

## **Effect of Bank Distress on Bank Performance in Nigeria**

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### **1.1 Introduction**

Bank's financial distress is defined as a situation when a financial institution fails to meet capitalization requirements, have weak deposit base and are afflicted by mismanagement (Adeyemi, 2011). When a bank is in a financial distress condition, it means the bank is unable to meet up with its financial obligations to its customers and this will lead to bank failure and bankruptcy (Brownbridge, 1998). In the banking industry, it is important to acknowledge the issue of financial distress because the entire industry drives the stability of a country's financial performance as whole. Organizations keen on their financial health and prudent financial management have financial distress being one of the salient topics (Abubakar, 2017). Financial distress refers to a situation where an organization is not able to generate adequate revenue to cover its long term and short term financial obligations upon maturity or they are met with a lot of difficulties (Ahmad, 2016). It is a universal phenomenon encountered by developed and developing economies, happening both in an economic downturn and upturn (Kipkemoi, 2018). Contrary to a boom period, financial distress during a recession is more adverse to a firm and may lead to bankruptcy (Hossain, 2018). Many companies worldwide have succumbed to financial distress regardless of their size, to face corporate failure, bankruptcy or even liquidation (Vengesai & Kwenda, 2018).

Financial distress plays an integral part in the overall performance of an organization and it happens gradually with major signs being constant cash shortage, falling margins and poor profits, revenue decline, extended payment days and non-compliance to legal and contractual terms (Efuntade & Akinola (2020). Financial distress prediction is of essence and aid in the development of appropriate mitigation measures and rescue of a firm before a destructive encounter. The assessment of losses expected to occur as a result of financial distress is emphasized, as opposed

to the focus on the probability of bankruptcy occurrence (Eyigege, 2018). Financial distress pushes companies into situations of cash flow shortages and operational insolvency that increases the default risk of a company. It exposes firms to systematic risks that arise from financial distress' macroeconomic factors not well managed (Habib, Costa, Huang, Bhuiyan & Sun, 2020). Distress in the financial sector is a situation where financial institution has more liabilities than the value of their assets in the market. This can result to portfolio shifts which eventually cause the collapse of the financial system. Bank distress is many times confused with bank failure.

Aburime (2009) stresses that bank distress means detrimental condition, immense pain in the banking activities which could be as a result of various factors. Some of these factors include discontinuity, policies and forgeries which are not consistent, mismanagement of poor loans and advances, board members interference and internal control which is poor. Bank distress is caused by bank conditions which may either be extrinsic or intrinsic. Ultimately, bank failure and unpleasant changes in the economic conditions of banks could be observed. In Nigeria, the banking operation started in the year 1829, when the African Banking Corporation (ABC) currently first Bank of Nigeria plc was established. In almost a century after the commencement of banking operations in the country, Nigeria experienced first bank distress in 1930, when the first indigenous bank, commercial and industrial banks ran into liquidation with total deposit liabilities of 23,000 British Pound Sterling (Adeyemi, 2011). Consequently, the period of non-regulatory banking operation has come to an end in the year 1952, when the then colonial government promulgated Banking Ordinance which took effect in 1954. Despite the introduction of the 1952 Banking Ordinance, series of bank crises continues to occur in Nigeria from 1952 to 1985. This is because only 4 out of 25 indigenous banks established during this period survived (Adeyemi, 2011).

## **1.2 Statement of the Problem**

The banking sector is among the sectors expected to facilitate the realization of vision2030, by ensuring that there is provision of efficient financial services and investment opportunities that will create a vibrant and global competitive financial service in Nigeria. Global competitive financial services on banking sector will be achieved only if financial distress will be well managed by banks (Bariviera, BelénGuercio, & Martinez, 2015). As noted by Kamau (2016) and Mwega (2016) banking sector is the engine that drives economic growth through efficient allocation of resources to productive units in any economy resulting in global competitiveness. Nasieku (2015) noted that banks provide an efficient system and main source of liquidity in the financial systems. In spite of this, more than ten financial institutions have either collapsed or been liquidated or have been placed under receivership by Deposit Protection Fund Board in Nigeria between 2005 and 2015 (CBN, 2015).

Situations where the solvency and/or liquidity of several banks have suffered shocks that shake public confidence have been a source of concern to bank regulators, the government, depositors and the general public. One worrisome aspect of the result of liberalization of the financial sector in Nigeria has been the extent of distress in the sector. Bank distress in Nigeria was caused by many factors. The Financial Sector Distress Subcommittee (1994) observes that distress in the banking industry emanates from a number of exogenous and endogenous factors. The exogenous factors include adverse economic condition, inhibitive policy environment, political instability,

interference in management, and impact of deregulation. Endogenous factors on the other hand include under capitalization, manpower problems, mismanagement, fraud etc.

Various researchers have analyzed the effect of financial distress on the financial performance of firms. Tan (2012) using leverage as a proxy for financial distress established that financial distress results in the decline in the profit margins of companies. Irungu (2013) established that increase in non-performing loans which contribute to increase in financial risks in amongst banks does not impair the earning capability of firms. However, Irungu (2013) noted that the rising risks were a concern as it could stimulate financial collapse. However, other researchers established that financial distress does not significantly affect financial performance. Hassan and Al-Mazrooei (2007) and Zaabi (2011) found that financial distress does not affect performance in studies conducted on Islamic banks in the United Arab Emirates (UAE). According to Al-Mazrooei (2007) and Zaabi (2011) financial performance was most affected by corporate governance practice and performance levels of the UAE bank. The differences in the results obtained are attributed to conceptual, contextual, and methodological differences (Saleh and Abedini, 2009).

This research study filled the methodological gaps by only focusing on the variables that cause financial distress amongst banks which according to literature were identified as non-performing loans, leverage, and liquidity. The study filled the conceptual gaps by focusing only on the segment of the commercial banking sector that had shown vulnerability to financial distress. This meant the exclusion on tier one and tier two commercial banks which have a history of robust growth and stability. The study filled the contextual gaps by focusing on the period after the global financial crisis.

### **1.3 Objectives of the Study**

Examining the effect of bank distress on bank performance in Nigeria is the study's primary aim. The study specific objectives are to:

1. Examine the effect of return on capital employed on performance of DMBs in Nigeria.
2. Investigate the effect of non-performing loan on performance of DMBs in Nigeria.
3. Determine effect of liquidity on performance of DMBs in Nigeria.
4. Ascertain the effect of leverage on performance of DMBs in Nigeria.

### **1.5 Research Hypotheses**

The following null hypotheses were developed to direct the study's objectives and strengthen the analysis:

1.  $H_{01}$ : return on return on capital employed has no significant effect on performance of DMBs in Nigeria.
2.  $H_{02}$ : Non-performing loan has no significant effect on performance of DMBs in Nigeria.
3.  $H_{03}$ : Liquidity has no significant effect on performance of DMBs in Nigeria.
4.  $H_{04}$ : Leverage has no significant effect on performance of DMBs in Nigeria.

## **REVIEW OF RELATED LITERATURE**

### **2.1 Theoretical Framework**

#### **Buffer Theory of Capital**

As a consequence of financial distress, financial institutions may prefer to hold a 'buffer' of excess capital to reduce the probability of falling under the legal capital requirements, especially if their capital adequacy ratio is very volatile. Capital requirements are one of the main supervisory instruments in Nigeria for financial institutions. According to this theory, capital is more reliable, dependable and can be used for long term planning. Ability of banks to mobilize enough deposits obviates the capital base from being eroded. The buffer theory of Calem & Rob (2016) predicts that a bank approaching the regulatory minimum capital ratio may have an incentive to boost capital and reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. However, poorly capitalized banks may also be tempted to take more risk in the hope that higher expected returns will help them to increase their capital. This is one of the ways risks relating to lower capital adequacy affect banking operations in the event of bankruptcy of a financial institution (Calem & Rob, 2016).

This theory indicates that the firm will be in a stable condition in times of low liquidity since there will be some capital reserves that will ensure the firm meets its obligation when they fall due using the excess capital recognized as a buffer regardless of the performance thus reducing the effect of financial distress in a firm. This means that in the absence of a buffer of capital, firms are likely to fall into financial distress in the future. In addition, Berger & Bouwman (2014) argued that capital helps small banks to increase their probability of survival and market share at all times (during banking crises, market crises, and normal times). Secondly, capital enhances the performance of medium and large banks primarily during banking crises. This therefore makes capital adequacy a significant factor of financial distress. This theory supports capital adequacy objective.

### **2.4. Empirical Review**

Nkiri and Ofoegbu (2022) examined the relevance of accounting based models in the prediction of financial distress and corporate failure. Using a sample of 30 commercial banks, consisting of 15 failed and 15 non failed banks during the period 2006-2020, the study utilizes the Logit and Multiple Discriminant Analysis (MDA) models using accounting information to predict the likelihood of failure within the Nigerian banking sector. The empirical results reveal that bank characteristics derived from financial statements can be used to predict corporate failure. Specifically, bank liquidity and profitability are key determinants of bank failure. The study adds to the scarce body of literature on bank failure among developing economies, by analyzing, developing and testing a prediction model in a developing economy like Nigeria. This study also offers recommendations for both policy and practice, especially for bank regulators and the management team on the need to monitor the profitability and liquidity position of banks.

Cherutich, (2021) investigate the effect of financial distress on the performance of selected firms listed at Nairobi Securities Exchange, Kenya. The study will adopt an explanatory research design. The target population of the study was all the 13 firms under manufacturing, construction as well as allied sectors quoted at Nairobi Securities Exchange. The study utilized purposive sampling design in the selection of the financial distressed firms under manufacturing, construction as well as allied sectors. Secondary panel data collected from published financial statements of the entire four financially distressed firms listed under manufacturing, construction and allied sectors covering 10 years (2009-2018) were utilized. Descriptive as well as inferential statistics was deployed to analyze panel data with support of statistical software (STATA, V.14). Regression

analysis was used to test four hypotheses at 95% confidence level and diagnostic tests were performed before conclusions were drawn. Findings were presented in table format and supported by narrations. The study found that liquidity has positive significant effect on financial performance return on assets (p-value=0.004) and return on equity (p-value=0.002) in selected firms at Nairobi Securities Exchange. This study also found that leverage had positive, but insignificant effect on financial performance return on assets (p-value=0.0567) and return on equity (p-value=0.812) in the selected firms quoted at Nairobi Securities Exchange. The researcher further revealed that firm size had positive and insignificant effect on financial performance return on assets (p-value=0.099) in selected firms listed at Nairobi Securities Exchange but significant effect on return on equity (p-value=0.021). In addition, the study found that inventory conversion period has an inverse and significant effect on financial performance return on assets (p-value=0.041) and return on equity (p-value=0.007) in the selected firms at Nairobi Securities Exchange.

Muchori and Wanjala (2020) focused on the influence of financial distress on financial performance for commercial banks regulated by Central Bank of Kenya (CBK) since they provide an important contribution to the economy. The study was prompted by the increased number of commercial banks in the recent past facing financial difficulties. The objective of the study was to examine the effects of capital distress, liquidity distress, operating inefficiency and assets quality distress on the performance of commercial banks in Kenya. To strengthen the conceptual framework the study adopted theories such as agency theory, liquidity theory, theory of efficient market hypothesis and buffer theory of capital adequacy. The study showed a diagrammatic representation of the relationship between the independent variables and the dependent variable. The target population was 129 employees of commercial banks in Kenya. The sample size was 99 employees of commercial banks in Kenya. A modified Likert scale questionnaire was developed and divided into three parts. A pilot study was carried out to refine the instrument. The quality and consistency of the study was further assessed using Cronbach's alpha. Data analysis was performed on a PC computer using Statistical Package for Social Science (SPSS Version 23) for Windows. Analysis was done using frequency counts, percentages, means and standard deviation, regression, correlation and the information generated was presented in form of graphs, charts and tables. The study findings revealed that there was a positive correlation between capital distress, liquidity distress and operating inefficiency but asset quality distress had a negative correlation. The study concluded that capital distress, liquidity distress and asset quality have no significant effect on financial performance of commercial banks in Kenya. Further, the study concluded that operational inefficiency has a significant effect on financial performance of commercial banks in Kenya. The study recommends that commercial banks must consider using debt in their capital structure, non-current debt should be prioritized ahead of short-term debt.

Akani and Uzah (2018) examined internal and external factors that determine banks distress in Nigeria. The objective is to examine the extent to which macroeconomic variables, monetary policy variables and bank internal variables determine bank distress in Nigeria. Annual time series data was sourced from Central Bank of Nigeria Statistical Bulletin, financial stability reports and annual reports of the deposit money banks. Three multiple regression models were formulated to determine the effect of the variables in determining bank distress. Ordinary least square method of co-integration, unit root test, Granger causality test and Vector error correction estimate was adopted to examine the effect of the variables in determining bank distress in Nigeria. From the monetary policy variables, the study found that 53.7 percent variation on bank capital adequacy ratio can be explained by the independent variables. The beta coefficient found that monetary

policy rate and treasury bill rate have negative effect on capital adequacy ratio while growth of broad money supply, real interest rate and financial sector development have positive impact on bank capital adequacy ratio. Model II found that macroeconomic variables can explain 83.3 percent variation on bank capital adequacy ratio. The beta coefficient found that inflation rate, public expenditure and real gross domestic product have negative effect while openness of the economy and exchange rate have positive effect on bank capital adequacy ratio. Model III found that the internal variables can explain 82 percent variation on bank capital adequacy. The beta coefficient found that credit expansion, earnings and management quality have positive effect while liquidity and non-performing loans have negative effect on bank capital adequacy ratio.

Osoro, (2018) assessed the effects of financial distress on the financial performance of manufacturing firms listed in Nairobi security exchange. The study specific objective were; to determine the effect of liquidity on financial performance of listed manufacturing firms, to establish the effect of solvency on financial performance of listed manufacturing firms and to analyze the effect of financial health on financial performance of the listed manufacturing firms. The study used credit risk theory, pecking order theory of financing, Gambler's Ruin Theory and shift-ability theory. Descriptive research design was used and census approach method was used in the study where all eleven companies were selected without sampling. The sample size included all the nine active listed manufacturing companies at the NSE. Data for all the variables in the study was extracted from audited published reports and financial statements of the listed manufacturing firms in the NSE covering the years 2011 to 2015 where quarterly reports were used. Data collected was analyzed using SPSS version 22 and Microsoft excel spread sheet. (ROA) of the firms listed at NSE was attributed to the changes in independent variables considered in the model while for ROE the findings indicated that  $AR^2$  was .885 which implied that ROE explained 88.5% of performance in the SACCOS. The findings showed that liquidity negatively impacts on the ROA of the firms listed at NSE. The effect of liquidity on ROA and ROE is not statistically significant at 5% level of significance. Solvency negatively affects ROA and ROE of firms listed at NSE. Financial health was found to positively influence ROA and ROE though the effect is not statistically significant.

Maryam and Adamu (2017) examined the causes of bank distress in Nigeria using annual data from 1986 to 2015. The study employed Autoregressive Distributed Lag Model developed by Pesaran et al (2001) as the technique of data analysis. The study reveals that exchange rate and non-performing loans have positive and statistically significant impact on bank distress, while inflation and interest rate have negative and statistically insignificant effect on bank distress. The study further found that liquidity ratio exerts positive and statistically insignificant influence on bank distress. In consistent with the findings, the study recommends the followings: firstly, there should be proactive measures by the banks such as loan surveillance and monitoring. The government should strengthen the mechanisms that will create favorable and sustainable macroeconomic stability in the economy; secondly, to guarantee effective control of non-performing loans, banks should ensure that loans to be given must satisfy the requirements of banking policy and finally, the Central Bank of Nigeria must ensure that deposit money banks are operating in line with the banking policy guide lines and any bank that violate or bridge the policy should be call to order or penalized.

## RESEARCH METHODOLOGY

### 3.1 Research Design

The research design adopted in this study is *ex-post facto*. The ex-post facto design simply called “after the fact” designs or causal-comparative designs.

### 3.2 Population of the Study

The population of this study consists of all the quoted DMBs on the Nigerian stock exchange (NSE) as at December 2021, and the study will cover a period of ten years 2012-2021.

### 3.3 Model Specification

The empirical literature examined in the previous chapter served as the basis for the basic linear equation that makes up the model. It has been found that the performance of banks and bank distress are causally related. By describing the model in more detail in this part, and further the pursuit of the same goal. The model is then used to validate bank performance and distress. A model will be created for this study that will encapsulate the objectives. The approach involves changing the model by defining a multiple regression equation that relates bank distress to bank performance.

Multiple regression methods using FE and RE models were used to test the study's hypotheses, based on previous studies' recommendations. The FE model allows for the simultaneous examination of variations within individual units and within cross-sections over time (Greene, 2008). The empirical models in this study are expressed mathematically as follows:

**Model 1:**  $ROA_{it} = \alpha + \beta_1 NPLS_{it} + \beta_2 LIQ_{it} + \beta_3 LEV_{it} + \beta_4 CAD_{it} + \mu_{it}$

Where

ROA	=	Return on assets (proxy of performance)
NPLs	=	Non performing loan
LIQ	=	Liquidity
LEV	=	Leverage
CAD	=	Capital adequacy
F	=	Functional Notation

## DATA PRESENTATION AND ANALYSIS

### 4.1 Data Presentation

The raw and logged data for this study were presented in the appendix I & II respectively.

	ROA	ROCE	NPLs	LIQ	LEV
Mean	2.294454	7.546797	7.897808	7.574567	136.3073
Median	1.600000	12.69366	12.84363	12.72158	0.740000
Maximum	29.90000	13.66147	13.36417	13.65884	20.18000
Minimum	3.070000	0.046234	3.238543	0.764336	0.250000
Std. Dev.	4.142546	6.103822	5.818555	5.864561	506.3571
Skewness	5.651738	0.122738	0.225804	0.085115	3.456449
Kurtosis	36.54208	1.029564	1.230321	1.015497	12.94709
Jarque-Bera	6211.999	19.55009	16.53957	19.67085	727.5504
Probability	0.000000	0.000057	0.000256	0.000054	0.000000
Sum	273.0400	898.0688	939.8392	901.3734	16220.57
Sum Sq. Dev.	2024.962	4396.284	3994.958	4058.383	30254908
Observations	50	50	50	50	50

### Interpretation

#### Mean

The mean result from the descriptive statistics shows that the data are not symmetric, following the fact that the mean and median values are not similar.

#### Standard Deviation

Standard deviation result from the descriptive statistics shows that the data needs not be revised, in that the mean value of the variables identified are not far from the standard deviation value.

#### Skewness

Result shows that all the variables ROA, ROCE, NPLs, LIQ and LEV are positively skewed with their skewness value showing 5.651738, 0.122738, 0.225804, 0.085115, and 3.456449 respectively i.e. they have longer tail to the right.

#### Kurtosis

The kurtosis result also showed that ROA, ROCE, NPLs, LIQ and LEV dataset have lighter tails than a normal distribution with their kurtosis value showing 36.54208, 1.029564, 1.230321, 1.015497 and 12.94709 respectively, values lesser than 3, i.e. (platykurtic) relative to the normal. While ROA and LEV has heavier tails than a normal distribution with their kurtosis value showing high value greater than 3, i.e. the distributions are peaked (leptokurtic) relative to the normal.

#### Jarque-Bera

From the above descriptive statistics table, it shows that the variables are statistically significant, at 5% level and they are normally distributed based on their Jarque-Bera value being higher than zero.

### 4.1 Unit Root Test

The time series variables when used in their natural form, often leads to spurious regression results and this misleads policy makers. In other not to obtain spurious result the variables were first tested for stationary by employing the Augmented Dickey Fuller test (ADF). The Result obtained from the analysis is presented in the table below



**Table 4.1 Unit Root Result**

Variables	ADF	Critical Value @ 5%	Integration	Significance
ROA	-11.07743	-2.585050	I (1)	1%
ROCE	-11.88476	-2.947783	1 (1)	1%
NPLs	-6.221145	-1.943688	1 (1)	1%
LIQ	-5.137995	-2.886074	1 (1)	1%
LEV	-5.777016	-2.886074	1 (1)	1%

**Source:** E-view 11 version.

From the result in table 4.1 above, it is well observed that none of the variables (ROA, ROCE, NPL, LIQ, LEV) was found to be stationary at level, but the entire variables were stationary at 1<sup>st</sup> difference. This implies that all the variables are stationary at first differencing with ADF values are higher than their critical values at 5% significance and this result gives us a lead way to co-integration analysis.

#### 4.4 Co-Integration Test

**Table 4.4: Johanson Co integration Test Result (TRACE and Maximum Eigenvalue) Unrestricted Cointegration Rank Test (Trace)**

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.318360	91.94088	69.81889	0.0003
At most 1	0.260845	48.63320	47.85613	0.0422
At most 2	0.103324	14.47917	29.79707	0.8127
At most 3	0.012124	2.155356	15.49471	0.9926
At most 4	0.006852	0.776944	3.841466	0.3781

Trace test indicates 2 co-integrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

#### Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.318360	43.30768	33.87687	0.0028
At most 1	0.260845	34.15403	27.58434	0.0062
At most 2	0.103324	12.32381	21.13162	0.5160
At most 3	0.012124	1.378412	14.26460	0.9988
At most 4	0.006852	0.776944	3.841466	0.3781

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

Max-eigen value test indicates 3 co-integrating equation(s) at the 0.05 level. \*denotes rating of the hypothesis at the 0.05 level \*\*Mackinnon – Haug-Michelis (1999) p-values. Since co-integration is a pre-requisite for the Error correction Mechanism, and following our co-integration result, there is a long-run equilibrium relationship among the variables. The result of the Johansen co-integration presented above in tables 4.4 was carried out assuming linear deterministic trend in co-integrating equation. The trace test indicates three co-integrating equation at 5% significance level likewise. In line with this, there exist long-run equilibrium relationship that between bank distress and bank performance in Nigeria. From this findings, we move ahead to present our regression result.

#### 4.2.4 Regression Results

In order to examine the relationship between the Independent variable (ROA) and the independent variables (ROCE, NPLs, LIQ and LEV) and to test the formulated hypotheses, we employed panel regression analysis since the data had both time series (2012-2021) and longitudinal properties (5 quoted deposit money bank). Our analysis is presented in table 4.3.1 below:

Dependent Variable: ROA

Method: Panel EGLS (Cross-section random effects)

Date: 01/09/23 Time: 19:11

Sample: 2010 2021

Periods included: 10

Cross-sections included: 5

Total panel (unbalanced) observations: 50

Swamy and Arora estimator of component variances

White period standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.057263	0.033693	1.606285	0.1110
ROCE	0.035479	0.043243	1.659313	0.0998
NPLs	-0.055214	0.051524	-2.229644	0.0014
LIQ	0.044921	0.081078	1.904820	0.0593
LEV	0.047705	0.000159	2.435371	0.0041
Effects Specification				
			S.D.	Rho
Cross-section random			0.427087	0.0110
Idiosyncratic random			4.055477	0.9890
Weighted Statistics				
R-squared	0.653363	Mean dependent var		2.156115
Adjusted R-squared	0.620148	S.D. dependent var		4.121130
S.E. of regression	4.079594	Sum squared resid		1897.312
F-statistic	9.606579	Durbin-Watson stat		1.780621
Prob(F-statistic)	0.000027			
Unweighted Statistics				
R-squared	0.055890	Mean dependent var		2.294454
Sum squared resid	1911.787	Durbin-Watson stat		1.767139

The R-squared which is the coefficient of determination or the measure of goodness of fit of the model, tests the explanatory power of the independent variables in any regression model. It tests for the goodness of fit of the model. From our result in table 4.3 above,  $R^2 = 0.653363$  (65%), this shows that our model has high goodness of fit, because the closer  $R^2$  is to 100%, the higher the goodness of fit of the model. Hence the explanatory variables can explain up to 65% out of the expected 100% leaving the remaining 45% which would be accounted for by the other variables outside the model which will be captured by the error term. The adjusted  $R^2$  is 62%, meaning that even with an adjustment in the independent variables it can still account for about 62% of the change in the independent variables.

The F-statistics measure the overall significance of the parameter estimates in the model. From table 4.3 above, the calculated value of F-statistics is 9.966010, while its probability is 0.000434, since the prob value is less than the desired 0.05 level of significance, we accept and state that there is a significant relationship between the variables; this means that the parameter estimates are statistically significant in explaining the relationship in the dependent variables.

The a priori expectation is determined by the existing economic theory and it indicates the signs of the economic relationship under consideration. From the result of our estimated model it was discovered that return on capital employed has a positive sign given its value as 0.035479. This implies that increase in return on capital employed increases the bank performance by 3%. Non-performing loans has a negative sign given its value as -0.055214 this suggests increase in non-performing loans has decrease the return on assets by 5%. This conforms to our theoretical expectation.

Liquidity has a positive sign given its value as 0.044921, this implies that increase in liquidity increase the bank performance by 4%, and this conform to a priori expectation

Leverage has a positive sign given its value as 0.047705, this implies that increase in leverage increase the bank performance by 4%, and this does conform by a priori expectation

The T-statistics help in measuring the individual statistical significance of the parameter in the model from the result report in table 4.4 above, return on capital employed is 1.659313, and is statistically insignificant; this implies that it has not contributed significantly to return on equity.

Non-performing loans is -2.229644 and is statistically significant, this further suggests that it has not contributed significantly to return on equity. Liquidity shows that it is significant has contributed to return on equity. Leverage has positive effect and is statistically significant at 5% level of significance.

Durbin-Watson statistics is used to test the presence or otherwise of autocorrelation in our model. Whenever the value of Durbin Watson is closer or little bit above (2), it means the absence of autocorrelation. From our model it is observed that our Durbin Watson is (1.7) this implies the absence of autocorrelation in our model. Hence our model result can be used for prediction and inferences.

### **4.3 Hypothesis Testing**

The need to examine the relationship between the collected data and the stated hypothesis has called for this section. This result will be compared with the statistical criteria to see if the preconceived notion in this research work holds or not.

#### **Hypothesis One**

Ho<sub>1</sub>: Return on capital employed has no significant effect on the return on assets of deposit money banks in Nigeria.

From the result of our test in the table 4.3 above, we found out the value of our T-test for return on capital employed is 1.659313 with a probability of 0.0998. This probability value is greater than the desired level of significance (0.05). We reject the alternative and accept the null hypothesis, which states that return on capital employed has no significant effect on the return on assets of deposit money banks in Nigeria.

#### **Hypothesis Two**

Ho<sub>2</sub>: Non-performing loans no significant effect on the return on assets of deposit money banks in Nigeria

From the result of our test in the table 4.3 above, we found out the value of our T-test for non-performing loans is -2.229644 with a probability of 0.0014, this probability value is less than the desired level of significance (0.05). We reject the null hypothesis and accept the alternative hypothesis, which states that non-performing loans has significant negative effect on the return on assets of deposit money banks in Nigeria.

#### **Hypothesis Three**

Ho<sub>1</sub>: Liquidity has no significant effect on the return on assets of deposit money banks in Nigeria.

From the result of our test in table 4.3 above, we found out that the value of our t-test for liquidity is 1.904820 with a probability of 0.0593 this probability value is greater than the desired level of significance (0.05). We reject the alternative hypothesis and accept the null hypothesis, which states that the liquidity has no significant effect on the return on assets of deposit money banks in Nigeria..

#### **Hypothesis Four**

Ho<sub>4</sub>: Leverage has significant effect on the return on assets of deposit money banks in Nigeria

From the result of our test in the table 4.3 above, we found out the value of our T-test for leverage is 2.435371 with a probability of 0.0041, this probability value is less than the desired level of significance (0.05). We reject the null hypothesis and accept the alternative hypothesis, which states that leverage has significant effect on the return on assets of deposit money banks in Nigeria.

## **SECTION FIVE**

### **SUMMARY OF THE FINDINGS, CONCLUSION AND POLICY RECOMMENDATION**

#### **5.1 Summary of the Findings**

The basic objective of this study is to examine the bank distress on bank performance in Nigeria. From the analysis of the data especially, and the testing of hypothesis it was realized that:

- 1 Return on capital employed has no significant effect on the return on assets of deposit money banks in Nigeria..
2. Non-performing loans employed has no significant effect on the return on assets of deposit money banks in Nigeria
3. Liquidity has significant effect on the return on assets of deposit money banks in Nigeria.
4. Leverage has significant effect on the return on assets of deposit money banks in Nigeria

#### **5. 2 Conclusion**

The study examined the bank distress and bank performance. The unit root test revealed that all the variables attained stationary trend at first difference. The Panel regression analysis indicates a positive relationship between the explanatory variables and banks' profitability. The empirical findings revealed that Return on capital employed has no significant effect on the return on assets of deposit money banks in Nigeria. Non-performing loans employed has no significant effect on the return on assets of deposit money banks in Nigeria. Liquidity has significant effect on the return on assets of deposit money banks in Nigeria. Leverage has significant effect on the return on assets of deposit money banks in Nigeria. Given the above findings, the researcher concludes that the effects of banks distress on Banks performance cannot be underestimated and poses a fundamental threat to the very existence of the Banks as corporate business entities.

#### **5.3 Recommendation**

- i. It is recommended that; managers of banks should continue to practice prudent credit risk management this will help in increasing their returns on capital employed.
- ii. Also, deposit money banks need to regularly review their credit policies to further reduce the incidence of non-performing loan.
- iii. The management of listed service firms in Nigeria should reduce the level of leverage in their capital structure in order to improve their firm value. Even though, it was found to have insignificant effect on firm value.
- iv. The listed firm in Nigeria's current liquidity position is detrimental to their firm value. Based on this, it is recommended that companies should reduce their current ratio and ensure that neither insufficient nor unnecessary funds are invested in current assets.

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