



**AN EVALUATION OF THE EFFECT OF GOVERNMENT MONETARY
POLICIES ON THE PERFORMANCE OF SELECTED DEPOSIT MONEY
BANKS IN NIGERIA**

ABSTRACT

This study evaluates the effect of government monetary policies on the performance of selected deposit money banks in Nigeria. The independent variables used in the study are Liquidity ratio, Cash reserve ratio and Interest rate while Return on asset is used as dependent variable. Secondary data were used, which were extracted from Central Bank statistical bulletin and the audited annual reports of the selected deposit money banks for the period 2014 - 2018. The study employed correlation and ex-post facto research designs and multiple regressions were used for data analysis. The study finds that liquidity ratio has positive but insignificant effect on return on asset of sampled deposit money banks in Nigeria. The study also found that cash reserve ratio and interest rate have negative and insignificant effects on return on asset of sampled deposit money banks in Nigeria. In view of the findings from the study, the study therefore, recommended that the management of deposit money banks in Nigeria should look beyond monetary policy instruments and think of investment that will enhance their profits. One important and major implication is that, cash reserve ratio and interest rate do not improve significantly the financial performance of selected deposit money banks in Nigeria.

Key words: Monetary Policy, Deposit Money Banks, Financial Performance, Return on Asset.

Background to the Study

Everywhere around the world, the banking sector is largely dominated by commercial banks which is by far one of the most important in any developing country. Globally, the unique role of banks as the engine of growth in any economy has been widely acknowledged (Adegaju & Olokojo, 2008). In fact, the intermediating role of banks can be said to be a catalyst for economic growth and development as investment funds are mobilized from the surplus units in the economy and made available to the deficit units. In doing this, banks provide an array of financial services to their customers. It can therefore be said that the effective and efficient performance of the banking industry is an important foundation for the financial stability of any nation.

The extent to which banks extend credit to the public for productive activities accelerates the pace of a nation's economic growth and development as well as the long-term sustainability of the banking industry (Kolapo et al., 2012:). Simply put, the banking institution occupies a vital position in the stability of the nation's economy. In other words, deposit money banks(DMBs) usually mobilize savings and extend loans and advances to their numerous customers bearing in mind, the three principles guiding their operations, which are profitability, liquidity and safety (Okoye & Eze, 2013).In performing these functions, it must be emphasized that banks in turn promote their own performance.

The Central Bank of Nigeria (CBN) as a monitoring agent of the government carries out its own responsibility on behalf of the government of Nigeria through a process outlined in the CBN Decree²⁴ of 1991. The CBN conducts periodic check on the books of specified licensed financial institutions which are also required to submit regular returns on their operations to the CBN. The CBN at some points attempts to keep the money supply growing at an appropriate rate to ensure sustainable growth as well as domestic and external stability and using the discretionary control of money stock by expansion or contraction of money, influencing interest rate to make money cheaper or more expensive depending on the prevailing economic conditions and trust of policy (Oloyede, 2008).

In the past decade, significant changes in the design and conduct of monetary policy have occurred around the world. Many developing countries including Nigeria have adopted various policy measures to achieve targeted objectives. The monetary policy is essential to achieve desired objectives which traditionally include promoting economic growth, achieving full employment level, reduction in the level of inflation, maintenance of healthy balance of payment, sustaining the growth of the economy, increase in industrialization and economic stability. According to Mishra & Pradhan, (2008), the smoothing of the business cycle, preventing financial crisis and stabilizing long term interest rate and the real exchange rate have been identified recently as other supplementary objectives of monetary policy because of the global financial crisis which engulfed major developing and emerging economies in the world.

During the period of the study, the monetary policy of the Central Bank of Nigeria include; Open Market Operation (OMO), Cash Reserve Ratio (CRR), Interest Rate (IR), Liquidity Ratio(LR), Exchange Rate(EXR), Lending Rate(LR) and Discount Rate(DR). Among these policies, interest rate, cash reserve ratio and liquidity ratio are some of the elements that fall under the impact analysis of this study, which intends to identify the monetary policy measures used by the CBN, their efficacies and effect on the performance of DMBs in Nigeria. However, these policies specifically affect the DMBs in Nigeria during the period of study in the following way; cash reserve ratio affects the availability of money with the DMBs for credit services in the system thereby affecting the money supply in the economy. A high cash reserve ratio gives banks less money to lend. This situation will be so hard on the small banks since they would not have enough to lend to their customers in the first place. Also, as interest rate increases, profitability on loan and advances also increases, as there is a greater spread between the federal funds and the rate the banks charges its customers. However, liquidity rate affects DMBs in a way that the higher the liquidity rate the lower the profitability and vice versa. Lack of liquidity may lead to lower rate of return for DMBs. The success of monetary policy depends on the operating economic environment and the institutional framework adopted.

Generally, monetary policy can either be expansionary or contractionary depending on the overall policy thrust of the monetary authorities. Expansionary monetary policy can be define as a tool through which CBN can increase money supply in order to force down IR, while

Contractionary monetary policy is a type of policy that is used as a macro-economic tool by the CBN to slow down an economy. This is done primarily through increasing IR, increasing CRR and reducing the money supply. Expansionary monetary policy measures are used during economic recession while Contractionary monetary policy measures are used during the period of boom.

The concept of performance has gained increasing attention in recent decades, being pervasive in almost all spheres of human activity. Didier (2002) believes that performance consist in achieving the goals that were given to you in convergence of enterprise orientation. In his opinion, performance is not a mere finding of an outcome, but rather it is the result of comparison between the outcome and the objective.

The fundamental problem of any developing country is how to develop its economy and as a result, a number of government monetary policy instruments have been designed and applied in Nigeria in the hope of achieving the desired result of stable price level, low unemployment, efficient banking system and so on, but the result is not as expected.

Each year the monetary authorities formulate policy guidelines geared towards the effectiveness of policy variables designed to ensure optimal performance of deposit money banks, but banks encounter certain problems in the course of implementation. For instance, a change in cash reserve ratio alters the magnitude of money multiplier, credit expansion, money supply and hence banks profitability. Similarly, the use of interest rate and other policy instruments are meant to alter the level of profitability of banks. Some of these policies result into inefficiency and misallocation of resources in the financial system. It is either that these policies are not right or that they are poorly implemented as the much expected result is yet to be found, thereby making the performance of the deposit money banks to still fall below international standard. It is against this backdrop that this study seeks to evaluate the effect of government monetary policies on the performance of deposit money banks in Nigeria.

Objective

Globally, commercial banks dominate the banking sector which makes it one of the most important sectors in developing an economy, this is because they make money circulation very easy by providing financial services to their numerous customers. Several school thoughts hold the view that government monetary policies positively influence the performance of deposit money banks while other are of the view that even though it influences performance, but if not well selected and implemented will do more harm than good to the deposit money banks. The objective of this study is to evaluate the effect of government monetary policies on the performance of deposit money banks in Nigeria. Here the multiple regression was used to analyze the effect of government monetary poilcies on the performance of deposit money banks in Nigeria. This study used yearly data generated from Central Bank of Nigeria statistical bulletin and the audited annual report of the selected deposit money banks between 2014 and 2018.

Conceptual Framework:

The study looks at the concepts return on asset, cash reserve ratio, interest rate and liquidity ratio.

Return on Asset: According to Gitman (2009), return on asset (ROA) is the measure of the overall effectiveness of management in generating profit with available assets. For the purpose of this study, ROA is used to measure profitability. Udeh (2015) believes that a very low positive relationship exists between profit before tax and cash reserve ratio (CRR). This implies that CRR

has no significant effect on profit before tax. While the LR has a high negative relationship with profit before tax, also, IR has a high negative relationship with profits before tax.

Similarly, Dare and Okega (2017) argued that there is a positive and significant relationship between monetary policy rate (MPR) and return on assets (ROA).

Cash Reserve Ratio: According to Ude, (2015), cash reserve ratio is the proportion of total deposit liabilities which the DMBs and other financial institutions are expected to keep as cash with the CBN. Olatu, Aladesanmi and Mary, (2014), again believe that it is the statutory cash reserves that banks are to keep with the CBN and this cash ratio was designed to help rescue the liquidity of the banks and hence control the volume of banks credit that can be extended by the DMBs. Increase or decrease in CRR affects banks ROA. Whenever CRR is increased, it acts as a tax on banks deposits. As financial intermediation becomes more costly, spreads between lending and deposit rates rises. If the CBN stabilizes the interbank rate, it is expected that will increase and deposit rates will fall, as the stable interbank rate typically lies between deposit and lending rates (Glocker & Towbin, 2012). Changes in the lending and deposit rate affect the banks spread and therefore it's return on asset.

Interest Rate: The Central Bank lends to financially sound DMBs at a most favourable rate of interest called the monetary policy rate (MPR). The MPR sets the floor for the interest rate regime in the money market (the nominal anchor rate) and thereby affects the supply of credit, the supply of savings (which affects the supply of reserves and monetary aggregate) and the supply of investment (which affects full employment and GDP). As interest rate rises, profitability on loan and advances also increases, as there is a greater spread between the federal funds rate and the rate the bank charges its customers. Increase in interest rate directly increases the yield on cash and the proceeds go directly to return on asset.

Liquidity Ratio: According to Olweny and Chiluwe (2012), the Liquidity Ratio is the proportion of total deposits to be kept in specified liquid assets mainly to safeguard the ability of the banks to meet depositor's cash withdrawals and ensure confidence in the banking system. It is generally accepted that LR is used to increase or decrease cash availability of commercial banks. However, researchers have argued that the major use of the statutory reserve ratio of banks is to float government securities. Olatu, Aladesanmi and Mary(2014), believe therefore, that it intends to direct commercial banks credit towards the public sector.

Theoretical Framework:

This study will be anchored on Keynesian Theory and Anticipated Income Theory.

Keynesian Theory: Several theoretical arguments have been advanced to support the assumption that monetary policies affect the performance of deposit money banks. This theory was propounded by John Maynard Keynes in 1936. The advocate of this theory; Keynesian Economists think that monetary policy works primarily through interest rate. In Keynesian transmission mechanism, an increase in the money supply leads to a fall in interest rate to induce the public to hold additional money balances. Consequently, a fall in interest rate may stimulate investment. The increased investments also increase the level of income or output through the multiplier, which may stimulate economic activities. Thus, monetary policy affects economic activity indirectly through their impact on interest rates and investment.

Jhingan, (2005), holds the view that the induced investment expenditure causes successive rounds of final demand to rise by a multiple of the initial change in investment. On the other hand, a fall in MS causes the general level of IR to rise or increase thereby increasing the commercial banks profitability.

Anticipated Income Theory: The anticipated income theory was propounded by Herbert V. Prochnow in 1945. This theory states that banks should involve themselves in a broad range of lending which may include long-term loans to business, consumer instalment loans and amortized real estate mortgage loans considering the fact that the likelihood of loan repayment which generates a cash flow that supplement bank liquidity depends on the anticipated income of the borrower and not the use made of the funds per se. This implies that a high excess reserve increases profitability of banks by increasing the availability of loanable investment funds.

Review of Empirical Literature

Olaoluwa and Shomade (2017) examine the appraisal of monetary policies on DMBs' lending behaviour in the Nigerian banking industry from 1980-2014. The independent variables are MPR, EXR and volume of deposit, MS and reserve requirement while the dependent variable is lending rate. Secondary data was utilised and annual time series data is sourced from the CBN statistical bulletin. Ordinary least square method (OLS), augmented Dickey Fuller test (ADF), co-integration test and error correction model (ECM) are employed as estimation techniques.

The empirical findings indicate that there is a long run relationship between all the independent variables and lending rate. It is shown that only interest rate and reserve requirement have a negative but significant impact on commercial bank lending rate while exchange rate, volume of deposit and money supply have a positive but insignificant relationship. It was recommended that Nigeria should consider policies beyond discretion, if monetary variables are to produce meaningful macroeconomic changes.

Uloma (2017) looks at the monetary policy instruments employed by the Nigerian monetary authorities and their effects on turnover ratio of DMBs in Nigeria from 1980 to 2015. The study uses money supply (MS), liquidity ratio (LR), MPR and cash reserve ratio (CRR) as independent variables while turnover (TOR), loans and advances (LADV), and bank assets (BNKAS) are used as the dependent variables. The study uses secondary sources of data which are extracted from the financial statements of the banks. The research employs multiple regressions method to analyse the data for the study.

The analysis shows that monetary policy has some level of effect on turnover ratio, bank assets and loan advances. Liquidity ratio is negative and equally significant in relation with bank turnover ratio, while money supply alone has a positive and significant effect in relation with bank assets. On the other hand, current reserve ratio has negative and significant impact on bank loan advances. The negative relationship between liquidity ratio and turnover ratio also indicates that when CBN increases the ratio, bank liquid assets reduces which hamper their ability to create more loans and engage in more investment, thereby reducing their turnover which in other words conforms to expectation. Recommendations of the study include that CBN should adjust the MPR by reducing the cash reserve ratio which will increase liquidity to enable the commercial banks to discharge their lending and investment duties effectively. The CBN and Ministry of Finance should work more closely to objectively articulate policies in the same economic direction. The policies that may affect banks loans which are necessary for economic development should be checked.

Dare and Okeya (2017) examine the impact of monetary policy on the performance of DMBs in Nigeria using United Bank for Africa (UBA) as a case study. The study used panel cross sectional data covering the period from 2009-2014. MPR, CRR and LR were the independent variables while return on asset (ROA) was the dependent variable. Secondary data were gathered from the bank's audited published financial statements and CBN statistical bulletin. Multiple

linear regression technique was used to test the relationships inherent in the explanatory and dependent variables.

The study shows that there is a positive but statistically insignificant relationship between MPR and ROA in the chosen bank. The study further indicated that CRR and LR have negative and insignificant impact on ROA.

Nhan, Ngoc and Ha (2017) examine the impact of monetary policy on the profit before tax of 20 DMBs in Vietnam covering the period 2007-2014. Monetary base (MB), discount rate (DR) and required CRR were the independent variables while profit before tax was used as the dependent variable. Panel data regression was used in analysing the data collected.

The result revealed that there was a positive relationship between all the independent variables and profit before tax of DMBs in Vietnam. However, only monetary base has a significant impact on the banks profit before tax. On this premise, the study recommends that monetary base should be one of the variables that should be given more attention regarding banking performance and stability.

Onodugo, Okoro, Benjamin and Vincent (2016) examine the impact of monetary policy regimes on performance of commercial banks in Nigeria. The study was divided into SAP period (1986-1999) and post SAP period (2000-2013). MPR is used as the independent variable while total asset value, deposit mobilization, loan advances and credit to private sector were the dependent variables. The study utilizes time series data collected from CBN bulletin. Regression and Pearson product moment correlation technique were used to analyse the data collected. The study discovers that MPR during the SAP period did not have significant impact on all the dependent variables. However, monetary policy regime during the post SAP period has significant impact on all dependent variables. The study recommends that policy makers should administer the monetary policy instruments to ensure they are effective in generating the level of economic activity desired in the banking sector.

Uwazie and Aina (2015) examine the cause and effect of monetary policy variables on commercial banks loans and advances in Nigeria for the period 1980-2013. The study used secondary data obtained from the CBN and National Bureau of Statistics (NBS). Error Correction Model was employed to determine an accurate prediction of the relationship between monetary policy variables and commercial banks loans in Nigeria. The result showed that there was a causal relationship between all the independent variables and commercial bank loans in Nigeria within the period under study. This implies that there exist cause and effect between commercial bank loans and the explanatory variables. On the other hand, commercial bank loan was found to significantly influence exchange rate. In ECM, disequilibrium of the system was found to be corrected at a speedy rate. It was estimated from the result that increase in money supply will bring about increase in commercial bank loans. The study therefore recommended that the relevant monetary authorities should apply with caution monetary policy variables to significantly influence the commercial banks loans and advances. Expansionary monetary policy should also be adopted by the CBN to force down interest rate and increase money supply. This will encourage more customers to secure loans from their banks, thereby increasing investment opportunities in the country *ceteris paribus*.

Greg, Udude and Hope (2015) investigated the effect of monetary policy on banking sector performance in Nigeria. The study period covers 37 years from 1970-2006. The independent variables were exchange rate (EXR), deposit rate (DR) and minimum discount rate (MDR) while the dependent variable is bank deposit liabilities. Secondary data is obtained from CBN statistical bulletin (2006). The study used OLS of multiple regression technique. Result showed

that all the independent variables have a significant effect on the banks deposits liabilities. However, on individual basis, they discovered that DR and MDR had a negative influence on the banks deposit liabilities in Nigeria whereas EXR has a positive and significant influence on the banks deposit liabilities in Nigeria. The study, therefore, recommended 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 guarantee and enhance growth and development of the banking sector in Nigeria.

Geoffrey (2015) examines the effect of monetary policy on the financial performance of commercial banks in Kenya from 2010-2014. The independent variables were; open market operation and cash reserve ratio (CRR) while net interest margin was used as the measure of financial performance to represent the dependent variable. Secondary data were used and were sourced from the financial statement of the commercial banks that were available on the websites and Central Bank of Kenya publications. The study uses descriptive statistical and inferential statistics to establish the relationship between the independent variables and the dependent variable. The result shows that a monetary policy tool as represented by open market operation has negative and insignificant effect on net interest margin. CRR is however, was found to have an insignificant but positive effect on net interest margin. The study, therefore, recommends that commercial banks need to focus more on internal factors that affect their net interest margin and also focus on monetary policy changes to the extent of complying with the Central Bank guidelines and adjusting their variables accordingly.

Ndugbu and Okere (2015) investigated the impact of monetary policy on the performance of DMBs in Nigeria from the period 1993-2013. Bank deposit rate (BDR), bank lending rate (BLR), CRR and LR were the independent variables while total bank deposit (TBD) was used as the dependent variable. Secondary data was used for the study and it is collected from the CBN statistical bulletin, annual reports and statement of accounts. OLS and co-integration were used to evaluate the impact of monetary policy on the performance of DMBs.

ADF unit root test and co integration prove that the variables are stationary and a long run relationship exist amongst all the monetary policy variables considered in the model. Only BDR has significant relationship though an inverse relationship. As a result, the study recommends among others that the CBN should moderate the deposit rate as a tool for regulating DMBs' operation. Again, there is need to modify the monetary policy instruments to reflect and respond more rapidly and easily to local economic conditions.

Udeh (2015) examines the impact of monetary policy instruments on profitability of commercial banks in Nigeria using the Zenith Bank Plc experience for the period 2005-2012. CRR, LR, interest rate (IR) and minimum rediscount rate (MRR) were the independent variables while profit before tax was used as the dependent variable. It utilizes time series data collected from published financial statements of Zenith Bank Plc as well as CBN bulletin from 2005-2012. Pearson product moment correlation technique is used to analyse the data collected.

It was found from the result that CRR, LR and IR does not have significant impact on the profit before tax of Zenith bank PLC. However, MRR was found to have significant effect on the profit before tax of the bank. The study recommended that management of commercial banks in Nigeria should look beyond monetary policy instruments to enhance their profits.

Ogunbiyi and Ihejirika (2014) examine low interest rates effect on the profitability of DMBs in Nigeria. The study was based on a country aggregate level annual data that covers the period of 14 years from 1999-2012. Maximum lending rate, real interest rate and saving deposit rate were the independent variables while return on assets, return on equity and net interest margin were

the dependent variables. The study uses secondary data which were obtained mainly from CBN statistical bulletins and annual report. Multivariate regression was adopted for analysis of data.

The results showed that all the independent variables have negative but significant effects on the return on assets and return on equity of the DMBs in Nigerian, while no significant relationship exists between the independent variables and net interest margin of the DMBs in Nigeria. The study, therefore, recommends that government should adopt monetary policies that will help Nigerian DMBs to improve on their profitability and there is need to review and strengthen bank lending rate policies through effective and efficient regulation and supervisory framework.

Jegade (2014) examined the effect of monetary policy on commercial bank lending in Nigeria in the period 1988-2008. EXR, IR, LR and MS were the independent variables while commercial banks' lending and loans and advances were the dependent variables. The study employs secondary data and a time series analysis for the period of the study which was obtained from the CBN and NBS, and used vector error correction mechanism of OLS econometric technique as the estimation method.

The study found that EXR and IR significantly influence commercial banks' lending while LR and MS exert negative but significant effect on commercial banks' loans and advances. The study also recommended that monetary authorities should make effort to develop indirect monetary instruments and exercise appropriate control over the monetary sector.

Agbonkhese and Asekome (2013) examined the impact of monetary policy on bank credit creation in Nigeria from 1980-2010. Total deposits, treasury bills rate, reserve requirement ratio and interest rate were the independent variables while credit creation is the dependent variable. The study used OLS method of econometric analysis to analyse the data for the period. The result of the analysis indicated that there was a positive linear relationship between total credit creation and total deposits and treasury bills rate, while the reserve requirement ratio and interest rate have a negative but significant relationship with total credit creation. Thus, any monetary policy by the monetary authority to control credit that emphasises on reserve requirement could not be effective as the bank could afford to raise and keep substantial deposits as reserve contrary to the actions of the monetary authority. The study recommended that the CBN should not rely too much on reserve requirement as a monetary policy on credit creation, commercial banks can increase credit creation by reducing lending rate through more cost effective strategies for sourcing of deposits to fund their credit creation as high lending rates would appear to reduce the demand for credit in Nigeria.

Akinbi and Ajagbe (2012) investigated the impact of monetary policy on the financial performance of three commercial banks in Nigeria from 1992-1999. IR, LR, lending rate and CRR were the independent variables while net profit was the dependent variable. The data was collected through various issues of CBN statistical bulletin and analysed with the use of regression model.

The results showed that an increase in interest rate lead to a decrease in the lending rate while LR and CRR are statistically significant to the net profit of the selected banks. The study recommended that Individual banks management should forward to CBN the annual plan of the bank estimated capacity to raise a volume of funds sufficient to meet anticipated needs and the reduction of lending rates should be insisted to prevent the banks from folding up.

Ashamu, Abiola and Oyende (2011) investigated the effect of monetary policy instruments on commercial bank credit in Nigeria covering the period 1990-2010. MS, IR, MRR and EXR were used as the independent variables while bank credit was used as the dependent variable. Secondary data was used and data on all the monetary policy variables were sourced from the

World Bank data base 2011 edition. The estimating technique adopted was the ordinary least square estimating technique, precisely the multiple regressions version. The study found that only the IR and EXR prove to have a significant impact on bank credit. MS has positive but insignificant impact on commercial banks credit while MRR has negative and insignificant impact on commercial banks credit. Based on the results, it is recommended that monetary authorities should rely more on the use of MS, IR, and EXR. Therefore, the MRR needs further re- examination with the aim of making it more responsive to the needs of the economy.

Okorafor (2010) examines the impact of monetary instruments on the economic development of Nigeria. The study was divided into pre-deregulation era (1986-1994) and post-deregulation era (1995-2006). The independent variables used were treasury certificate, treasury bills, money supply, and certificate of deposits, commercial papers and banker's acceptance while the dependent variable was economic performance. Secondary data was used from CBN statistical bulletin, CBN annual report and accounts. T- Test was adopted to test the difference between the two means of the pre- and post- deregulation periods as the statistical tool of analysis.

The findings reveal that both treasury certificate and treasury bills exert significant effect on economic development during the period of study while the banker's acceptance, money supply, certificate of deposit and commercial papers exert insignificant effect on economic development. The study, therefore, concludes that with the insignificant nature of money supply, certificate of deposit, commercial papers and banker's acceptance, policy formulation and implementation inconsistencies appear to hinder the full impact of monetary policy on the economy and therefore, should be critically watched.

METHODOLOGY

The research design employed for this research is correlational and ex-post facto designs. The design for the study is appropriate because it assists in determining the effect of monetary policy on the performance of the DMBs in Nigeria. The general objective in this correlational and ex-post facto research designs is to gain an insight and generate new idea. The ex-post factoresearch design was used because the events have already occurred and variables not manipulated. Multiple Regression technique was also adopted as the tool of analysis as it is most appropriate for the study and because of its ability to use multiple independent variables to estimate their effect on a single dependent variable. The OLS method adopted in this study is a parametric statistical test that is based on a number of assumptions, the violation of which could affect the reliability of the results. The regression model was used because it assumed linearity and normality and it ascertains the impact of the independent variables on dependent variable. Yearly data were generated from the Audited Annual Report of the 10 selected Deposit Money Banks listed on the NSE and the Central Bank of Nigeria statistical bulletin between 2014 and 2018. The model equation is stated in Error Correction Form to establish whether there will be long run effect of monetary policy on the Performance of Deposit Money Banks in Nigeria.

$$ROA_{it} = \beta_{0it} + \beta_1 LR_{it} + \beta_2 CRR_{it} + \beta_3 IR_{it} + \epsilon_{it}$$

Where

ROA = Return on Assets

β_0 = intercepts autonomous variable.

$\beta_1, \beta_2, \beta_3$, = the regression coefficients of the independent variable

it= time for intercepts

LR= Liquidity Ratio

CRR=Cash Reserve Ratio
IR=Interest rate
ε = Error Term

RESULTS

Table 1: Descriptive statistics of dependent and independent variables

Variable	Mean	Standard Deviation	Minimum	Maximum
ROA	.0207	.02407	-.09	.08
LR	.2999	.00020	.30	.30
CRR	.1940	.03904	.12	.23
IR	.1320	.00756	.12	.14

Source: IBM SPSS 21.0 OUTPUT

The above table shows that the mean for Return on Asset (ROA) is 2% with a standard deviation of 2.4%. This means that the ROA is vulnerable and can increase or decrease by 2%. With the minimum and maximum of -.09 and 8%. This indicates a low variability around the mean. It implies that the amount of ROA is not widely dispersed among the listed banks during the study period.

The overall mean of Liquidity Ratio (LR) is 0.2999 with standard deviation of 0.00020 indicating the average variability of LR between the sampled banks. Meaning that LR could rise or fall by 0.00020 among the Banks. The highest LR recorded during the period is 0.30 while the minimum is 0.30 resulting in the range of 0.

The overall mean of Cash Reserve Ratio (CRR) is 19% with standard deviation of approximately 4%. Indicating a low variability of CRR of the sampled Banks. It also means that the CRR of the banks differs minimally as the period changes with the minimum and maximum 12% and 23% respectively indicating a range of 11, which indicates the difference between the highest and lowest CRR of the banks for the period of study.

The table also shows the mean of Interest Rate (IR) as 0.1320 with standard deviation of 0.00756. This means that the IR could rise or fall by 0.00756. The highest rate recorded during the period is 14% while the minimum is 12% with a range of 2% indicating a low range of IR among the sampled banks.

Table 2: Correlation matrix of dependent and independent variables

Variables	statistic	ROA	LR	CRR	IR
ROA	Pearson correlation	1.000			
	N	50			
LR	Pearson correlation	.220	1.000		
	Sig. 2- tail	.125	.004		
	N	50	50		
CRR	Pearson correlation	-.217	-.401**	1.000	
	Sig. 2- tail	.131	.004		
	N	50	50	50	
IR	Pearson correlation	-.233	.940**	-.535**	1.000
	Sig. 2- tail	.103	.000	.000	
	N	50	50	50	50

Source: IBM SPSS 21.0 OUTPUT

** Correlation is significant at 1% level (2-tailed)

From the above table, it shows that liquidity ratio, cash reserve ratio and interest rate, all have weak relationship with return on asset; though this result is not significant because cash reserve ratio and interest ratio have negative relationship while only the liquidity ratio has a positive relationship.

Regression Diagnostics

Table 3: Multicollinearity Diagnostics Result

VARIABLES	COLLINEARITY STATISTICS	
	TOLERANCE (1/VIF)	VIF
LR	.625	1.600
CRR	.101	9.878
IR	.086	11.605
Mean VIF		7.69

Source: IBM SPSS 21.0 OUTPUT

The above results show that the VIF for the independent variables varies; it shows that the interest rate is greater than ten while cash reserve ratio and liquidity ratio are less than ten. The tolerance values are also smaller than one or significantly higher than 0.1. The result shows that there is strong evidence indicating absence of adverse multicollinearity between two independent variables of the study; the cash reserve ratio and liquidity ratio but otherwise for interest rate. This shows that the model of the study fits appropriately.

Table 4: ANOVA Result for the Regression Model

Source	Sum of Squares	Df	Mean Square	F	Prob (Sig)	R ²	Adj R ²
Model	.002	3	.001	1.121	.350	.068	.007
Residual	.026	46	.001				
Total	.028	49	.002				

Source: IBM SPSS 21.0 OUTPUT

The result as in table 4 above shows that the F-statistics, which is used to test the hypothesis that a proposed regression model fits the data well is 1.121 and the corresponding degree of freedom are 3 (for the numerator) and 46 (for the denominator). Similarly, the regression's p-value is .350, which is higher than the pre-selected 5% level of significance. This implies that at least one of the regression coefficients is zero.

Table 5: Regression Results

STATISTICS VARIABLES	BETA COEFFICIENTS	t-VALUES	SIGNIFICANCE
LR	.148	.820	.416

CRR	-.105	-.234	.427
IR	-.056	-.116	.908
DW	1.105		
F-STATISTIC	1.121		
SIGNIFICANCE	.350		

Source: IBM SPSS 21.0 OUTPUT

$$ROA_{it} = -0.522 + 0.11CRR_{it} + 0.15LR_{it} - 0.06IR_{it} + e_{it}$$

The above regression result on table 5 shows that the coefficients of cash reserve ratio and interest rate are negative while liquidity ratio is positive. Furthermore, all the coefficients of the model are significant at 1%, it can be seen that a 1% change in cash reserve ratio would result to -11% decrease in return on asset, provided other factors remain the same. Liquidity ratio shows insignificant positive relationship with return on asset at 99% confidence level with a model coefficient of approximately 0.15 indicating that a 1% change in liquidity ratio would lead to about 15% increase in return on asset, when other factors are held constant. The model estimate also reveals that a 1% change in interest rate, holding other variables constant, would result to approximately -6% change in return on asset and the relationship is significant at 1%.

Autocorrelation

Autocorrelation occurs when the residuals are not independent from each other. Durbin-Watson statistics has been adopted in this study to test for the presence of autocorrelation. The regression result shows that the Durbin-Watson statistics (DW) is 1.105 which is less than 2. This signifies a problem of autocorrelation of the variables of the study. Also from the result, the Fishers ratio (i.e. the F-Statistics) presents a p-value that is more than 0.05. This invariably suggests clearly that simultaneously the explanatory variable are insignificantly associated with the dependent variable, this shows that they do not affect the behaviour of the dependent variable.

Discussions:

It was observed from the result that the liquidity ratio has positive but insignificant impact on return on asset at 42% level of significance, which implies that 1% increase in liquidity ratio of the selected deposit money banks will lead to 15% increase in the bank’s return on asset, thereby increasing the performance of the banks. This finding is in conformity with the studies conducted by Udeh (2015) and Dare and Okeya (2017) whose results show that liquidity ratio has insignificant effect on return on asset and in disagreement with the submission of Akinbi and Ajagbe (2012) whose findings showed significant effect of liquidity ratio on return on asset.

Cash reserve ratio is another variable of interest in the study, it was found that cash reserve ratio has negative and insignificant effect on return on asset at 82% level of significance which implies that 1% increase in cash reserve ratio will lead to 11% decrease in return on asset of the selected deposit money banks in Nigeria. This finding also agrees with the studies conducted by Udeh (2015) and Dare and Okeya (2017), who in their submission have it that cash reserve ratio has insignificant effect on return on asset. This finding disagrees with the submission of to Akinbi and Ajagbe (2012) whose findings showed significant effect of cash reserve ratio on return on asset.

Finally, interest rate is yet another variable in the study, it was found in the study that interest rate from the result showed negative and insignificant effect return on asset at 91% level of

significance which means that 1% increase in interest rate will lead to 6% decrease in return on asset of the selected deposit money banks in Nigeria. This finding agrees with Dare and Okeya (2017) and Akinbi and Ajagbe (2012) who find that interest rate has insignificant effect on return on asset, but does not agree with the study of Jegede (2014) whose findings showed significant effect of interest rate on return on asset.

Conclusion

This study evaluated the effect of government policies on the performance of selected deposit money banks in Nigeria. The results showed that liquidity ratio has positive coefficient and insignificantly influence the performance of the selected deposit money banks while cash reserve ratio and interest rate have negative coefficients and insignificantly affect the return on asset of the selected deposit money banks in Nigeria. Generally, the results revealed that cash reserve ratio and interest rate do not add value to financial performance of deposit money banks in Nigeria. Thus, all the monetary policy instruments used in this study prove to have insignificant effects on ROA of selected deposit money banks in Nigeria. The cause of which is not far from the deposit money banks' low rate of compliance with the government monetary policy guidelines. The study concludes therefore, that a good number of monetary policy instruments do not impact significantly on the performance of deposit money banks in Nigeria. The results suggest important implications for practitioners and policy makers in Nigeria. One important and major implication is that, cash reserve ratio and interest rate do not improve significantly the financial performance of DMBs. In view of the findings from the study, it recommended that the management of deposit money banks in Nigeria should look beyond monetary policy instruments and think of investment that will enhance their profits.

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