



Money Market Instruments and Real Sector Development in Nigeria

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Abstract

The paper evaluated the effect of money market instruments on real sector development in Nigeria. Data were collected from CBN statistical bulletin for thirty five (35) years. Expost facto design was employed for the study. Ordinary least square multiple regression was adopted for the analysis. The findings showed that treasury bills, certificate of deposits, commercial papers and federal government bonds had positive significance, development stocks had negative significance where as treasury certificates and bankers acceptance had no significant effect on real sector development at the appropriate level of significance during the period of the study. Based on the findings, we recommend that monetary authorities should encourage and sustain treasury bills, certificate of deposits, commercial papers and federal government bonds to enhance the real sector development, monetary authorities should also ensure adequate market and promotion of development stocks so as to deal with the negative significance etc.

Keywords: Real Sector Development, Gross Domestic Product, Treasury Bills, Certificate of Deposits, Commercial Papers, Federal Government Bonds, Development Stocks, Treasury Certificates, Bankers Acceptance etc.

INTRODUCTION

Money market is a market where short term funds are acquired for investment and other purposes^[1]. Money market operates with instruments which facilitate the exchange. Common among the instruments are promissory note, commercial papers, bill of exchange, treasury bills, call and notice money, inter-bank term market, certificate of deposits, banker's acceptance, repurchase agreement, term deposits, mutual funds etc. These instruments help the financial institution to carryout financial transaction with ease. Financial institution such as banks and other financial institutions exchange transactions in the money market with the aid of money market instruments^[2].

The transaction of these instruments in the money market helps in real sector development in Nigeria^[3]. Real sector according to Wikipedia is defined as real economic transactions of an economy. It is the main segment of the economy because its operation affects economic productivities^[4]. It is the main components of the economy of Nigeria because of its contribution to gross domestic product and National income and product account^[5]. The real sector consists of manufacturing and service industries majorly and also include housing, agriculture, mining, infrastructures and services sectors^[5]. In Nigeria, CBN classified real sector into agricultural, industrial, building and constructions, wholesale and retail, trade and services sector^[6]. The aggregate output of these sectors can be used as yardstick or measurement of the growth of the economy. Although, the economy is divided generally into four sector according to Nwafor^[5] such as external, fiscal or government, financial and real sectors; real sector stand tall to all other sectors because of its strategic positions that it occupies in the economy.

Nwafor^[5] also posited that the strategic position of the real sector include: product and distribution of visible goods and services required in the economy and it is use as a measure of effectiveness of macroeconomic policies, create linkages to other sectors of the economy and finally helps in capacity building and high employment and income generating like agriculture and manufacturing that employ the highest number of people in the economy.

Real sector development in Nigeria can only be enhanced when there is efficient and effective working of money market instruments. These instruments help to release money into the economy so as to finance the real sector to grow and develop, hence real sector development ^[7].

Many works have been done on monetary policy and real sector development in Nigeria, money market credit and real sector development, fiscal policy and real sector development in Nigeria, what is probably left undone to the best of our knowledge is money market instruments and real sector development. This therefore becomes the central problem of the study.

The purpose of the study is to determine the effect of money market instruments and real sector development in Nigeria, the hypothesis is stated in the null form: money market instruments do not have significant effect on real sector development in Nigeria.

The rest of the paper shall be categorized into four: Literature review, methodology, presentation and analysis and conclusion and recommendations.

LITERATURE REVIEW

a. Conceptual Framework

The concepts used in this work are:

i. Real Gross Domestic Product (RGDP)

Gross domestic product is the value of final goods and services produced in a country within a given period of time usually one year. These goods and services are valued at their market prices and these are added together to get the GDP. When the gross domestic products are adjusted to inflation, we have the real gross domestic product. Put in another way, real gross domestic product is the gross domestic product minus inflation.

ii. Treasury Bills (TB)

The Treasury bills are issued by the federal government and known to be one of the surest and safest money market instruments in Nigeria's money market. The instrument have zero risk, therefore, the returns are not too attractive. Besides, they have different maturity periods like 1 year, 6 months or 3 months and are also circulated in the markets. The federal government issues them at a lower price than their face-value.

iii. Treasury Certificates (TC)

The instrument is like the treasury bills. It is a short-term securities issued at a discount for a tenor ranging from 91 to 364 days, such that the income received is the difference between the purchase price and the amount received at maturity or prior to the sale.

iv. Certificate of Deposits (CD)

Certificate of deposits functions as a deposit receipt for money which is deposited with a financial organization or bank. Certificate of deposit is a negotiable instrument. It can also be issued at discounted price just like treasury bills and treasury certificates and the range is between 7 days up to 1 year. The CD issued by banks span through 3 months, 6 months and 12 months.

v. Banker's Acceptance (BA)

Banker's acceptance is an instrument that promises future payment which deposit money bank guaranteed. It is a document used in money market that specify the details of repayment such as the date of repayment, amount to be paid and complete details of the person to which the repayment is to be made when due.

The maturity periods span from 30 days up to 180 days.

vi. Commercial Papers (CP)

Commercial paper is an unsecured short-term promissory note issued by blue chip or top rated companies with the aim of raising funds to meet obligations directly from the market. Commercial papers have a fixed maturity period which span from 1 day up to 270 days. They give higher returns when compared to treasury bills and certificates.

vii. Federal Government Bonds (FGB)

These are debt security issue by the federal government. The federal government bonds are issued by the government to raise funds for infrastructural development. The bondholders are creditors to the government and subject to be honoured at the due date. The amount, issue date and redemption date are clearly specified in the document.

b. Theoretical Framework

The theories relevant to the work are:

i. Monetary Theory

This is propounded by Friedman in 1956. The theory is based on the fact that money supply influences the economic activities. He advocated that when there is money supply in the economy, such as currency and other high instrument (Money market instruments), they will exert much power over economic growth. He further argue that the economy may not always be in full equilibrium and cannot be operating in full employment level of real GDP in the short run, but in the long run, there will be a link between money supply price level and real GDP. According to him, in the short run, the money supply only affect the price level which led to inflation, but in the long run, the real variables such as normal national income, interest rate and prices are controlled through monetary policy of the government^[8]. The essence of the theory is that money supplied by central bank, through currency and financial instruments, can affect the real sector of the economy.

ii. Monetary Theory

Modern monetary theory according to Wikipedia is a heterodox macro-economic theory (it is against the orthodox microeconomic theory). It posited that the monetary authority has the sole right of releasing the currency for the economy. The theory describes currency as a public monopoly and therefore shortage of supply of currency and financial instruments for the economy will starve the economy^[9]. This theory was developed by knap in 1905 which sees money as a creature of law rather than a commodity. The theory posited that money is created by the state and recognize as the legal tender by the citizen of the state and cannot be equated with metals. The theory is a guide to the monetary authorities and draw attention to the wider public to control inflation, interest rate, government spending deficit and debt in order to regulate and grow the real sector of the economy.

iii. Growth Theory

This theory was propounded by Adam Smith in 1776. He posited that the growth in every economy depends on their wealth. The wealth of cause is the function of productions of goods and services in the economy. The real sector is the productive sectors in every economy. It is made up of the manufacturing, agricultural, housing and building, mining sectors etc. These sectors which constitute the real sector help in the growth of the economy. For real sector to grow and develop in its full capacity, there must be currency and near currency (financial instruments) which will help to propel growth in the sector.

METHODOLOGY

According to Ihenetu^[10], research design is a blue print, framework for collecting and analyzing data. The researchers employed expost facto design. The fact that the data were original from CBN statistical bulletin and adopted for the study necessitated the choice of the design. Furthermore, the researchers want to evaluate the effect of money market instruments on real sector development in Nigeria.

The data were purely from secondary sources. CBN statistical bulletin 2019 provided the data for the analysis. Purposive sampling method was employed for the work. The sample size is 35 years (1985-2019). Since there is enough data in this area, it becomes apparent to apply judgmental sampling to select a reasonable sample size. The researcher employed ordinary least square multiple regression for the analysis.

Ordinary least square multiple regression test the effect of money market instruments on real sector development in Nigeria.

The model specification is given as:

RGDP= f(TB, TC, DS, CD, CP, BA, FGB). This functional model was trans- modified into the mathematical form by the introduction of the constant α , β and error term μ as:

$$GDP = \alpha + \beta_1 TB + \beta_2 TC + \beta_3 DS + \beta_4 CD + \beta_5 CP + \beta_6 BA + \beta_7 FGB + \mu$$

Where RGDP = Real Gross Domestic Product

TB = Treasury Bills

TC = Treasury Certificates

DS = Development Stocks

CD = Certificate of Deposits

CP = Commercial Papers

BA = Bankers Acceptances

FGB = Federal Government Bonds

α = constant variable

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ = Coefficient of independent variables (slope)

μ = error term.

DATA PRESENTATION AND ANALYSIS

The data used for the work are presented below:

Table-1: Real Gross Domestic Product (RGDP), Treasury Bills (TB), Treasury Certificates (TC), Development Stocks (DS), Certificate of Deposits (CD), Commercial Papers (CP), Bankers Acceptances (BA) and Federal Government Bonds (FGB) in billions

| Period | Treasury Bills | Treasury Certificates | Development Stocks | Certificate Of Deposits | Commercial Papers | Bankers Acceptances | FGN Bonds | RGDP |
|--------|----------------|-----------------------|--------------------|-------------------------|-------------------|---------------------|-----------|-----------|
| 1985 | 16.98 | 6.65 | 4.32 | 0.21 | 0.14 | 0.02 | 0.00 | 14,953.91 |
| 1986 | 16.98 | 6.65 | 4.81 | 0.26 | 0.26 | 0.02 | 0.00 | 15,237.99 |
| 1987 | 25.23 | 6.66 | 4.91 | 1.33 | 0.50 | 0.01 | 0.00 | 15,263.93 |
| 1988 | 35.48 | 6.79 | 4.76 | 1.86 | 0.67 | 0.13 | 0.00 | 16,215.37 |
| 1989 | 24.13 | 6.94 | 4.63 | 1.22 | 0.60 | 0.13 | 0.00 | 17,294.68 |
| 1990 | 25.48 | 34.21 | 4.40 | 1.90 | 0.79 | 0.12 | 0.00 | 19,305.63 |
| 1991 | 56.73 | 34.21 | 4.22 | 1.11 | 0.82 | 0.21 | 0.00 | 19,199.06 |
| 1992 | 103.33 | 35.24 | 3.96 | 0.54 | 1.58 | 0.13 | 0.00 | 19,620.19 |
| 1993 | 103.33 | 36.58 | 3.73 | 0.09 | 3.37 | 1.86 | 0.00 | 19,927.99 |
| 1994 | 103.33 | 37.34 | 3.35 | 0.02 | 5.25 | 4.66 | 0.00 | 19,979.12 |
| 1995 | 103.33 | 23.60 | 3.17 | 0.05 | 10.03 | 8.10 | 0.00 | 20,353.20 |
| 1996 | 103.33 | 0.00 | 2.96 | 0.10 | 8.02 | 12.20 | 0.00 | 21,177.92 |
| 1997 | 221.80 | 0.00 | 2.84 | 0.00 | 13.39 | 11.72 | 0.00 | 21,789.10 |
| 1998 | 221.80 | 0.00 | 2.68 | 0.00 | 7.25 | 17.47 | 0.00 | 22,332.87 |
| 1999 | 361.76 | 0.00 | 2.44 | 0.00 | 20.48 | 11.97 | 0.00 | 22,449.41 |
| 2000 | 465.54 | 0.00 | 2.11 | 0.00 | 19.00 | 31.77 | 0.00 | 23,688.28 |
| 2001 | 584.54 | 0.00 | 1.83 | 0.00 | 35.35 | 30.75 | 0.00 | 25,267.54 |
| 2002 | 733.76 | 0.00 | 1.63 | 0.00 | 36.98 | 32.21 | 0.00 | 28,957.71 |
| 2003 | 825.05 | 0.00 | 1.47 | 0.00 | 47.57 | 33.90 | 72.56 | 31,709.45 |

| | | | | | | | | |
|------|----------|-------|------|-------|--------|-------|-----------|-----------|
| 2004 | 871.58 | 0.00 | 1.25 | 0.00 | 80.12 | 24.00 | 72.56 | 35,020.55 |
| 2005 | 854.83 | 0.00 | 0.98 | 0.00 | 194.59 | 41.12 | 250.83 | 37,474.95 |
| 2006 | 701.40 | 0.00 | 0.72 | 0.00 | 193.51 | 45.74 | 643.94 | 39,995.50 |
| 2007 | 574.93 | 0.00 | 0.62 | 2.50 | 363.37 | 81.83 | 1,186.16 | 42,922.41 |
| 2008 | 471.93 | 39.71 | 0.52 | 0.00 | 822.70 | 66.40 | 1,445.60 | 46,012.52 |
| 2009 | 797.48 | 0.00 | 0.52 | 50.50 | 509.08 | 62.24 | 1,974.93 | 49,856.10 |
| 2010 | 1,277.10 | 0.00 | 0.22 | 0.00 | 189.22 | 79.17 | 2,901.60 | 54,612.26 |
| 2011 | 1,727.91 | 0.00 | 0.00 | 0.00 | 203.01 | 73.41 | 3,541.20 | 57,511.04 |
| 2012 | 2,122.93 | 0.00 | 0.00 | 34.00 | 1.05 | 9.86 | 4,080.05 | 59,929.89 |
| 2013 | 2,581.55 | 0.00 | 0.00 | 20.50 | 9.32 | 20.47 | 4,222.04 | 63,218.72 |
| 2014 | 2,815.52 | 0.00 | 0.00 | 50.95 | 9.82 | 8.76 | 4,792.28 | 67,152.79 |
| 2015 | 2,772.87 | 0.00 | 0.00 | 75.70 | 6.29 | 28.42 | 5,808.14 | 69,023.93 |
| 2016 | 3,277.28 | 0.00 | 0.00 | 0.00 | 0.49 | 27.80 | 7,564.94 | 67,931.24 |
| 2017 | 3,579.80 | 0.00 | 0.00 | 59.50 | 0.52 | 26.43 | 8,715.81 | 68,490.98 |
| 2018 | 2,735.97 | 0.00 | 0.00 | 59.69 | 9.86 | 12.18 | 9,334.74 | 69,799.94 |
| 2019 | 2,651.51 | 0.00 | 0.00 | 59.69 | 7.23 | 3.27 | 10,524.16 | 71,387.83 |

Source: CBN 2019

Table-2: Ordinary Least Square Multiple Regression

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 28609.00 | 3774.201 | 7.580148 | 0.0000 |
| TB | 8.540211 | 1.934049 | 4.415717 | 0.0001 |
| TC | 55.74663 | 51.51659 | 1.082110 | 0.2888 |
| DS | -3118.876 | 942.7105 | -3.308413 | 0.0027 |
| CD | 76.43591 | 40.62165 | 1.881655 | 0.0707 |
| CP | 10.80849 | 6.181633 | 1.748484 | 0.0917 |
| BA | 59.98575 | 50.86500 | 1.179313 | 0.2486 |
| FGB | 1.381802 | 0.513364 | 2.691659 | 0.0121 |
| R-squared | 0.981515 | Mean dependent var | | 37001.83 |
| Adjusted R-squared | 0.976723 | S.D. dependent var | | 20101.98 |
| S.E. of regression | 3066.914 | Akaike info criterion | | 19.09236 |
| Sum squared resid | 2.54E+08 | Schwarz criterion | | 19.44787 |
| Log likelihood | -326.1164 | Hannan-Quinn criter. | | 19.21508 |
| F-statistic | 204.8106 | Durbin-Watson stat | | 0.882115 |
| Prob(F-statistic) | 0.000000 | | | |

Source: Eview version 9

From table-2, TB, TC, DS, CD, CP, BA, FGB are the independent variables whereas the RGDP is the dependent variable. The result of the analysis showed that TB was positively significant at 1 percent level of significance, DS was negatively significant at 3 percent level of significance, CD was positively significant at 8 percent level of significance,

CP was positively significant at 10 percent level of significance and FGB was positively significant at 5 percent level of significance whereas TC, BA had no significant effect on RGDP at 1, 5 & 10 percent level of significance during the period of the study. The coefficient of TB, TC, CD, CP, BA and FGB are positive ie 8.540211, 55.74663, 76.43591, 10.80849, 59.98575 and 1.381802 respectively showing that 1 percent increase in them increases RGDP by N8.54, N55.75, N76.44, N10.81, N59.99 and N1.38 respectively. This means that TB, TC, CD, CP, BA and FGB are likely drivers of real sector development in Nigeria. The coefficient of DS is -3118.876 showing that 1 percent increase in DS decreases RGDP by N3118.88. This could be attributed to low value of the instrument over the years and also no market for the instrument since 2011 till date. The r^2 0.9815 and the adjusted r^2 0.9767 implies that variation in all the explanatory variables account for 98% of the variation in real gross domestic product. F – Statistic measures the overall significance of the model. The F-statistic is 204.8106 and the probability of F-statistic 0.0000 is far less than 0.05 power of test. This means that money market instruments have significant effect on real sector development in Nigeria.

CONCLUSION AND RECOMMENDATIONS

From the findings, treasury bills, certificates of deposits, commercial papers and federal government bonds have positive significance; development stock has negative significance where as treasury certificates and bankers acceptance have no significance on real sector development in Nigeria. The researchers therefore recommend that:

1. Monetary authorities should encourage and sustain treasury bills, certificate of deposits, commercial papers and federal government bonds to enhance the real sector development
2. Monetary authorities should ensure adequate market and promotion of development stocks so as to deal with the negative significance
3. Treasury certificates and bankers acceptance should be redirected to other sectors other than real sector such as external, fiscal or government and financial sector to boost the sectors.

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