

## EFFECTS OF FINANCIAL CONDITIONS ON RETURN ON EQUITY OF DEPOSIT MONEY BANKS IN NIGERIA

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### ABSTRACT

This study examined effects of financial conditions on return on equity (ROE) of deposit money banks in Nigeria. The study employed private sector credit, net foreign assets, net domestic credit, broad money supply and monetary policy as indices of financial condition. The population of the study comprised 13 deposit money banks listed on the Nigerian Stock exchange. The study relied on secondary data sourced from Central Bank of Nigeria (CBN) annual reports and statistical bulletins and economic Journals covering the period of 2011-2020. The study used multiple regression models to examine the effect of indices of financial conditions on ROE. After cross sectional validity of the model, the results obtained validate the use of fixed effect model. The Durbin Watson statistic of the variable showed coefficients greater than the upper band which proves the absence of negative serial autocorrelation. The fixed effect results of the study shows that 66.3% variation in ROE of deposit money banks can be explained by financial conditions. The regression coefficient showed that private sector credit, net foreign assets, net domestic credit and monetary policy rate have negative insignificant effect on ROE while net domestic credit and broad money supply have positive insignificant effect on ROE. The study concludes that financial conditions have effect on ROE of deposit money banks; and recommends that management of deposit money banks should increase net domestic credit and formulate policies aimed at managing their operating environments to avert negative effects of net domestic credit on their ROE.

**Keywords:** Credit to private sector, deposit money banks, financial conditions, net foreign assets, return on equity

### INTRODUCTION

Commercial banks play critical roles in economic resource allocation by channeling funds from depositors to investors. These banks must however, also generate enough income to cover costs incurred in the course of their operations. In other words, commercial banks can perform their financial intermediation functions more effectively if they run at a profit. Beyond financial intermediation, the financial performance of banks has critical implications for economic growth (Hatzius et al., 2010). Good financial performance yields rewards for shareholders, employees and the society at large. This in turn, encourages more investment and engenders economic growth. On the other hand, poor financial performance of banks results in failure and crisis, with negative repercussions on economic growth.

Organized studies of banks' performance started in the late 1980's (Olweny & Shiphio, 2011) with the application of Market Power (MP) and Efficiency Structure (ES) theories (Athanasoglou et al., 2005). MP theory states that increased external market forces results in profit. The theory suggests that only firms with large market share and well differentiated portfolios can outsmart competitors and earn monopolistic profit. On the other hand, the ES theory suggests that enhanced managerial and scale efficiency leads to higher concentration and then to higher profitability. The balanced portfolio theory suggests additional dimension to the study of banks' financial performance (Olweny & Shiphio, 2011). It states that portfolio composition of banks, its profit and return to shareholders is the result of decisions made by management and overall policy decisions (Alexandru et al., 2008; Murthy & Sree, 2003). Nonetheless, Athanasoglou et al. (2005) states that banks' performance is dependent on such internal factors as bank size, capital, management efficiency and risk management capacity; as well as external factors, including macroeconomic variables like interest rate, inflation, and economic growth.

Financial condition of banks is a convenient measure for evaluating the macroeconomic environment when key variables diverge (Guichard & Turner, 2008); they are also used to assess the impact of non-traditional monetary measures in countries where policy rates have been pushed to extremes. They also serve as valuable guides in periods when connections between policy settings and financial conditions appear weak (Hatzius et al., 2010). Literature is replete with prior studies on financial condition index. However, most of these studies focused on effects of financial condition index on economic growth. For example, Akani and Onyema (2017) examined determinants of credit growth in Nigeria; while Akani and Uzah (2019) examined effects of credit expansion on commercial banks' soundness in Nigeria. Also, Okereke and Theophilus (2021) developed financial condition indices for six emerging countries and estimated its impact on economic growth and inflationary trend. Angelopoulou et al. (2014) constructed three variants of financial condition indices for the Euro area from 2003 to 2011 using principal components analysis.

This study however, opts to examine the effect of indices of financial conditions on ROE of deposit money in Nigeria. The study formulated the following hypotheses to serve as guides:

**H<sub>01</sub>:** Private sector credit does not have significant effect on ROE of deposit money banks.

**H<sub>02</sub>:** Net foreign assets do not have significant effect on ROE of deposit money banks.

**H<sub>03</sub>:** Net domestic credit does not have significant effect on ROE of deposit money banks.

**H<sub>04</sub>:** Broad money supply does not have significant effect on ROE of deposit money banks.

**H<sub>05</sub>:** Monetary policy does not have significant effect on ROE of deposit money banks.

## LITERATURE REVIEW

### Theoretical Foundation of the Study

The study is based on classic money theory and money view theory. In classic money theory, classists describe money as a veil whose impact on overall economy is neutral and only has effect on price levels. If money supply increases then interest rate, real income and general level of real economic activities remains unaffected as the price level increases. The nexus between money and general price level is explained by quantity theory of money, which affirms that price level determines supply of money. In an Algebraic form, they contend that  $MV=PT$  with  $MVPT$  defined as supply of money, money velocity, price level and transaction volume or real output respectively. Jhingan (1997) established that the equation of money exhibit the equality of

money supply the (MV) and total volume of output (PT) in an economy. The belief of the classical economists lies in the long-run mechanism where full employment can only be achieved. They affirm that the event of downward rigidity of money wage can result in unemployment. Given the velocity of money and output level, if the Central Bank raises the stock of money, the increase in liquidity as a result of this will automatically increase the demand for goods and services which also raises the general price level. Incentives and more investments will occur if the wage rate diminishes as price which in turn widens employment and production level towards the full employment.

Money view theory on the other hand, is based on the notion that reductions in the quantity of outside money raise real rates of return; this in turn reduces investment because fewer profitable projects are available at higher required rates of return (Cecchetti, 1995). This is a movement along a fixed marginal efficiency of investment schedule. The less substitutable outside money is for other assets and the larger the interest rate changes. There is no real need to discuss banks in this context; In fact, there is no reason to distinguish any of the “other” assets in investors’ portfolios. In terms of the simple portfolio model, the money view implies that the shift in assets prices for all of the assets excluding outside money are equal. An important implication of this traditional model of the transmission mechanism involves the incidence of the investment decline. Since there are no externalities or market imperfections, it is only the least socially productive projects that go unfunded (Cecchetti, 1995). Cecchetti (1995) points out that it is difficult to measure economically significant responses of either fixed or inventory investment to changes in interest rates that are plausibly the result of policy shifts.

### **Concept of Financial Condition Index**

Financial condition index is a comprehensive index constructed based on the combination of variables, such as currency price, and asset price. Financial condition index make up for shortages in using of conventional indexes (money supply and interest rate) in measuring financial conditions and forecasting economic trends. Monetary Conditions Index developed by the Central Bank of Canada developed in the 1990s (Okereke &Theophilus, 2021) better measures financial conditions and analyzes implications of monetary policy than many single variables.

The International Monetary Fund (IMF, 2010) built financial conditions for Nigeria based on unrestricted models that highlights the real economic impact of major financial variables reflecting external and domestic financial conditions: namely, private sector credit growth, real lending rates, interest rate spreads, lending standards equity price movements and real effective exchange rate changes. IMF staff economists combined this method with a dynamic factor model to construct an index for Asian economies that can be used as leading indicators (Osorio et al., 2011). They also calculated a financial stress index designed to identify periods when a financial system falls under pressure with application to emerging economies (Balakrishnan et al., 2009).

Kannan et al. (2006) reveals that the monetary policy is significantly influenced by interest rate rather than exchange rate; and that monetary condition index works as an effective tool for assessing the stance of monetary policy is more effective to put together than individual indicators in order to provide a better assessment of the stance of monetary policy. The potential of monetary condition index is a viable indicator of monetary policy, supplementing existing set of multiple indicators of monetary authority (Sahoo, 2017; Samantaraya, 2009). Financial

condition index is in this study, represented as monetary policy rate, money supply, financial deepening and private sector credit.

Monetary Policy Rate (MPR) is the rate which central banks lend to Deposit Money Banks in performing their duties as lenders of last resort. It is usually set at a level that is consistent with the objective of price stability of central banks. MPR communicates the stance of monetary policy and acts as a guide for all other market interest rates (CBN 2016). MPR is used as a policy tool that defines the focal point of a standing facility meant to steer market interest rates. While the upper bound corridor of MPR represents monetary authorities' lending rate to deposit money banks, the lower bound corridor represent the deposit rate at which monetary authorities accepts deposits from deposit money banks under the Standing Lending Facility (SLF) and Standing Deposit Facility (SDF) of monetary authorities.

Monetary Policy refers to specific deliberate actions taken by monetary authorities to regulate the value, supply and cost of money in an economy with a view to achieving Government's macroeconomic objectives. The objectives of monetary policy vary amongst countries. While the objective of monetary policy is predicated on achieving price stability in one country, another country may seek to achieve price stability and other diverse macroeconomic objectives. The Central Bank of Nigeria, like other central banks in developing countries, achieves monetary policy objective via the volume of money supply. Money supply is the entire stock of currency and other liquid instruments in circulation in an economy at a particular time. Money supply may include cash and balances held in checking and savings account, and other near money substitutes.

Financial deepening involves persistent increase in the provision of financial services (private sector funding) to businesses with increase choice of services geared towards the development of all levels of society. The size of the financial sector is usually measured by two basic quantitative indicators: monetization ratio and intermediation ratio. Whereas monetization ratio includes money-based indicators or liquid liabilities like broad money supply to GDP ratio; intermediation ratio consists indicators concerning bank-based measures like bank credit to the private sector and capital market-based measures such as capitalization ratio of stock market (Hao et al., 2017; Ndebbio, 2004).

The private sector is the engine of economic growth of a country (William et al., 2019). Private sector funding (credit) is a driver of the real economy, particularly in developing economies like Nigeria where financial markets are porous and not well-developed to mobilize needed resources to accelerate the desired level of economic development. The private sector encompasses businesses that are not owned or operated by the government. Companies and corporations that are government run are part of what is known as public sector, while charities and other non-profitable organization are part of the voluntary sector. Private sector funding thus refers to various sources of funding for private investors. The private sector in Nigeria raises funds from two main sources: Equity and debt.

### **Financial Performance**

Improved financial performance is the basic goal of every firm; measuring financial performance has been one interesting and challenging area of inquiry. Financial performance is a measure of the extent to which a firm meets or surpasses its financial goals. Literature on performance

measures discusses the market-based and accounting-based measures of performance. There is however, an increasing shift towards hybrid measures that accommodates both quantitative and qualitative indicators of performance.

A significant advantage of accounting-based performance measures however, is that they are easy to interpret. The commonest accounting-based performance measures are return on equity (ROE) and return on assets (ROA). They are defined as:

$$ROE = \frac{\text{Earnings after interest expenses and taxes}}{\text{Shareholders' equity}}$$

$$ROA = \frac{\text{Earnings after interest expenses and taxes}}{\text{Total assets}}$$

ROE measures only return on assets of equity owners, whereas ROA aggregates return of equity-holders and debt-holders. Thus is a ROE better proxy for financial performance. However, the discussion of ROE or ROA appears irrelevant when taking a look at studies that used both measures. They obtain similar coefficients for both; and ROA sometimes appears insignificant in contrast to the highly significant ROE (Chaganti & Damanpour, 1991).

### **Empirical Review**

Literature holds significant evidence of previous studies on financial conditions index and different micro- and macro-economic outcomes. Okereke and Theophilus (2021) employed panel data to develop a financial conditions index for six emerging and developing countries and estimate its impact on economic growth and inflationary trend, using annual data from 2010 to 2010. The study found real effective exchange rate, credit to private sector, treasury bills rate, interest rate spread and market capitalization as variable in the construction of financial conditions index. In the study of Li and Zhong (2020) it was reported that global economic policy uncertainty shocks have significant spillover effects on financial conditions index of China. Olaniyan (2019) incorporated the interactive effect of remittances and financial development in the growth model and argues that it can improve growth estimate. Fitting the resultant growth model to yearly data obtained from the World Development Indicators database reveals that although, both remittances and financial development (credit to private sector ratio to GDP) individually affect economic growth negatively, their interaction plays a positive and highly significant role in the growth model.

In other studies, Ejem and Ogbonna (2020) examine the predictive power of financial conditions index on economic growth and inflation in Nigeria using yearly data from 1985 to 2018. The constructed financial conditions index comprises Treasury Bills rate, exchange rate, stock market index, credit to private sector and interest rate spread. They find amongst others that the constructed financial conditions index has little predictive power on economic growths and inflation. Ogbonna and Ejem (2020) showed that economic growth responds only to money and capital market conditions. Ipeghan and Marshall (2019) found that both capital market and banking sector development significantly affect and are cointegrated with economic growth. Olayungbo and Quadri (2019) focused on the relationship between financial development and economic growth and found amongst others that both financial development and remittances exhibit a positive effect on economic growth. Swiston (2008) found that credit availability is an important driver of business cycle, and accounts for more than 20% of typical contribution of financial variables to economic growth. Akani and Onyema (2017) reports that monetary policy

variables like treasury bill rate, interest rate and compliance to credit rules have negative effect on net domestic credit while monetary policy rate, financial deepening and growth of broad money supply have a positive effect on net domestic credit.

Kabundi and Mbelu (2020) found amongst others that tighter financial conditions reduce both economic growth rate and level of inflation. Akani and Uzah (2019) examined the effects of credit expansion on commercial banks soundness in Nigeria; and found that credit expansion significantly relates to commercial banks' soundness in Nigeria. Ncanywa and Mabusela (2019) examined the link between financial development and economic growth in five sub-Saharan African countries from 1980 to 2014 and found the presence of both short and long run relationship between financial development and economic growth, with credit to private sector and bank liquid liabilities exerting positive long run effect on economic growth.

Furthermore, Saeed and Zahid (2016) analyzed the impact of credit risk on profitability of commercial banks in UK, using ROA and ROE as indicators of profitability. The study found that credit risk indicators have positive association with profitability of the banks. Xu and Chen (2018) and Khundrakpam et al. (2017) found that financial conditions index is useful in predicting future inflation; while Sahoo (2017) and Bulut (2016) predicts inflation and future inflationary trend. Balcilar et al. (2016) and Angelopoulou et al. (2014) found that response of the economy to financial shocks is non-linear; and that Treasury Bills rates and manufacturing output growth are more affected by unexpected changes in financial conditions.

## METHODOLOGY

This study used quasi-experimental research design to study the effect of financial condition index on ROE. The population of the study comprised 13 deposit money banks listed on the floors of the Nigeria Stock Exchange. The data used in the study were mainly secondary data. They covered the period of (2011 – 2020) and were obtained from various sources, notably the Central Bank of Nigeria (CBN) annual reports, CBN statistical bulletin and economic Journals. The main tool of analysis is the Ordinary Least Squares (OLS) using the multiple regression method for a period of 10 years, annual data covering 2011-2020. Statistical evaluation of the global utility of the analytical model, so as to determine the reliability of the results obtained were carried out using the coefficient of correlation ( $r$ ) of regression, the coefficient of determination ( $r^2$ ), the student T-test and F-test. Other test statistics employed are the Durbin Watson test which was used to test the presence or absence of autocorrelation between and among the explanatory variables and the adjusted R square used to test the percentage variation of the dependent and the independent variables.

### Model Specification

The model specified below is based on theories, principles and empirical findings of the relationship between external reserve managements and economic growth. The model in the functional form is specified as:

$$ROE = f(NDC, PSC, NFA, M2, MPR) \quad (4)$$

The regression model is specified as:

$$ROE_{it} = S_1 + S_1NDC_{it} + S_2PSC_{it} + S_3NFA_{it} + S_2M2_{it} + S_2MPR_{it} + \sim_{it} \quad (5)$$

Where:

ROE = Return on equity.

NDC = Net Domestic credit  
 PSC = Credit to private sector  
 NFA = Net foreign Assets  
 M2= Broad money supply  
 MPR = Monetary policy rate  
 e = Error Term.

### The Fixed Effects Model

Fixed effects models are a class of statistical models in which the levels (i.e. values) of endogenous variables are assumed to be constant. That is, over the time frame covered by the data (daily, weekly, monthly etc.) the intercept remains constant, however it varies cross-sectional. Nevertheless, the slopes for all endogenous variables remain constant across section and over time. Thus:

$$y_{it} = \gamma_j + x_{it}'\beta + v_{it} \quad v_{it} \sim HD(0, \sigma^2) \quad (6)$$

Expressing this in a regression framework, we have:

$$y_{it} = \sum_{j=1}^N \gamma_j d_{ij} + x_{ij}'\beta + v_{it} \quad v_{it} \quad (7)$$

Where  $d_{ij} = 1$  if  $i=j$  and 0 elsewhere.

### The Random Effects Model

The stochastic term, otherwise referred to as white noise or error term is usually added in regression models to account for endogenous variables excluded in the model. These endogenous variables are assumed to be homoscedastic; this often culminates in the assumption that the parameters are distributed identically and independently. Thus we write the random effects model as:

$$Y_{it} = \gamma + x_{it}'\beta + \omega_{it}, \quad \omega_{it} = \epsilon_i + v_{it} \quad (8)$$

Where  $x_{it}$  is still a  $1 \times k$  vector of explanatory variables, but unlike the fixed effects model, there are no dummy variables to capture the heterogeneity in the cross-sectional dimension.

### A-priori Expectation of the Result

The elasticity parameter also known as the a-priori expectation of the variables proposes that an increase in the independent variables corporate financing will increase deposit money banks' ROE. Therefore it can be mathematical stated as follows:-  $\gamma_1, \gamma_2 > 0, \gamma_5 > 0$

### Hausman Test

The Hausman test is used to establish the appropriate choice between random effect regression and fixed effect regression (Brooks, 2014). Since heterogeneity invalidates the cardinal assumption of homogenous deviation of endogenous variables which underpins the application of random effect model, the test is imperative to decide if a variable can be treated as a distinct element with separate structural equation or as an exogenous variable. Croissant & Millio (2019) succinctly noted that Hausman test detects endogenous regressors in a regression model.

## RESULTS AND DISCUSSION OF FINDINGS

### Presentation of Results

Percentage of total debt to total equity, Percentage of retained earnings to total earnings, Percentage of short term debt to total debt, the results are presented in the tables below:

**Table 1: Correlated Random Effects - Hausman Test**

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		8.728026	5	0.0000
Variable	Fixed	Random	Var(Diff.)	Prob.
PSC	-20.819573	-20.908794	0.008379	0.3297
NFA	-9.637466	-9.838971	0.017437	0.1270
NDC	-0.400330	-0.387111	0.000065	0.1011
MPR	-16.967209	-17.223775	0.020471	0.0729
M2	16.216270	15.972502	0.027346	0.1405

Source: Extract from E-view windows, 9.0

From the Hausman's test, the probability value of 0.0000 is less than the critical value of 0.05 at 5% level of significance, we therefore accept that the fixed effect model is well specified and meets the requirement for analysis in this study for the three models that examined the financial condition on the performance of quoted deposit money banks in Nigeria.

**Table 2: Presentation of Pooled Effect Regression Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PSC	-20.90879	9.241764	-2.262425	0.0254
NFA	-9.838971	3.933287	-2.501463	0.0137
NDC	-0.387111	0.542176	-0.713994	0.4766
MPR	-17.22378	12.57639	-1.369532	0.1733
M2	15.97250	11.72191	1.362620	0.1755
C	492.6009	233.2235	2.112141	0.0367
R-squared	0.655139	Mean dependent var		18.47656
Adjusted R-squared	0.516415	S.D. dependent var		80.29805
S.E. of regression	79.63629	Akaike info criterion		11.63856
Sum squared resid	773716.5	Schwarz criterion		11.77225
Log likelihood	-738.8677	Hannan-Quinn criter.		11.69288
F-statistic	7.423891	Durbin-Watson stat		2.067481
Prob(F-statistic)	0.000362			

**Source: Extract from E-view windows, 9.0**

Table 2 presents results on the effect of financial condition as a predictor to financial performance of deposit money banks in Nigeria. From the pooled affect model, 51.6 % variation in return on equity of the deposit money banks can be explained by the independent variables (financial condition variables). The F-statistic and probability shows that the model is statistically significant in examining the relationship between the dependent and the independent variables.

The coefficient shows that private sector credit have negative and significant effect on return on equity, net foreign assets have negative and significant effect on return on equity, net domestic credit have negative and no significant effect on return on equity, monetary policy rate have negative and no significant effect on return on equity while broad money supply have positive and no significant effect on return on equity. The Durbin Watson statistics prove the absence of negative serial autocorrelation.



**Table 3: Presentation of Fixed Effect Regression Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PSC	-20.81957	9.302016	-2.238179	0.0272
NFA	-9.637466	3.960940	-2.433126	0.0166
NDC	-0.400330	0.545744	-0.733548	0.4648
MPR	-16.96721	12.65858	-2.340372	0.0229
M2	16.21627	11.79891	1.374387	0.1721
C	477.7677	234.8791	2.034100	0.0443

## Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.737015	Mean dependent var	18.47656
Adjusted R-squared	0.663644	S.D. dependent var	80.29805
S.E. of regression	80.15159	Akaike info criterion	11.73542
Sum squared resid	706670.6	Schwarz criterion	12.13648
Log likelihood	-733.0667	Hannan-Quinn criter.	11.89837
F-statistic	1.027325	Durbin-Watson stat	2.281334
Prob(F-statistic)	0.435154		

Source: Extract from E-view windows, 9.0

Table 3 presents results on the effect of financial condition as a predictor to financial performance of deposit money banks in Nigeria. From the fixed affect model, 66.3% variation in return on equity of the deposit money banks can be explained by the independent variables (financial condition variables). The F-statistic and probability shows that the model is statistically significant in examining the relationship between the dependent and the independent variables. The coefficient shows that private sector credit have negative and significant effect on return on equity, net foreign assets have negative and significant effect on return on equity, net domestic credit have negative and no significant effect on return on equity, monetary policy rate have negative and no significant effect on return on equity while broad money supply have positive and no significant effect on return on equity. The Durbin Watson statistics prove the absence of negative serial autocorrelation.

**Table 4: Presentation of Random Effect Regression Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PSC	-20.90879	9.301565	-2.247879	0.0264
NFA	-9.838971	3.958739	-2.485380	0.0143
NDC	-0.387111	0.545685	-0.709404	0.4794
MPR	-17.22378	12.65777	-1.360727	0.1761
M2	15.97250	11.79776	1.353859	0.1783
C	492.6009	234.7326	2.098562	0.0379

## Effects Specification

Cross-section random		S.D.	Rho
Idiosyncratic random		0.000000	0.0000
		80.15159	1.0000

## Weighted Statistics

R-squared	0.555139	Mean dependent var	18.47656
Adjusted R-squared	0.416415	S.D. dependent var	80.29805
S.E. of regression	79.63629	Sum squared resid	773716.5
F-statistic	1.423891	Durbin-Watson stat	2.067481
Prob(F-statistic)	0.220362		

## Unweighted Statistics

R-squared	0.555139	Mean dependent var	18.47656
Sum squared resid	773716.5	Durbin-Watson stat	2.067481

Source: Extract from E-view windows, 9.0

Table 4 presents results on the effect of financial condition as a predictor to financial performance of deposit money banks in Nigeria. From the random affect model, 41.6% variation in return on equity of the deposit money banks can be explained by the independent variables (financial condition variables). The F-statistic and probability shows that the model is statistically significant in examining the relationship between the dependent and the independent variables.

The coefficient shows that private sector credit have negative and significant effect on return on equity, net foreign assets have negative and significant effect on return on equity, net domestic credit have negative and no significant effect on return on equity, monetary policy rate have negative and no significant effect on return on equity while broad money supply have positive and no significant effect on return on equity. The Durbin Watson statistics prove the absence of negative serial autocorrelation.

**Table 5: Presentation of descriptive statistics**

	ROE	PSC	NFA	NDC	MPR	M2
Mean	18.47656	18.33789	22.81281	18.44805	12.88672	22.71734
Median	5.620000	18.31000	22.42500	15.19000	13.00000	23.07000
Maximum	538.0000	20.50000	27.93000	54.76000	14.00000	24.90000
Minimum	3.070000	15.07000	20.16000	-3.460000	11.00000	19.82000
Std. Dev.	80.29805	1.433291	2.522762	16.91825	1.025684	1.336769
Skewness	6.296566	-0.760571	0.824106	0.631824	-0.412324	-0.691282
Kurtosis	40.66399	3.459962	2.499599	2.844506	1.798006	3.122540
Jarque-Bera	8411.536	13.46900	15.82404	8.645259	11.33244	10.27466
Probability	0.000000	0.001189	0.000366	0.013265	0.003461	0.005873
Sum	2365.000	2347.250	2920.040	2361.350	1649.500	2907.820
Sum Sq. Dev.	818867.6	260.8991	808.2696	36350.84	133.6074	226.9427
Observations	128	128	128	128	128	128

Source: Extract from E-view windows, 9.0

Descriptive statistics was used to vividly describe the distribution and behavior of all the variables; Tables 5 present the descriptive summary of the observed variables. The descriptive statistics was presented on the overall data (combined) to observe for general patterns among the sampled firms. As indicated, the first line of descriptive analysis was conducted on all the deposit money banks combined. Results as shown on Table 4.5 net foreign assets are higher than other variables. Mean statistics indicate that on the average the sampled deposit money banks acquired about 22.8. The minimum and the maximum coefficient return on equity respond to variation positively at maximum and positively at minimum. The Jarque-Bera and the probability value show that the variables are normally distributed as the probability coefficient is less than 0.05 critical value while the standard deviation shows that the variables have high dispersion.

## DISCUSSION OF FINDINGS

This study focuses on examining the effect of indices of financial condition (credit to private sector, net foreign assets, net domestic credit, broad money supply, and monetary policy) on ROE of deposit money. The result of the empirical analyses showed that, net domestic credit has negative insignificant effect on ROE of commercial banks in the ten years period covered in the study. The results showed that net domestic credit lead to 0.04 decrease on ROE of deposit money banks. This finding is contrary to the expectations of the results and the objectives of the

study. It is also contrary to the objectives of bank credit as bank credit is the largest earnings income to deposit money banks. The negative effect could be traced to increasing nonperforming loans and credit risks. It could also be traced to macroeconomic factors like monetary policy within the operating environments of deposit money banks. Empirically, the negative effect of net domestic credit on ROE of commercial banks is in line with the opinion of Gosh (2010) on the effect of credit boom on commercial banks soundness. The result also aligns with the findings of Okereke and Theophilus (2021) that real exchange rate is the most significant financial conditions index, that determine economic growth; and that of Li and Zhong (2020) that global economic policy uncertainty shocks have significant spillover effects on financial conditions index, especially during crisis; as well as that of Ejem and Ogbonna (2020) that financial conditions has little predictive power on economic growths and inflation.

Similarly, the test showed that private sector credit has negative significant effect on ROE of deposit money banks. From the regression coefficient, a unit increase in credit to private sector results in 20.8 percent decrease in ROE of deposit money banks. This finding is also contrary to the a priori expectations of the study; and contrary to bank management theories such as management efficiency theory, stakeholders' theory and agency theory. This finding contradicts the findings of Akani and Uzah (2018) and Ogbonna and Ejem (2020) that economic growth responds to money and capital market conditions; as well as that of Ipeghan and Marshall (2019) and Olaniyan (2019) that capital market and banking sector development significantly affect economic growth.

The empirical analyses also showed that net foreign assets have negative insignificant effect on ROE of deposit money banks within the period covered in the study. The result shows indicate that a unit increase in net foreign assets could lead to 9.6 per cent decrease in ROE of deposit money banks. This finding is contrary to the expectation of the study and the objectives of international monetary policies. The negative effect of net foreign assets on ROE could be ascribed to volatility in the international monetary environment. The finding also contradicts the findings of Kabundi and Mbelu (2020), Akani and Uzah (2019) and Yaaba (2013) that credit expansion significantly relates to commercial banks soundness in Nigeria.

In addition, the empirical results reveal that broad money supply has positive, but insignificant effect on ROE of deposit money banks in Nigeria. The positive effect of reveals that broad money supply on ROE confirm a-priori expectations of the study. The finding also aligns with the report of Ncanywa and Mabusela (2019) about the presence of short and long run relationship between financial development and economic growth; and that of Olayungbo and Quadri (2019) that financial development and remittances exhibit positive effect on economic growth. The finding also corroborates the position of Okunlola et al. (2020) that level of financial development is essential to economic growth, that of Swiston (2008) that credit availability is an important driver of business cycle, and accounts for more than 20% of contributions to economic growth. The finding also supports the view that financial conditions predict real GDP and economic growth (Akani & Onyema, 2017).

Furthermore, study found that monetary policy rate have negative significant effect on ROE of deposit money banks, such that, a unit increase in monetary policy rate lead to 16.9 per cent decrease in ROE of deposit money banks. The negative effect of monetary policy rate on ROE of the deposit money banks contradicts the a-priori expectation of the study and monetary policy

objectives. The negative effect could however, be traced to tight monetary policy of monetary authorities. The negative effect of monetary policy rate on ROE of deposit money banks is in alignment with the findings of Akani and Onyema (2017) that public expenditure, inflation rate and capital formation have negative relationship with growth of Nigeria's net domestic credit; while real GDP, government revenue and balance of payment have positive impact on economic growth.

### CONCLUSION AND RECOMMENDATIONS

This study examined the effect financial condition indices (credit to private sector, net foreign assets, net domestic credit, broad money supply, and monetary policy) on ROE of deposit money banks in Nigeria. The fixed effect results showed that 66.3% variation in ROE of deposit money banks can be explained by financial condition indices. The study however, observed that financial condition indices like private sector credit and net foreign assets have negative and insignificant effect on ROE of deposit money banks within the period covered in the study; while net domestic credit, broad money supply and monetary policy rate has positive insignificant effect on ROE of deposit money banks. The study concludes that financial condition indices, such as net domestic credit and broad money supply affects ROE of deposit money banks in Nigeria; and recommends that management of deposit money banks should increase net domestic credit and formulate policies and strategies aimed at managing the operating environments to avert the negative effect of net domestic credit on their ROE; and also reduce liquidity reserves to increase their lending capacity to the private sector and enhance their ROE.

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