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MONETARY POLICY, THE CONTROL OF MONEY SUPPLY AND ITS EFFECTS ON THE PROFITABILITY OF DEPOSIT MONEY BANKS IN NIGERIA (1999-2013)

Dr. Okaro, Celestine Sunday
Department of Banking & Finance, Faculty of Management Sciences, Nnamdi Azikiwe University, Awka
E-mail: cs.okaro@unizik.edu.ng

Abstract

This paper investigated the effects of Monetary Policy and control of money supply on the profitability of Deposit Money Banks (DMBs) in Nigeria from 1999 to 2013. The specific objectives of the study were to: determine the relationship between money supply, the level of credit in the economy, macroeconomic variables (inflationary rate, exchange rate movement, and Real Gross domestic Product and the profitability of DMBs in Nigeria. Three research questions and three hypotheses were raised. Ordinary Least Linear Regression Analysis method was adopted for the study which employed SPSS statistical tool to run the correlation and regression analysis.Data gathered included Quasi Money (QM), Real Gross Domestic Product (RGDP), Exchange Rate (ER), Inflation (INF), Lending Interest Rate (LIR) Real Interest Rate (RIR) Domestic Credit to Private sectors (DCP), Currency in Circulation (CC) and Return on Assets (ROA). The findings revealed among others that; quasi money has insignificant positive relationship with profitability of DMBs, while currency in circulation has insignificant positive relationship with profitability of DMBs in Nigeria. The level of credit in the economy has significant negative relationship with profitability of DMBs. More so, inflation, exchange rate, and real GDP have insignificant relationship with the profitability of the banks. Hence, monetary policy influences the DMBs directly, as well as indirectly through through feed-back effects from the economy It is recommended among others that, monetary policy must work in random to create the right macroeconomic framework, create a favourable investment climate by facilitating the emergence of market based interest rate and exchange rate regimes that would attract both domestic and foreign investments, create jobs, promote non-oil export and revive industries that are currently operating far below installed capacity. The government should also endeavor to make the financial sector less volatile and more viable as it is in developed market economies. Finally, given the limitations of monetary policy in Nigeria, it should be used along with government fiscal policy.

Introduction

Nigeria's potential for growth and poverty reduction is yet to be realised. A key constraint has been the conduct of macroeconomic policies - particularly fiscal and monetary policies. This has led to rising inflation and decline in real incomes. There has been little transparency and accountability in the management of public resources. An objective indicator of the traumatic

experience of the Nigerian economy which at the inception of the present administration was the persistent weak GDP growth and declining productivity. This was a manifestation of a demoralized workforce coupled with corruption that characterized government businesses. Lack of transparency and accountability in the execution of public sector activities was very pronounced in all tiers of government. Equally glaring is the poor socio-economic condition of the people. Poverty rate remained very high, with about 70percent of the population estimated to be living below the $1 per day consumption bar **(**Odewunmi, 2013**).**

National economic management became a Herculean task, as the economy has to contend with volatility of revenue and expenditure. The widespread lack of fiscal discipline was further exacerbated by poor co-ordination of fiscal policy among the three tiers of government. Also, there is a weak revenue base arising from high marginal tax rate with very narrow tax base, resulting in low tax compliance. These have been curbed with the introduction of a new integrated tax system.

In the past two decades macroeconomic policies has been said to have improved enormously in developing countries, but the expected growth benefit failed to materialize, instead a series of financial crisis, severely depressed growth and macroeconomic instability has been the case. Conceptually, macroeconomic instability refers to phenomena that make the domestic macroeconomic environment less predictable and this is of concern because unpredictability can hamper resource, allocation decisions, investment and growth. Although, macroeconomic instability can take diverse forms; such as the volatility of the key macroeconomic variables or of unsustainability in their behavior such as the one that predict future volatility. How then can a country like Nigeria experience macroeconomic stability? This problem is widely perceived to have worsened in the developing countries like Nigeria.

Monetary policy refers to combination of measured designed to regulate the cost, value and supply of money in consonance with the level of economic activities in a country (Okaro, 2014). Its broad objective in Nigeria is to 'ensure monetary and price stability' (CBN ACT, 2007).

Chang and Grabel (2004) defined monetary policy as government actions that influence the money supply and market interest rates. Governments control money supply and market interest rates through a number of instruments such as open market operations, discount rates and reserve requirements. Money supply is basically made up of domestic credit and net foreign assets and domestic credit is composed of central bank credit to government and commercial bank credit to the public (Hossain and Chowdhury, 1998).

It is known to be a vital instrument that a country can deploy for the maintenance of domestic price and exchange rate stability as a critical condition for the achievement of a sustainable economic growth and external viability. Its role in ensuring an overall macroeconomic stability cannot be overemphasized. Although in Nigeria appreciable progress has been made in this regard since the introduction of various financial sector reform programs from 1986. Despite the foregoing, the Nigerian monetary policy has continued to face several challenges. No wonder, the CBN is increasingly focusing more on the aspect of price stability, recognizing the relevance of macroeconomic stability for economic sustainable output and employment growth.

The Nigerian people aspire and desire to move out of poverty within the framework of a stable and rapidly growing economy. This is certainly feasible if adequate policies are put in place and sustained. Partially and poorly implemented reforms will not serve to reserve current trend. Thus, the government is at crossroads.

The purpose of monetary policy includes macro-economic goals of full employment, economic growth, price stability, wealth distribution, efficient resource allocation, favourable balance of payment and industrial development (Ojo, 2002; Jhingan, 2013). Two key functions of Central Bank of Nigeria are to ensure monetary and price stability and to promote sound financial system

(CBN Act, 2007). These functions have facilitated long term planning, aid infrastructural development, attract foreign investments, and engender economic growth (Adekunle, 2002). In Nigeria the Central Bank is responsible for the formulation and implementation of sound monetary policies in order to aid the attainment of the set objectives.

The existence of an effective banking industry is necessary for every economy because it create the necessary environment for economic growth and development through its role in intermediating funds from surplus to deficit economic units. This stimulates investment, economic growth, and employment as well as international trade and payment and explains why every economy takes interest in creating and nurturing it. One of the ways taken by all economies to make the banking sector effective is the use of monetary policy which relies on the control of money stock in order to influence financial and economic activities.

The extent to which money and monetary policy influence financial and economic activities has been widely discussed over the years. While it is generally agreed that monetary developments affect economic and financial performance, there are differing views on the extent of the effect and the channels through which this effect is achieved. In order to appreciate the effects of money and monetary policy on the banking industry, it would be instructive to review the varied and changing views on monetary influence. These effects are achieved directly as well as indirectly through feed-back effects from the economy. Usually when the quantity of money supplied changes relative to money demand either because of monetary policy measures or other measures, there are changes in relative price and wealth. While these changes are seen as major channels of monetary influence, there are several variants, over the years, on how these changes influence total spending in the economy.

Monetary policy aims at controlling the activities of banks and other financial sectors in the economy, but in spite of the key position this control occupies in the economy, care had not been taken to really exploit the trend of events in the economy so as to come up with the appropriate regulation and deregulation policy that will promote the economy (Olowe, 2010).

It is either that these polices are not right or that they are poorly implemented as the much expected result is yet to be found. For now, there is instability in the economy and the inflationary rate is very high, and the performances of deposit money banks are still beyond international standard.

A strong and healthy bank undoubtable mean a strong and healthy economy In view of this, there is a need to evaluate the effect of monetary policies of Central Bank of Nigeria on performance of Deposit money banks in Nigeria.

Specifically, this study intends to: determine the relationship between money supply, the level of credit in the economy, interest rates and the profitability of DMBs in Nigeria from 1999 to 2013.

This study addressed issues relating to the following relevant questions emerging within the domain of study problems thus: What is the relationship between money supply; the level of credit in the economy, interests rates and the profitability of DMBs in Nigeria?

To proffer useful answers to the research questions and realize the study objectives, the following hypotheses stated in their null forms are tested;

H_{01}: There is no significant relationship between money supply and the profitability of Deposit Money Banks. H_{02}: There is no significant relationship between the level of credit in the economy and the profitability of Deposit Money Banks. H_{03}: There is no significant relationship between interest rates and the profitability of Deposit Money Banks.

Review of Related Literature

Monetary policy refers to the combination of measures designed to regulate the value, supply and cost of money in an economy, to match with the level of economic activities (Okaro,2014). It can also be described as the act of controlling the direction and movement of monetary policy and credit facilities in pursuance of stable price and economic growth in an economy (CBN, 2015). In contemporary economies, the central bank is the authority with the mandate of manipulating monetary policy; through monetary policy tools, to achieving desired macroeconomic objectives which includes; the achievement of price stability with respect to both domestic and external prices.

Akomolafe, Danladi, Babalola, and Abah (2015) examined the impact of monetary policy on commercial banks' performance in Nigeria in a micro-panel analysis. Interest rate and money supply were used as proxies for monetary policy, while profit before tax (PBT) was used to represent commercial banks' performance. Pooled regression, Fixed effect regression, and random effect regression were all carried out in the analysis. However, Hausman test revealed that fixed effect regression is the most appropriate. The results showed that there is a positive relationship between banks' profits and monetary policies as proxied by money supply and interest rate. However, interest rate was not statistically significant at 1% and 5% levels.

Omankhanlen, Okorie and Taiwo (2015) investigated the effects Monetary Policy has on Loan Risk Exposure in Nigeria Commercial Banks. The data analysis of this study was carried out with ordinary least square multivariate regression perspective within the confinement of a vector error correction model (VECM) framework. The result of this study reveals that lending rate does not play significant role in support of loans and advances. However, monetary policy rate reveal the most significant effect on commercial banks loans and advance confirmed by its efficient estimate. This means that monetary policy rate is a competent parameter in measuring the performance of banks in the allocation of their credit facilities.

Ahmad (2003) reported that interest on loan is the largest constituent of income for Nigerian banks as evidenced from available data and that movement from one interest regime to another could have some effects on the profitability of banks in the system.

Amidu and Wolfe (2008) examined the constrained implication of monetary policy on bank lending in Ghana between 1998 and 2004. Their study revealed that Ghanaian banks lending behaviour are affected significantly by the country's economic variables and changes in money supply. Their findings also showed that the central bank prime rate and inflation rate negatively affect bank lending. Prime rate was found statistically significant while inflation was insignificant. Based on the firm level characteristics, their study revealed that bank size and liquidity significantly influence bank's ability to extend credit when demanded.

In another dimension, Gull, Irshad and Zaman (2011) examined the relationship between bank-specific and macro-economic characteristics over bank profitability by using data of top fifteen Pakistani commercial banks over the period 2005 to 2009. The work used the pooled ordinary least square (POLS) method to investigate the impact of assets, loans, equity, deposits, economic growth, inflation and market capitalization on major profitability indicators that is, return on asset (ROA), return on equity (ROE), return on capital employed (ROCE) and net interest margin (NIM) separately. The empirical results showed strong evidence that both internal and external factors have a strong influence on the profitability.

Onyeiwu (2012) conducted an empirical investigation of the effectiveness of Central Bank of Nigeria's monetary policy on the country, it was discovered that:

i. Overall, CBN's monetary policies play crucial role in influencing the level of productivity in the country. This result gives weight to the place of Central bank in the national development process of a nation;

ii. The regression analysis also revealed that the adoption of various monetary policy measures by the Central Bank of Nigeria has no significant impact on the inflation rate in the country. This suggests that the problem of inflation in Nigeria is not a monetary phenomenon but is rather attributable to the structural rigidity in the country. This is understandably as Nigeria is operating far below full employment equilibrium and the increase in GDP does not translate to improved purchasing power because poverty index has continued to worsen over the years. A lot still needs to be done in the areas of creating public awareness, improving operations of the financial market, enhancing the depth and breadth of the market and building regulatory capacity so as to appropriately position the market to face the challenges ahead.

iii. The empirical analysis also reveal that liquidity and cash ratios do not have significant impact on the balance of payment position which means that the monetary policy has not supported healthy exchange rate system that would encourage export and discourage frivolous importation

Uchendu (1995) investigated the effect of monetary policies on the performance of Nigerian commercial banks. He found that whether you use all banks data, six banks or the then three large banks' data, the dominant factors influencing bank profitability are interest rates, exchange rate, bank reserves, banking structure and unit labour costs, particularly when return on capital is used as measure of profitability.

Ahmad (2003) reported that interest on loan is the largest constituent of income for Nigerian banks as evidenced from available data and that movement from one interest regime to another could have some effects on the profitability of banks in the system.

Agbada and Osuji (2013) studied the efficacy of liquidity management and banking performance in Nigeria using survey research methodology. Data obtained were first presented in tables of percentages and pie charts and were empirically analyzed by Pearson product-moment correlation coefficient (r). Findings from the empirical analysis were quite robust and clearly indicate that there is significant relationship between efficient liquidity management and banking performance and that efficient liquidity management enhances the soundness of bank.

Uremadu (2012) examined the effect of bank capital structure and liquidity on profitability using Nigerian data for the period 1980-2006 and applying an OLS methodology. The study found a positive influence of cash reserve ratio, liquidity ratio and corporate income tax; and a negative influence of bank credits to the domestic economy, savings deposit rate, gross national savings (proxy for deposits with the central bank), balances with the central bank, inflation rate and foreign private investments, on banking system profits. It also found that liquidity ratio leads banks' profits in Nigeria, closely followed by balances with the central bank and then, gross national savings and foreign private investments,followed suit in that order. Olagunju, Adeyanju and Olabode (2011) examined liquidity management and commercial banks' profitability in Nigeria by analyzing both primary and secondary data. The results indicate that the profitability of commercial banks is significantly influenced by their liquidity and vice versa. Kolapo, Ayeni and Oke (2012) carried out an empirical investigation into the quantitative effect of credit risk on the performance of commercial banks in Nigeria over the period of 11 years (2000-2010) using five commercial banking firms. Panel model analysis was used to estimate the determinants of the profit function. The results showed that

the effect of credit risk on bank performance measured by the Return on Assets of banks is cross-sectional invariant. That is the effect is similar across banks in Nigeria, though the degree to which individual banks are affected is not captured by the method of analysis employed in the study.

Adegbaju and Olokoyo (2008) investigated the impact of previous recapitalization in the banking system on the performance of the banks in Nigeria with the aim of finding out if the recapitalization is of any benefit. The study employed secondary data obtained from NDIC annual reports. The results indicate that the mean of key profitability ratios such as the Yield on earning asset (YEA), Return on Equity (ROE) and Return on Asset (ROA) were significant meaning that there is statistical difference between the mean of the bank before 2001 recapitalization and after 2001 recapitalization.

Punita and Somaiya (2006) examined monetary policy impact on the profitability of banks in India (1995-2000). Variables used to capture monetary policy include bank rates, lending rates, cash reserve ratio, and statutory ratio regressed autonomously on banks profitability. The rate at which loans were given out was attested to have significantly affected banks' profitability positively. This signified that a decline in the rate of lending would cause a decline in profitability of banks. It was also noticed that bank rate, cash reserve ratio and statutory ratio integrated to state the relationship between bank profitability and the instruments of monetary policy in the private sector.

Olokoyo (2012) examined the effects of bank deregulation on DMBs' performance in Nigeria. The study analyzed secondary data collected from CBN statistical bulletin by employing the Ordinary Least Square (OLS) technique. This study found out that the deregulation of the banking sector has positive and significant effect on DMBs' performance.

Methodology

This study applied descriptive and quantitative research techniques based on ex-post facto research design to study the effects of monetary policy on profitability of Deposit Money banks in Nigeria. The uses of mathematical and statistical techniques including models are the key tools in the conduct of quantitative research. Quantitative research mainly explores objective relationships among variables in a particular study.However, this work made use of Ordinary Least Regression Analysis and correlation analysis to explore the subject of the study. The data required for this study are the Quasi Money (QM), Real Gross Domestic Product (RGDP), Exchange Rate (ER), Inflation (INF), Lending Interest Rate (LIR) Real Interest Rate (RIR) Domestic Credit to Private sectors (DCP), Currency in Circulation (CC) and Return on Assets (ROA) within the period 1999-2013.

Model specification

The study adopted eight major monetary policy and macro-economic variables. These variables include Quasi Money (QM), Real Gross Domestic Product (RGDP), Exchange Rate (ER), Inflation (INF), Lending Interest Rate (LIR) Real Interest Rate (RIR) Domestic Credit to Private sectors (DCP), Currency in Circulation (CC) and Return on Assets (ROA). The choice of these eight macro variables is grounded in the overall goal of the researcher. The study adapted the empirical model used by Punita and Somaiya (2006). The model was used to examine the impact of monetary policy on bank profitability in India and it is specified as:

$$P_t = \beta_o + \beta_1 BR + \beta_2 LR + \beta_3 CRR + \beta_4 SLR + u \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (a)$$

Where: Pt is the profitability of the banks; BR is the bank rate. It is the rate at which the central bank of the country is prepared to buy or rediscount the eligible bills of exchange? Proxy as prime lending rate; LR is the lending rates of the banks; CRR is the cash reserve ratio; SLR

is statutory liquidity ratio. As defined in Punita and Somaiya (2006), Statutory Liquidity Ratio (SLR) is a statutory prescribed minimum proportion of banks' total demand and time liabilities (L) in the form of liquid assets. The liquid assets consists of excess reserves (ER), unencumbered government and other approved securities (I) and other current account balances with other banks (CB).

In modifying the model, Pt is excluded and replaced with banks operation which is proxied by banks domestic credit. Inflationary rate, exchange rate, lending interest rate, real interest rate, real GDP and quasi money are introduced as explanatory variables to capture the effect of other macroeconomic indicators in line with previous studies.

From equ. (a), econometric model for this paper is expressed as:

For hypotheses one the model will be thus;

$$ROA = \alpha_1 + b_1 QM + b_{2I} CC + U_1 \quad ---------- (1)$$

For hypotheses two the model will be thus;

$$ROA = \alpha_2 + b_2 DCP + U_2 \quad ---------- (2)$$

For hypotheses three the model will be thus;

$$ROA = \alpha_4 + b_4 LIR + b_{4i} RIR + U_4 \quad ---------- (3)$$

Data Presentation and Analysis

Table 4.1 Presentation of Data for the analysis of effects of monetary policy, money supply on profitability of DMBs in Nigeria (1999-2013)

Year	Return on Assets	Quasi Money	Currency in circulation	Domestic credit to Private sector	Inflation	Exchange rate	Real GDP	Lending Interest Rate	Real Interest Rate
1999	3.82	33.1	208.6	13.5	6.6	69.6	0.5	20.3	2.8
2000	3.78	48.1	301.5	12.4	6.9	69.3	5.3	21.3	-10.3
2001	4.82	26.4	338.7	16.6	18.9	77.2	4.4	23.4	23.8
2002	2.63	18.8	386.9	13.0	12.9	77.4	3.8	24.8	-10.8
2003	2.00	13.5	412.2	13.8	14.0	72.6	10.4	20.7	8.6
2004	2.58	20.7	458.6	13.1	15.0	74.3	33.7	19.2	19.4
2005	0.75	22.6	563.2	13.2	17.9	84.8	3.4	17.9	-3.3
2006	0.59	36.4	650.9	13.2	8.2	90.7	8.2	16.9	-0.4
2007	5.92	64.4	737.9	25.2	5.4	88.8	6.8	16.9	11.6
2008	4.29	53.4	892.7	33.8	11.6	98.3	6.3	15.5	4.2
2009	-64.72	14.5	927.2	38.5	11.5	92.2	6.9	18.4	23.7
2010	3.91	10.0	1082.3	15.6	13.7	100.0	7.8	17.6	-41.9
2011	0.04	13.1	1245.1	12.4	10.8	101.6	4.7	16.0	4.5
2012	2.62	17.4	1150.3	11.9	12.2	115.0	6.7	16.8	10.7
2013		16.922	1246.4	16.5	8.5	129.2	7.3	16.7	11.3

Source: Worldbank database, NDIC, CBN statistical bulletin, Factfish.com, Mondiindex.com

Hypothesis 1

H_0: There is no significant relationship between money supply and the profitability of Deposit Money Banks.

H_1: There is a significant relationship between money supply and the profitability of Deposit Money Banks.

Table 4.2 Descriptive Statistics, Correlation, ANOVA, Coefficients, Collinearity Diagnostics, Residuals Statistics: Hypothesis 1

Descriptive Statistics

	Mean	Std. Deviation	N
ROA	-1.9264	18.15092	15
QM	28.0286	16.85049	15
CC	668.2929	341.17957	15

Correlations

		ROA	QM	CC
Pearson Correlation	ROA	1.000	.281	-.237
	QM	.281	1.000	-.232
	CC	-.237	-.232	1.000
Sig. (1-tailed)	ROA	.	.165	.207
	QM	.165	.	.212
	CC	.207	.212	.
N	ROA	15	15	15
	QM	15	15	15
	CC	15	15	15

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	337.908	1	337.908	1.028	.331[b]
	Residual	3945.017	12	328.751		
	Total	4282.924	13			
2	Regression	471.703	2	235.852	.681	.526[c]
	Residual	3811.221	11	346.475		
	Total	4282.924	13			

a. Dependent Variable: ROA

b. Predicators: (Constant), QM

c. Predicators: (Constant), QM, CC

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-10.407	9.667		-1.077	.303					
	QM	.303	.298	.281	1.014	.331	.281	.281	.281	1.000	1.000
2	(Constant)	-2.673	15.918		-.168	.870					
	QM	.257	.315	.239	.816	.432	.281	.239	.232	.946	1.057
	CC	-.010	.016	-.182	-.621	.547	-.237	-.184	-.177	.946	1.057

a. Dependent Variable: ROA

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	CC	-.182[b]	-.621	.547	-.184	.946	1.057	.946

a. Dependent Variable: ROA

b. Predicators in the Model: (Constant), QM

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	QM	CC
1	1	1.865	1.000	.07	.07	
	2	.135	3.721	.93	.93	
2	1	2.661	1.000	.01	.03	.02
	2	.276	3.102	.00	.48	.30
	3	.063	6.499	.99	.50	.68

a. Dependent Variable: ROA

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-11.3409	6.7801	-1.9264	6.02369	15
Residual	-56.81226	14.47414	.00000	17.12223	15
Std. Predicted Value	-1.563	1.445	.000	1.000	15
Std. Residual	-3.052	.778	.000	.920	15

a. Dependent Variable: ROA

Remark: From the result of the analysis presented in Table 4.2, it is evident that there is an insignificant positive relationship between quasi money. Also, there is an insignificant negative relationship between currency in circulation and return on assets. Since for both cases P = 0.165 and 0.207 is greater than 0.05. Therefore we accept the null hypothesis which states that there is an insignificant relationship between money supply and the profitability of Deposit Money Banks. In essence, 1% increases in the quasi money causes the Return on assets to increase by 0.239. While 1% increase on Currency in circulation will have a 0.182 decrease on return on assets.

Hypothesis 2

H_0: There is no significant relationship between the level of credit in the economy and the profitability of Deposit Money Banks

H_1: There is a significant relationship between the level of credit in the economy and the profitability of Deposit Money Banks

Table 4.3 Descriptive Statistics, Correlation, ANOVA, Coefficients, Collinearity Diagnostics, Residuals Statistics: Hypothesis 2

Descriptive Statistics

	Mean	Std. Deviation	N
ROA	-1.9264	18.15092	15
DCP	17.5857	8.59319	15

Correlations

		ROA	DCP
Pearson Correlation	ROA	1.000	-.660
	DCP	-.660	1.000
Sig. (1-tailed)	ROA	.	.005
	DCP	.005	.
N	ROA	15	15
	DCP	15	15

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.660[a]	.436	.389	14.18814	.436	9.276	1	12	.010	2.492

a. Predicators: (Constant), DCP
b. Dependent Variable: ROA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1867.283	1	1867.283	9.276	.010[b]
	Residual	2415.641	12	201.303		
	Total	4282.924	13			

a. Dependent Variable: ROA
b. Predicators: (Constant), DCP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	22.600	8.901		2.539	.026					
	DCP	-1.395	.458	-.660	-3.046	.010	-.660	-.660	-.660	1.000	1.000

a. Dependent Variable: ROA

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	DCP
1	1	1.905	1.000	.05	.05
	2	.095	4.471	.95	.95

a. Dependent Variable: ROA

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-31.0955	6.0034	-1.9264	11.98487	15
Residual	-33.62452	28.83041	.00000	13.63153	15
Std. Predicted Value	-2.434	.662	.000	1.000	15
Std. Residual	-2.370	2.032	.000	.961	15

a. Dependent Variable: ROA

Remark: From the result of the analysis presented in table 4.3, it is evident that there is a significant negative relationship between Return on Assets and Domestic Credit to Private sectors since P = 0.005 which is equal 0.05. Therefore we reject the null hypotheses and accept the alternate which state that there is a significant relationship between the level of credit in the economy and the profitability of Deposit Money Banks. In essence, 1% increases in the domestic credit to private sector causes the Return on assets to decrease by -0.660.

Hypothesis 3. H_0: There is no significant relationship between interest rate (lending and real interest rate) and the profitability of money deposit banks.

H_1: There is no significant relationship between interest rate (lending and real interest rate) and the profitability of money deposit banks.

Table 4.4 Descriptive Statistics, Correlation, ANOVA, Coefficients, Collinearity Diagnostics, Residuals Statistics: Hypothesis 3

Descriptive Statistics

	Mean	Std. Deviation	N
ROA	-1.9264	18.15092	15
LIR	18.9786	2.79207	15
RIR	3.0429	16.94560	15

Correlations

		ROA	LIR	RIR
Pearson Correlation	ROA	1.000	.078	-.345
	LIR	.078	1.000	.023
	RIR	-.345	.023	1.000
Sig. (1-tailed)	ROA	.	.395	.114
	LIR	.395	.	.469
	RIR	.114	.469	.
N	ROA	15	15	15
	LIR	15	15	15
	RIR	15	15	15

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	LIR[b]	.	Enter
2	RIR[b]	.	Enter

a. Dependent Variable: ROA

b. All requested variables entered.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.078[a]	.006	-.077	18.83444	.006	.074	1	12	.791	
2	.355[b]	.126	-.033	18.44512	.120	1.512	1	11	.244	1.867

a. Predicators: (Constant), LIR
b. Predicators: (Constant), LIR, RIR
b. Dependent Variable: ROA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.093	1	26.093	.074	.791[b]
	Residual	4256.832	12	354.736		
	Total	4282.924	13			
2	Regression	540.478	2	270.239	.794	.476[c]
	Residual	3742.446	11	340.222		
	Total	4282.924	13			

a. Dependent Variable: ROA
b. Predicators: (Constant), LIR
c. Predicators: (Constant), LIR, RIR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-11.556	35.862		-.322	.753					
	LIR	.507	1.871	.078	.271	.791	.078	.078	.078	1.000	1.000
2	(Constant)	-11.418	35.121		-.325	.751					
	LIR	.560	1.833	.086	.305	.766	.078	.092	.086	.999	1.001
	RIR	-.371	.302	-.347	-1.230	.244	-.345	-.348	-.347	.999	1.001

a. Dependent Variable: ROA

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	RIR	-.347[b]	-1.230	.244	-.348	.999	1.001	.999

a. Dependent Variable: ROA
b. Predicators in the Model: (Constant), LIR

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	LIR	RIR
1	1	1.990	1.000	.00	.00	
	2	.010	14.178	1.00	1.00	
2	1	2.054	1.000	.00	.00	.03
	2	.936	1.482	.00	.00	.97
	3	.010	14.406	.99	.99	.00

a. Dependent Variable: ROA

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-9.9203	13.9896	-1.9264	6.44789	15
Residual	-54.79966	12.18699	.00000	16.96704	15
Std. Predicted Value	-1.240	2.468	.000	1.000	15
Std. Residual	-2.971	.661	.000	.920	15

a. Dependent Variable: ROA

Remark: From Table 4.4, it can be seen that the regression for lending interest rate and real interest rate are 0.006 and 0.126 respectively. This implies that lending interest rate and real interest rate have positive relationship with profitability of banks. Furthermore, lending interest rate has 6% direct relationship with profitability of banks while real interest rate has 12% positive relationship with profitability of banks. This implies that the higher the lending and real interest rate, the more the banks make profit.

Conclusion

The conduct of monetary policy is the statutory responsibility of the Central Bank of Nigeria(CBN) The primary objective of monetary management by the CBN is to ensure a stable macroeconomic environment, which is the basis for promoting sustainable economic growth and development. Sound monetary and fiscal policy has become very crucial during the recent global financial crisis, when the Central Bank of Nigeria in collaboration with the fiscal authorities adopted measures to avert a collapse of the banking system and to stimulate aggregate demand and strengthen output growth.

Recommendations

(i) For effective operation of the monetary policy measures in the Nigerian economy, the Central Bank of Nigeria should be granted full autonomy on its monetary policy functions. Partial autonomy should be replaced with full autonomy for the central banks devoid of government interference. (ii)The central bank of Nigeria and other financial authorities should persuade commercial banks to abide by the regulations governing the issuance of credit to the public. Any deviation from the set regulations should be punished to serve as a deterrent to others. (iii).Monetary policy must work in random to create the right macroeconomic framework in other word such monetary policy applied by the central bank is to great extent depends on coordination with fiscal policy. Therefore, these two should be well articulated in order to bring out effective results. (iv)The government should also endeavour to make the financial sector less volatile and more viable as it is in developed countries. This will allow for smooth execution of the Central Bank monetary policies. Law relating to the operation of the financial institutions could be made a bit less stringent and more favourable for the operators to have room to operate more freely. (v)The Central Bank should reduce the level of deficit financing, improve funding of the informal sector and the

SMEs and promote their integration into the formal sector while at the same time working with government to improve the tax regime to make the tax capacity to approach the tax potential so as to reduce tax evasion to barest minimum and ensure that there is proper balancing between capital and recurrent expenditures of government.

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