



Effects of monetary policy on performance of Nigerian deposit money banks

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Abstract

This study investigated performance of Nigerian deposit money banks from 1989 to 2019 and the impact of monetary policy on it. Data for this study were collected from the Central Bank of Nigeria (CBN) statistical bulletin 2019. The Augmented Dicker Fuller (ADF) unit root test, Autoregressive distributed lag (ARDL), bounds test, cointegrating and long run form test were used to evaluate the impact of monetary policy on the performance of deposit money banks. The Augmented Dicker Fuller (ADF) unit root test proved that the variables are I (0) and I (1) hence stationary. Also, the ARDL test and bounds test reveals that long run relationship exists among the variables. The results revealed that in the long run, the result of the estimated coefficients of the long run relationship exhibits that BDR and LQR are significant and exhibits a negative relationship with TBD while CRR is significant and exhibits positive relationship with TBD and BLR also exhibits positive relationship TBD but is not significant. On this basis, the study recommends among others that Central Bank of Nigeria (CBN) should moderate the deposit rate as an instrument for regulating deposit money banks operations and performance.

Keywords: Monetary policy, performance, deposit rate, lending rate

1.0 Introduction

The presence of effective deposit money banking sector is important for every economy because it creates the required environment for economic growth and economic development through its role in intermediation within the economy. Deposit money banks are financial intermediaries whose activities includes collection of funds as savings and lending out such funds thus standing between the lender and the borrower and matching the investment requirement of the lender. Ndugbu and Okere (2015) posited that stable financial sector is crucial to ensure a well-functioning national economy and ensure balance liquidity within the economy and also an

appropriate liquidity management is essential to foster economic growth. Alalade, Oseni and Adekunle (2020) explained the very important role that the financial sector plays in the economy of a nation. It is simply a channel through which idle funds are made available to the productive sector, thereby enabling the use of savings in the economy to engender job opportunities for the populace and stimulate economic prosperity.

This function of the deposit money banks stimulates investment within the economy as well as stimulates international trade and improves the nation's balance of payments. In playing this important role of financial intermediation, the deposit money banking



sector is seen as effective institution in the use of monetary policy, which relies on the control of money in reserve stock in order to influence financial and economic activities. According to Ayodele (2014), monetary policy is an aspect of macroeconomics which deals with the use of monetary tools to control the value and supply of money in an economy, in line with the expected level of economic activity. It covers an array of a blend of different packages with the intention to control the amount and direction of money in the economy every time.

Monetary policy is basically the management of interest rates and money in circulation and is generally carried out by Central banks. Fiscal policy is the totality of the different taxes and expenditure of governments. In Nigeria, the national fiscal policy is determined by the executive and legislative branches of the government. Nwoko, IHEMEJE and ANUMADU (2016) defines monetary policy as the blend of procedures taken by monetary authorities (e.g. CBN and ministry of finance) to control money supply and credit to the economy and the structure of interest rate for economic growth and price stability. He also mentioned that the CBN is authorized to execute monetary policy in Nigeria by decree 25 of 1991 Act and it must carry along the finance ministry and the presidency. The Nigeria central bank has frequently used three different policy tools to influence the economy. They are open market operations, changing reserve requirements for banks and setting the discount rate. Open market operations are carried out on a daily basis where the central bank buys and sells government bonds to either inject money into the economy or pull money out of circulation. By setting the reserve ratio, or the percentage of deposits that banks are required to keep in

reserve, the central bank directly influences the amount of money created when banks avail loans. The central bank can also target changes in the discount rate (the interest rate it charges on loans it makes to financial institutions), which is intended to affect interest rates across the economy.

Monetary policy is divided into expansionary and contractionary. Expansionary increases money supply in order to lower unemployment, boost private-sector borrowing and consumer spending, and stimulate economic growth. Contractionary monetary policy decreases money supply in order to control inflation, slows economic growth, increase unemployment and reduce borrowing and spending by consumers and businesses. Contractionary monetary policy will most likely result in a recession but the measure will keep spiraling inflation in check.

2.Literature Review

Due to criticism of the Keynesian theory, the monetarist theory was propounded by Milton Friedman in 1956. Hence, Friedman & Schwartz (1968) explained that inflation is always and everywhere a monetary phenomenon, that in the short run, increase in money supply can reduce unemployment but can also create inflation and so the monetary authorities should increase money supply with caution.

Ekpong et al (2015) in their study of the impact of monetary policy on the banking sector in Nigeria Investigated the factors that influence the banking sector performance using bank's deposit liabilities as proxy for bank performance. Their proxies for monetary policy include Exchange Rate, Deposit Rate and Minimum Discount Rate. Their Results showed that overall, monetary policy has a significant effect on the banks deposit liabilities.



Punita and Somaiya (2006) in their study between 1995-2000 looked at impact of monetary policy on banks' profits in India. The independent variables include statutory ratio, lending rate, cash reserve ratio, bank rate and each regressed on banks profitability independently. Lending rate was found to exact positive nd significant influence on banks profitability while cash reserve ratio and statutory ratio were found to have significant negative effect on profitability of banks.

Ogbeifun and Akinola (2019) investigated the impact of monetary policy tools on deposit money banks performance in Nigeria. They employed Ordinary least square (OLS) method and concluded that monetary policy tools have no significant effect on the financial performance of commercial banks in Nigeria.

The amount of influence that monetary policy yields over economic and financial activities has always been a source of argument and debates. There are different opinions on the amount of impact and the channel of achievement. In Nigeria, this is quite important noting that various governments have applied different measures of monetary policy to control the financial economy and also performance of deposit money banks. On the other hand, most financial intermediaries are often uninterested towards channeling resources to productive investment even in the face of lower interest rates. Hence, these factors have inhibited performance of Nigeria monetary policy in. Thus, the debate on effect of monetary policy on performance of deposit money banks is still ongoing and therefore offers a gap for this research work. For now, severe structural supply constraints are deemed to hinder expansion of output even when the demand for it increases. An expansionary monetary policy, if not

properly monitored, consequently often results in inflation rather than output growth.

3.Methodology

Data for this study was sourced from the CBN statistical bulletin 2019 and the data spanned from 1989 to 2019. The 1989 base year makes it a 30-year period. Eviews 9 statistical software is employed for the tests. The chosen indicator for performance of Deposit Money Banks is total bank deposit which is specified to depend on bank deposit rate, bank lending rate, cash reserve ratio and liquidity ratio.

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3.1 Model specification:

Having adapted the model stated by Ndugbu and Okere (2015) by including liquidity ratio as a proxy of monetary policy, the relationship between monetary policy and the Nigerian DMBs performance can be specified as:

The functional relationship is presented as:

$$TBD = f(BDR, BLR, CRR, LQR) \\ TBD = \alpha_0 + \alpha_1 BDR + \alpha_2 BLR + \alpha_3 CRR + \alpha_4 LQR + \mu t \dots \\ \dots\dots\dots(1)$$

Where the variables are:

TBD = total bank deposit

BDR = bank deposit rate

BLR= bank lending rate

CRR= cash reserve ratio

LQR= liquidity ratio

α_0 = interceptof the model

μt = stochastic error term incorporating other factors that are not considered in the model

α_1 - α_4 = coefficient of the independent variables or parameters

To bring the data of both the dependent and independent variables to a level of equal comparability, their logarithm is calculated



and gotten. The logarithm form of the model becomes:

$$\log \text{TBD} = \alpha_0 + \alpha_1 \log \text{BDR} + \alpha_2 \log \text{BLR} + \alpha_3 \log \text{CRR} + \alpha_4 \log \text{LQR} + \mu t \dots \dots \dots (2)$$

the coefficients in the model are expressed in their elasticity since the variables are in natural logarithm form hence they measure direct response of growth to variable changes.

4.Results and Discussions

Table 1. Augmented Dickey Fuller Unit Root Test at Level

variable	ADF test at level	critical value at 5%	critical value 10%	at probability	remark	order of intergration
Tbd	-1.167542	-2.963972	-2.621007	0.6750	Non-stationery	nil
Bdr	-3.240287	-2.963972	-2.621007	0.0273	Stationery	i (0)
Blr	-2.876412	-2.963972	-2.621007	0.0601	Non-stationery	nil
Crr	-2.940826	-2.963972	-2.621007	0.0525	Non-stationery	nil
Lqr	-3.247709	-2.963972	-2.621007	0.0269	Stationery	i (0)

Source: Authors' Computation (2021)

Table 2. Augmented Dickey Fuller Unit Root Test at First Difference

Variable	ADF test at 1st diff.	critical value at 5%	critical value 10%	at probability	remark	order of intergration
Tbd	-3.9998	-2.967767	-2.622989	0.0046	Stationery	i (1)
Blr	-5.903189	-2.967767	-2.622989	0.0000	Stationery	i (1)
Crr	-5.666975	-2.971853	-2.625121	0.0001	Stationery	i (1)

Source: Authors' Computation (2021)

Table 3 Bounds Test

Test Statistic	Value	k
F-statistic	6.356223	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.2	3.09
5%	2.56	3.49



2.50%	2.88	3.87
1%	3.29	4.37

Source: Authors' Computation (2021)

Table 4

	ARDL RESULTS	SHORT	RUN			
Variable	Coefficient			Std. Error	t-Statistic	Probability
D(TBD(-1))	-0.761577			0.228766	-3.329068	0.0088
D(TBD(-2))	-0.347738			0.237403	-1.464755	0.1770
D(BDR)	0.464922			0.106863	4.350623	0.0018
D(BDR(-1))	-0.792673			0.210009	-3.774477	0.0044
D(BDR(-2))	-0.569860			0.152901	-3.726978	0.0047
D(BDR(-3))	-0.170996			0.100250	-1.705704	0.1223
D(BLR)	0.425044			0.250378	1.697612	0.1238
D(BLR(-1))	0.268688			0.167281	1.606213	0.1427
D(CRR)	0.050549			0.070815	0.713807	0.4934
D(CRR(-1))	0.355501			0.087322	4.071155	0.0028
D(LQR)	0.011426			0.138536	0.082475	0.9361
D(LQR(-1))	0.129470			0.128114	1.010580	0.3386
C	-5.593941			1.620860	-3.451219	0.0073
BDR(-1)	1.739071			0.384804	4.519364	0.0014
BLR(-1)	-0.313539			0.221876	-1.413128	0.1913
CRR(-1)	-0.518770			0.129738	-3.998580	0.0031
LQR(-1)	0.787571			0.186723	4.217849	0.0022
TBD(-1)	0.154164			0.044015	3.502515	0.0067

Source: Authors' Computation (2021)

R-squared = 0.899545

Table 5

	ARDL RESULTS	LONG	RUN			
Variable	Coefficient			Std. Error	t-Statistic	Probability
BDR	-11.280646			1.718008	-6.566121	0.0001
BLR	2.033799			1.781280	1.141763	0.2830



CRR	3.365048	0.606424	5.549003	0.0004
LQR	-5.108653	1.224439	-4.172239	0.0024
C	36.285628	4.082066	8.889034	0.0000

Source: Authors' Computation (2021)

The result of the Augmented Dickey Fuller unit root test on all the variables revealed in table 1 and table 2 that the data is I (0) and I (1) meaning the data is stationery at level and first difference combined.

The result of the Augmented Dickey Fuller unit root test led to initiate the autoregressive distributed lag (ARDL) test and bounds test. The bounds test in table 3 revealed that the f-statistic figure of 6.356223 > than both the lower bounds figure of 2.56 and upper bounds figure of 3.49 at 5% significance. This proves that there is long run relationship among the variables, hence we reject Null hypothesis which says no long run relationship exist and we accept alternative hypothesis.

The result of the bounds test led to initiate the cointegration and long run form test which revealed in table 4 that in the short run, DTBD-1, DBDR-1, DBDR-2, CRR-1 affect TBDnegatively and are significant. WhileDTBD-2, DBDR-3, BLR-1, affect TBD negatively and are not significant. Table 4 also revealed that in the short run, DBDR, DCRR-1, BDR-1, LQR-1, TBD-1 affect TBD positively and are significant. While DBLR, DBLR-1, DCRR, DLQR, DLQR-1, affect TBD positively and are not significant. The R-squared figure of 0.899545 revealed that the explanatory variables explain 89.9% of TBD (total bank deposit) which is the dependent variable.

The results revealed in table 5 that in the long run, the result of the estimated coefficients of the long run relationship exhibits that:

$$TBD=36.285-11.2806BDR+2.0337BLR+3.3650CRR-5.10865LQR$$

Means BDR and LQR are significant and exhibits a negative relationship with TBD while CRR is significant and exhibits positive relationship with TBD and BLR also exhibits positive relationship TBD but is not significant. A 1% increase in BDR will cause a decrease of 11.2% in TBD. This result compared with the short run result tallies together. Result is not in synchronization with theoretical expectation because of poor awareness mechanism put in place for the banking public. A 1% increase in LQR will cause a decrease of 5.1% in TBD. The result here does not tally with short run result but result is in line with theoretical expectation because the more funds tied down to liquidity ratio, the less the available funds to lend out which will in turn reduce bank deposit funds. This result is in tandem with results of Ogbeifun and Akinola (2019)

A 1% increase in BLR will cause an increase of 2.03% in TBD. This result compared with the short run result tallies together and the result is in line with theoretical expectation because a reasonable lending rate will stimulate lending and borrowers will deposit such funds back in the banking system which will push up bank deposits.A 1% increase in CRR will cause an increase of 3.36% in TBD.The result here tallies with short run result and result is in line with theoretical expectation because the more funds tied down to cash reserve ratio,



the less the available funds to lend out which will in turn reduce bank deposit funds. Hence CRR rates should be in moderation by monitoring authorities.

5. Conclusions

This study investigated performance of Nigerian deposit money banks from 1989 to 2019 and the impact of monetary policy on it. The result revealed that data of both dependent and independent variables are stationary at level and first difference combined. This led to initiate the autoregressive distributed lag (ARDL) test and bounds test which revealed that there is long run relationship among the variables which is in line with results of Ndugbu and Okere (2015). This led to initiate cointegration and long run form test which revealed that in the short run, DBDR, DCRR-1, BDR-1, LQR-1, TBD-1 affect TBD positively and are significant. While DBLR, DBLR-1, DCRR, DLQR, DLQR-1, affect TBD positively and are not significant. In the long run, BDR and LQR are significant and exhibits a negative relationship with TBD while CRR is significant and exhibits positive relationship with TBD and BLR also exhibits positive relationship TBD but is not significant.

Nigeria monetary policy to control and mobilize funds from the public has always been on raising interest up and down. Hence, it is needed to source for measures to control and motivate savings and mobilize funds from the public. Deposit money banks should strengthen and improve on its awareness mechanism to educate the public on the need, benefit and essence of imbibing the banking culture. Administration of monetary policy should be such that is flexible to enable the deposit money banks to discharge their duties effectively to the public. A monetary policy adopted should aim at stabilizing and stimulating a realistic

exchange rate for the deposit money banking sectors in the Nigerian economy. It is good that government and its monetary authorities should strive to create a conducive environment for deposit money banks to grow in Nigeria by packaging appropriate monetary policies that would guarantee and enhance growth and development of the deposit money banks in Nigeria.

Hence, it is recommended that regulatory authorities should moderately use the deposit rate as a tool for regulating deposit money banks operation. Also policy makers should modify the monetary policy instruments to respond more promptly and easily to local economic conditions. This study recommends that government and its monetary authorities should strive to create a conducive environment for banking sectors to grow in the country by packaging appropriate monetary policies that would ensure robustness of the banking sectors in Nigeria. This study also recommends that deposit money banks should also lay emphasis on internal factors to performance like asset quality, management efficiency and liquidity management.

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