of creditor rights and information sharing in explaining why some financial markets in sub-Saharan Africa have remained shallow for the period 1983 to 2004. They used ordinary least square multivariate regression method to analyze the data. The study finds that while financial liberalization and macroeconomic stability promote financial deepening, they are not enough. For countries with similar financial liberalization efforts, those with stronger legal institutions and information sharing have deeper financial development. This result is consistent with a growing body of research for other regions of the world.

Generally, there are no conclusive findings from the empirical literatures on the relationship between money market operations and money supply in Nigeria. The major reasons for this difference are due to the difference in methods that have been used in making the analysis, difference in measurement, sample size, area of the research and data span. However, many previous studies on this topic excluded government instruments such as value of treasury bills outstanding in their investigation, which is seen as one of the dominant players in the market. This research work intends to fill this vacuum, by including certificate of deposit outstanding in the study and contribute to knowledge.

Methodology

The study adopted quasi-experimental research design. The secondary source of data was mainly employed in this study. It was obtained from the CBN statistical bulletin of 2024 edition covering the period from 2000 to 2024. The study employed Auto regressive distributive lag (ARDL) model considered suitable for the model of this nature since the stationarity test of the data set were stationary at level and first differencing.

Model Specification

The model for this study is specified thus;

The relationship is expressed mathematically Thus:

MS2 = F(TB, CP, CD, BA)

This is further written as a regression equation thus.

$MS2= b_0 + b_1TB + b_2CD + b_3CP + b_4BA+l$

Where:

MS2 = Money supply

TB = Treasury bill

CD = Certificate of deposit

CP = commercial paper

BA = Bankers acceptance

b_0 is a constant (intercept); while b_1, b_2, b_3, b_4

Represents shops coefficients and l is the error term.

Table 4.1: logged form of Data of the Original Data Set

YEAR	LogM2	LogTB	LogBA	LogCD	LogCP
2000	2.943721	5.667953	4.502084	2.073352	4.278811
2001	3.103572	5.766811	4.487885	2.106871	4.548359
2002	3.177814	5.766811	4.508047	3.385856	4.567946
2003	3.290685	5.916483	4.530204	3.121986	4.677324
2004	3.32875	5.940306	4.380264	3.364438	4.903715
2005	3.42126	5.931879	4.61409	3.480524	5.289123
2006	3.579545	5.845966	4.660329	3.391852	5.286707
2007	3.709897	5.759615	4.912934	3.397575	5.560348
2008	3.936686	5.750673	5.019718	3.284047	5.674781
2009	3.986212	5.759615	5.189135	3.264487	5.727513
2010	4.04538	5.759615	5.186633	3.513896	5.792806
2011	4.101346	5.673877	5.105609	3.512711	5.843561
2012	4.190427	5.673877	4.82216	3.654408	5.915242
2013	4.272841	5.636049	4.854147	3.373905	5.844056
2014	4.309962	5.737931	4.889378	3.711208	5.874073
2015	4.319845	5.807487	4.870496	3.665375	5.779932
2016	4.384873	5.877128	4.951152	3.567273	5.858851
2017	4.456434	5.901721	4.794095	3.391182	5.706785
2018	4.473843	5.510714	4.867687	3.289076	5.624602
2019	4.534761	5.720553	4.112384	3.512097	5.593001
2020	4.556761	5.87894	4.851452	3.436465	5.363814
2021	4.606063	5.014212	4.800213	3.574205	5.493563
2022	4.685396	5.014212	4.7 14817	3.437655	5.329136
2023	4.802859	5.014212	4.539831	3.393628	5.628647
2024	4.726943	5.014212	4.909034	3.560206	5.322291

Source: Authors' computations (2026).

Table 4.2 ADF Unit Root Result

VARIABLES	ADF TEST STATISTICS AT LEVEL	5% CRITICAL VALUES	LEVEL OF INTEGRATION	REMARKS
MS2	-3049633	-2.991878	I (0)	Stationary @ Level
TB	-5.595835	-2.998064	I (1)	Stationary @ 1st Diff.
CD	-4.134977	**-2.991878**	I (0)	Stationary @ Level
CP	-3.797520	-3.012363	I (0)	Stationary @ Level
BA	-7.177243	-2.998064	I (1)	Stationary @ 1st Diff.
CPS	-3.194252	-2.998064	I (1)	Stationary @ 1st Diff.

Source: e-view output , 2026

In the unit root test result above, the ADF statistics reveal MS2, CD and CP were stationary at level while TB and BA were stationary at first difference. This implies that the series are integrated

(stationary) at different order of integration (i.e order I(0) and I(1). We therefore affirm that the variables have statistical properties that are constant and do not change over the time period under study. Based on the above result, ARDL model is deemed appropriate for analyzing the data set since all the variable were stationary at different order of integration.

Table 4.3: Results of Coefficient of the ARDL Estimate

Included observations: 23 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.967890	0.887048	1.091136	0.2966
LOGTB(-1)	-0.989039	0.104861	-9.431995	0.0000
LOGCD(-1)	0.246688	0.065012	0.718155	0.0264
LOGCP(-1)	0.106753	0.117562	0.908057	0.3817
LOGBA(-1)	-0.092188	0.119045	-0.774393	0.4537
R-squared	0.891289	Mean dependent var		0.070581
F-statistic	12.18901	Durbin-Watson stat		2.247960
Prob (F-statistic)	0.008569			

Source: *e-views output, 2026*

Test for long run relationship using bounds test

Bounds test

Wald Test:

Equation: Untitled

Test Statistic	Value	Df	Probability
F-statistic	7.331430	(5, 12)	0.0156
Chi-square	6.657148	5	0.0474

Null Hypothesis: C(7)=C(8)=C(9)=C(10)=C(11)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(7)	-0.169109	0.093287
C(8)	-0.089039	0.104861
C(9)	0.046688	0.065012
C(10)	0.106753	0.117562
C(11)	-0.092188	0.119045

Pesaran Criteria

Critical value	Lover Bound	Upper Bound
1%	3.74	4.99
5%	2.86	4.01
10%	2.45	3.52

Source: e-views output, 2026

Restrictions are linear in coefficients.

The F-statistics of the bound test was obtained as 7.331430. Since the f-statistic is greater than the upper and lower bounds of pesaran critical value at 1% and 5% respectively. We therefore infer that a long run effect exists in the model.

Test of Goodness of Fit

The adjusted R^2 of the model shows 0.89 indicating that about 89% of the variations in Money supply is being accounted for or explained by explanatory variable which is a very good fit. The remaining 11% is taken care of by other factors included in the error term.

Autocorrelation Test Result

The Durbin Watson value of 2.247960 tends towards 2 than 0 which is an indication that there is no autocorrelation among the variables. The absence of autocorrelation further confirmed that the variable is independent of each other.

Breusch-Pagan-Godfrey Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	**0.877110**	**Prob. F(10,12)**	**0.5764**
Obs*R-squared	9.712308	Prob. Chi-Square(10)	0.4661
Scaled explained SS	3.604656	Prob. Chi-Square(10)	0.9634

The test for heteroscedasticity indicates that the probability value of the F- statistic is 0.5764. which is greater than 0.05. On the other hand, observed R squared and scaled explained SS respectively have probabilities that are above 5%. All these imply that there is no heteroscedasticity in the model hence the model is homoscedastic.

Test of Hypotheses

$H0_1$: Treasury bill has no significant effect on money supply.
The P-value of TB was obtained as 0.0000, which is less than the critical value at 5% (0.05). This implies that treasury bill has significant effect on money supply in Nigeria

$H0_2$: There is no significant effect of certificate of deposit and money supply
The P-value of certificate of deposit was obtained as 0.0264 which is less than the critical value at 5% (0.05). this implies that certificate of deposit has significant effect on money supply in Nigeria

$H0_3$: Commercial papers has no significant effect on money supply in Nigeria.
The P-value of commercial paper was obtained as 0.3817, which is greater than the critical value at 5% (0.05). this implies commercial paper has no significant effect on money supply in Nigeria.

$H0_4$: There is no significant effect bankers acceptance and supply in Nigeria.
The P-value of bankers acceptance was obtained as 0.4537, which is greater than the critical value at 5% (0.05). this implies bankers acceptance has no significant effect on money supply in Nigeria.

The effect of treasury bill on money supply

Treasury bill (TB) has negative significant effect on money supply of Nigerian economy. This direct relationship implies that a percentage decrease in the slope of treasury bill will result to a corresponding increase in money supply in Nigeria to the tune of -0.989039.

The effect of certificate of deposit (CD) on money supply

Certificate of deposit (CD) has positive significant effect on money supply of Nigeria economy. This direct effect implies that a percentage increase in the slope of certificate of deposit will result to a corresponding increase in money supply in Nigeria to the tune of 0.246688.

The effect of commercial paper (CP) has a positive insignificant effect on money supply of Nigeria economy. This direct effect implies that a percentage increase in the slope of commercial paper will result to a corresponding increase in money supply in Nigeria to the tune of 0.106753.

The effect of banker's acceptance on money supply

Bankers acceptance (BA) has a negative insignificant effect on money supply of Nigeria economy. This invers relationship implies that a percentage increase in the slope of bankers' acceptance will result to a corresponding decrease in money supply in Nigeria to the tune of -0.092188.

The F-statistics of the bound test was obtained as 7.331430. Since the f-statistic is greater than the upper and lower bounds of pesaran critical value at 1% and 5%, respectively. We therefore infer that a long-run effect exists in the model.

The study has achieved the objectives of this research work with the following findings:

1. Treasury bill has significant effect on broad money supply
2. Certificate of deposit has significance effect on broad money supply
3. Commercial paper has no significant effect on broad money supply
4. Bankers' acceptance has no significance effect on broad money supply.

Conclusion and Recommendations

Money market operations to a large extent play a significant role in the Nigerian financial market. Having investigated the effect of money market on money supply of Nigeria economy, the study discovered that the indicators captured in the study reveals mixed effect on money supply. Treasury bill and bankers acceptances showed inverse effect while commercial paper and certificate of deposit exert positive effect. However, the study concludes that money market operations have a significant effect on money supply since the joint power of the predictor variables revealed such in our analysis.

Recommendations

The following recommendations were made based on the study:

1. Treasury bill from our analysis has significant effect on money supply as such there is need for regulatory authorities to increase the issuance of treasury bills which will in turn depeen the Nigerian financial system.
2. The study revealed that commercial paper is positively signed; issuance increases money supply; hence, policies that support this finding should be maintained.
3. There is a need for regulatory authorities to make policies that will increase the issuance of bankers acceptance based on the state of money in circulation they want to maintain.
4. There is need for regulatory authorities to intensify efforts to enhance the operations of the money market.

References

Adediyan, Aderopo R. (2020) "Determinants of money supply in Nigeria," *CBN Journal of Applied Statistics (JAS): Vol. 12: No. 1, Article 2. Available at: https://dc.cbn.gov.ng/jas/vol12/iss1/2*

Agbada, A.O., & Odejimi, D. O. (2015). Developments in money market operations and economic growth viability in Nigeria: *An empirical analysis. European Journal of Business and Management, 7(18),* 42-52.

Akpotor, V. A. & Egharevba, E. F. (2022). Can treasury bills Issued Influence economic growth in Nigeria? An empirical answer. *British International Journal of Applied Economics, Finance and Accounting, 6(2), 1-8.*

Anyanwu, J. C. (1996). Monetary economics. L*agos, Heinemann Educational Books (Nigeria) Plc. 247–274.*

Cvetanovic, S.; Mitrovic, U. &Jurakic, M. (2019). Institutions as the driver of economic growth in classic, neoclassic and endogenous theory. *Economic Themes, 57(1), 111-125. Dabwor T. D. (2009). The Nigerian banking system and the challenges of financial intermediation in the twenty first century. Jos Journal of Economics, 4(1).*

Ehigiamusoe, U.K. (2013). The link between money market and economic growth in Nigeria – vector error correction model approach. *International Journal of Social Education, Economics and Management, 7(12),* 1792-1800.

Ele, L E O, Godwin A, Ogadi, E.D & Nwankwo D (2025) The money supply and inflation rate in Nigeria (1985- 2024). *International Journal of Social Sciences and Management Research E-ISSN 2545-5303 P-ISSN 2695-2203 Vol 11. No. 8 2025 www.iiardjournals.org online version 10.56201/ijssmr.vol.11no8.2025.pg117.137*

Etale, L.M., & Ayunku, P.E. (2017). Does money market spur economic growth in Nigeria? granger causality approach. *International Journal of Development and Economic Sustainability, 5(7),* 28-37.

Hellmann, Thomas F., Kevin C. Murdock, & Joseph E. Stiglitz. (2023). "Liberalization, moral hazard in banking, and prudential regulation: Are capital requirements Enough?" *American Economic Review 90 (1): 147–65.*

Igbinosa, S.O., & Orobator, B. (2016). Determinants of money market development in Nigeria: empirical evidence. *Journal of Business and Value Creation, 2(3), 11-24.*

Kurtzleben, D. (2012). What does historically low treasury yield say about the economy? *U.S. News and World Report. Lagos State, Nigeria.*

Maloney, Paddy. (2022). "The value of cash management: Its relevance to debt management." *in proceedings of the regional debt and liquidity management Workshop, C*

McDonald, C., & Schumater, L. (2007). Financial deepening in sub-Saharan Africa: empirical evidence on the role of creditor rights protection and information sharing. *IMF Working Paper, WP/07/203.*

Ndugbu, M.O., Duruechi, A.H. & Ojiegbe, J.N. (2016). " Money market instruments and bank performance in Nigeria". *Journal of Economics and Sustainable Development,* 7(10): 95104

Nwosu, C. P. & Hamman, H. M. (2008). The Nigerian money market: Issues and challenges. *Central Bank of Nigeria Bullion, April - June 2008, 32(2), 51-62*

Okoro, E.U., Nwadike, A.O., & Kalu, E.U. (2017). Interest rate and investment in money market instruments in a developing economy: A case of Nigeria. *Journal of Economics, Management and Trade, 20(2), 1-9.*

Pavtar, A. (2016). The Nexus between money market instruments and Nigeria's economic growth: *A Time Series Analysis. Journal of Accounting and Financial Management, 2(3), 22-39.*

Tsintop U.D & Bala T.T (2023) The Impact of money market activities nn the economic growth of Nigeria. *International journal of management and social sciences. Vol. 8 no 2*

Roberta B, Saranda T, Adelina G & Medain H (2024) Analysing the impact of money supply on economic growth: A panel regression approach for Western Balkan countries (2000–2023) *journal of Regional Science Policy & PracticeVolume 17, Issue 2, February 2025, 100159*

Welch, Patrick J.; Gerry F. Welch (2016). Economics: Theory and practice. *John Wiley & Sons. p. 190. ISBN 978-1118949733. Retrieved 14 January 2017.*

Appendix

Data set for M_2, TB, BA, CD and CP from 2000 to 2024

YEAR	M2 Nb	TB Nb	BA Nb	CD Nb	CP Nb
2000	878.46	465,535.8	31,774.9	118.4	19,002.5
2001	1,269.32	584,535.8	30,752.8	127.9	35,347.5
2002	1,505.96	584,535.8	32,214.2	2,431.4	36,978.2
2003	1,952.92	825,054.5	33,900.3	1,324.3	47,569.0
2004	2,131.82	871,577.0	24,002.9	2,314.4	80,115.3
2005	2,637.91	854,828.0	41,123.5	3,023.6	194,591.2
2006	3,797.91	701,399.8	45,743.5	2,465.2	193,511.6
2007	5,127.40	574,929.4	81,834.0	2,497.9	363,369.5
2008	8,643.43	563,214.0	104,645.0	1,923.3	472,913.0
2009	9,687.51	574,929.4	154,573.4	1,838.6	533,964.9
2010	11,101.46	574,929.4	153,685.7	3,265.1	620,591.6
2011	12,628.32	471,929.5	127,529.1	3,256.2	697,527.6
2012	15,503.41	471,929.5	66,398.7	4512.4	822,700.9
2013	18,743.07	432,563.0	71,473.8	2365.4	698,323.0
2014	20,415.61	546,929.4	77,513.7	5,142.9	748,295.5

2015	20,885.52	641,929.4	74,215.7	4,627.8	602,465.9
2016	24,259.00	753,578.1	89,361.8	3,692.1	722,521.8
2017	28,604.47	797,482.5	62,243.6	2,461.4	509,079.1
2018	29,774.43	324,126.0	73,737.2	1,945.7	421,309.8
2019	34,257.90	525,476.0	12,953.4	3,251.6	391,743.0
2020	36,038.01	756,728.3	71,031.6	2,731.9	231,107.4
2021	40,370.41	103,326.5	63,126.7	3,751.5	311,575.2
2022	48,461.42	103,326.5	51,858.2	2,739.4	213,371.5
2023	63,512.40	103,326.5	34,660.2	2,475.3	425,252.5
2024	53,326.5	103,326.5	81,102.4	3,632.5	210,034.9

Source: CBN statistical bulletin, 2024