



**LIQUIDITY MANAGEMENT AND FINANCIAL PERFORMANCE: EVIDENCE
FROM LISTED DEPOSIT MONEY BANKS IN NIGERIA**

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Abstract

The study explored the impact of liquidity management on financial performance of listed deposit money banks in Nigeria. The population of this study comprises all the listed Deposit Money Banks on the Nigeria Stock Exchange (NSE) as at 31st December, 2020, which constitutes Sixteen (16) Banks. Fourteen (14) Banks were emerged as sample after two (2) were filtered out based on some criteria. Data were collected from the annual reports and accounts of the sample Banks for the period of the study. Collected data were analysed using descriptive statistics, correlation and multiple regression technique. The findings of the study revealed that Liquidity ratio (LR) has positive and significant impact on the financial performance of listed Deposit Money Banks in Nigeria. The finding further shows that cash reserve ratio (CRR) is negative and significantly related to the financial performance of listed Deposit Money Banks in Nigeria. Finally, the finding shows that Loan to debt ratio (LDR) has a positive but insignificant relationship with financial performance of listed Deposit Money Banks in Nigeria. The study therefore, concludes that Liquidity ratio and Loan to deposit ratio have an impact in influencing the financial performance of listed DMB's in Nigeria. It is therefore recommended that the listed DMBs should pay attention on their liquidity by increasing its level through prudent spending, aggressive deposit and debt recovery. Regulatory agencies such as Nigerian Deposit insurance commission (NDIC), Central bank of Nigeria and the Board of directors should mandate the increase in percentage of loans that DMB's give to customers so as to increase their performance.

Keywords: Liquidity, Deposit Money Banks, financial performance, Nigeria

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1. INTRODUCTION

Liquidity is crucial to the successful running of any organization, more especially financial institutions like Deposit Money Banks. Liquidity has been identified as one of the most critical goals of working capital management and central pillar of cash management (Lamberg & Vålming, 2009). The existence and development of an enterprise is largely dependent on the efficient management of its liquidity (Sathyamoorthi et al., 2020). The authors further buttressed that liquidity and its effective management in the context of banks refers to the ability of banks to meet their financial commitments and maturing obligations within the stipulated time. The survival of banks, therefore, depends largely on the level of liquidity and its effective management, any inadequacy and poor management will lead to the erosion of the level of public confidence in the banks. Liquidity is generally referred to as the ability to generate adequate cash to pay off financial obligations but in banking it mainly refers to the ability to honor maturing deposits (Dzapasi, 2020). Banks indeed require liquidity since such a large proportion of their liabilities are payable on demand (deposits).

However, Nigerian Deposit Money banks over the years have faced a lot of issues which have seriously affected their performance. These issues have led to the consolidation policy of 2004 brought by the Central Bank of Nigeria. This consolidation policy was to strengthen the bank and protect the depositors' fund. After the consolidation policies many banks were found to engage in insider trading and this led to huge amounts of non-performing loans. The case of Intercontinental and Oceanic bank is a perfect example and this led to the sacking of the CEO of the banks. To avert further crises in the banks, the Central Bank of Nigeria set up the Asset Management Corporation of Nigeria (AMCON) with the mandate to operate for ten years. The responsibility of AMCON was to take over toxic assets of the banks and inject more funds to ailing banks, take over management and restructure the banks. AMCON was able to live up to this mandate as some banks were taken over and more funds injected. Afribank, Bank PHB and Spring Bank were the first set of banks to be taken over. AMCON injected N679 billion into the Bridge Banks namely, Main Street Bank, Keystone Bank and Enterprise Bank, to meet the minimum capital base of N25 billion and the minimum capital adequacy ratio of 15 percent (Okpara, 2013). The high non-performing loans in these banks created liquidity problems and thus affected the performance of the banks. Despite these interventions by AMCON, more banks were still found wanting. The implication of this is that there will be a continuous rise in skepticisms in the mind of investors, shareholders and other stakeholders on the continuous survival of the banks and the banks' ability to make returns on the investments. Therefore, there is no harm in saying that liquidity is a key to the survival of banks and as such it is important to continually assess the role played by liquidity in enhancing the financial performance of the banks.

From the literature, many studies on liquidity management and financial performance have left a lot to be desired. Even though many studies have been done, there are specific areas that still need to be resolved due to the conflicting findings in the literature as some studies revealed positive relationship between liquidity management and financial performance, others reported negative relationship (Toby & Danjuma, 2021; Terseer, Henry & Mkuma, 2020; Salim & Bilal, 2016). The inconsistency in the findings may not be unconnected to the differences in environment, period of the study, measurements used, technique of data analysis or tools used for the analysis.

This study is therefore conducted in Nigeria, covering a period of ten years (2011-2020). This period is important because it is the period the Nigerian government introduced a lot of financial management mechanism such as Treasury Single Account (TSA), integrated personnel payroll information system (IPPIS), Zero-base budgeting among others which affected the liquidity as well as the financial performance of Deposit Money Banks in Nigeria. Also, most of the studies conducted in Nigeria for examples; Alhassan, and Anwarul Islam (2021) and Adegbie and Dada (2018), failed to use the correct measures of liquidity such as cash reserve ratio (CRR), loan to deposit ratio (LDR). Finally, this study used STATA for the analysis which is capable of testing heteroscedasticity test, fixed and random effects, multicollinearity test, lagrangian multiplier test among others to validate its result. Based on these that this study is considered imperative.

The main objective of this study is to examine the effect of liquidity management on financial performance of listed deposit money banks in Nigeria. The specific objectives are to:

- i. Examine the impact of liquidity ratio on the Return on Asset of listed DMBs in Nigeria.
- ii. Determine the effect of loan to deposit ratio on the Return on Asset of listed DMBs in Nigeria.

Assess the effect of cash reserve ratio on the Return on Asset of listed DMBs in Nigeria

2. LITERATURE REVIEW

This part of the study examines different studies carried out by various researchers in different countries. This review mainly concentrated on the studies related to the analyses of the effect of liquidity management on bank's performance within and outside Nigeria. Sathyamoorthi et. al (2020) examined the impact of liquidity management on the financial performance of commercial banks in Botswana. The study used Return on Assets and Return on Equity to measure financial performance. Cash and cash equivalents to total assets ratio, Cash to deposits ratio, Loans to deposits ratio, Loans to total assets ratio, Liquid assets to total assets ratio, and Liquid assets to deposits ratio were used as proxies for liquidity management. The research population was all the 9 commercial banks in Botswana and the study

covered a period of 9 years from 2011 to 2019. This descriptive study sourced monthly secondary data from the Bank of Botswana Financial Statistics database. Descriptive statistics, correlation and regression analyses were applied to analyze the data. The results from regression analysis show statistically significant positive relationships for Loans to total assets ratio and Liquid assets to total assets ratio with return on assets and return on equity. Loans to deposits ratio and Liquid assets to deposits ratio had statistically significant negative relationships with return on assets and return on equity. Cash and cash equivalents to total assets ratio had statistically insignificant positive relationship with return on assets and return on equity whilst cash to deposits ratio had statistically insignificant negative relationship with return on assets and return on equity.

In the same vain, Salim et al (2016) has investigated the effect of liquidity management on the financial performance of Omani Banking sector. The study aims to investigate the liquidity position and its impact on the financial performance of Omani Banks with the eventual objective to advice policies to improve the management of liquidity risk in Omani banks. A sample of 4 local commercial banks has been used to examine the relationship between the Liquidity and Financial performance for the period of five years from 2010-2014. The data has been taken from the Banks annual reports using multiple regression analysis. The study concluded significant relationship between the bank's loans to total assets ratio, illiquid assets to liquid liabilities ratio and bank's ROA; bank's Liquid assets/deposits; Liquid assets/Short term liabilities and ROE; and bank's Loans/ Total assets, Loans/ Deposits & short term liabilities; Bank's loans – customer deposits/ Total assets and ROAA. However, the study finds no significant relationship between Omani bank liquidity position (such as a bank high ability to absorb shocks, liquidity at short-term, ability to cope with long term liquidity risk, less liquidity and less risk exposure) and NIM.

Also, Agbada et al (2013) assessed the efficacy of liquidity management and banking performance in Nigeria where a Survey research design through structured questionnaires was used for data collection. The sample of the study consists of twenty randomly selected banks in Nigeria where 300 bank employees were randomly selected as respondents. The findings disclose a significant relationship between efficient liquidity management and banking performance. Similarly, Bassey et al (2016) investigates the relationship between bank performance and liquidity management using bank deposits, cash reserve requirement, bank investment and cash ratio. The findings of the study re-emphasize the fact that successful operations and survival of the banks are anchored on efficient and effective liquidity management. They therefore postulate that banks should not concentrate purely on deposits but rather other measures should be adopted to reduce illiquidity in this sector.

Dzapasi (2020) examined the impact of Liquidity Management on Bank Financial Performance in a subdued economic environment: A case of the Zimbabwean Banking Industry. This paper sought to establish the impact that proper liquidity management has on the financial performance of banks in the backdrop of a poorly performing economy. Factors that include asset liability mix, regulatory and market changes and liquidity management strategies are closely scrutinized in line with the ever changing Zimbabwean economic environment. The study focused on the population of banking financial institutions in Zimbabwe and drew a sample of five (5) leading banks that comprised Commercial Bank of Zimbabwe (CBZ), Standard Chartered Bank of Zimbabwe, First Capital Bank, FBC Bank and ZB Bank. The major findings of the study were that there is a strong positive relationship between liquidity management and bank financial performance. Trade-off between liquidity and profitability in Zimbabwean Banking institutions has seen a decline in profit margins over the period under study, but has fostered greater stability that has guaranteed better performance and sustainability.

Terseer et al., (2020) follows suit and examines the effect of liquidity management on financial performance of banks in Nigeria for the period 2010 to 2018. The study uses secondary data from five listed banks on the stock exchange in Nigeria. The proxies employ for liquidity management are; Liquidity ratio (LQR), Loan to deposit ratio (LDR), Cash reserve ratio (CRR) and deposit ratio (DR), while return on assets (ROA), return on equity (ROE) and return on net interest margin (NIM) are proxies for financial performance (Profitability). The study uses panel regression analysis in estimating the model and Hausman test while making a choice between fixed effect and random effect model. The study found that the liquidity ratio (LQR) has a positive and significant effect on financial performance of DMB as measured by return on assets (ROA), return on equity (ROE) and net interest margin (NIM).

Similarly, Alhassan et al., (2021) investigates the impact of Liquidity management and financial performance of listed oil and gas companies in Nigeria. The purpose of the paper is to figure out the link between liquidity and profitability, as well as the impact of liquidity on profitability. Ten listed companies with a bigger market share in the oil and gas sector of the Nigerian economy were subjected to a fixed panel regression study. Secondary data was gathered for ten years, from 2011 to 2020, from their published annual reports. Profit after tax (PAT), Return on Asset (ROA), and Return on Equity (ROE) were used to determine profitability (ROE). Internal liquidity variables such as equity, debt, and sales were utilized to determine the behavior of the dependent variable, but external elements such as lending interest rate and exchange rate were employed to further explain profitability behavior. The data were analyzed using a multiple regression approach. The findings revealed that debt has a significant negative impact on companies' profitability. Similarly, equity capital and retained earnings are more beneficial to firms than the debt financing of the oil and gas sector.

Otekunrin et al., (2019) also examined the performance of selected quoted deposit banks of Nigeria and liquidity management. Secondary data used was extracted from the financial statements of 15 money deposit banks out of the population of 17 deposit money banks on the Nigerian Stock Exchange (NSE) for 2012–2017 (six years). The descriptive research design was used. The data collected was analyzed using ordinary least squares method (OLS). Liquidity management was measured using capital ratio (CTR), current ratio (CR) and cash ratio (CSR), while performance was measured using return on assets (ROA). Based on the results of the study, liquidity management proxied by capital ratio, current ratio and cash ratio and performance of the firm proxied by return on assets are positively related. The result shows that liquidity management is an essential factor in business operations and consequently leads to business profitability.

In another related study, Wisdom et al (2021) assessed the impact of liquidity management on the financial performance of listed deposit money banks in Nigeria. Secondary data were gathered from the annual reports and accounts of the fifteen (15) banks for a period of 11 years 2007–2017. The data gathered were analyzed using descriptive and inferential statistics. The analysis revealed that there is a significant relationship between liquidity management and financial performance of listed Deposit Money Banks in Nigeria. In addition, they discovered that there exists a significant difference in profitability of DMB's before and after the adoption of Treasury single account in Nigeria.

Dadebo et al., (2020) examined the impact of the liquidity management on the performance of the 10 (ten) manufacturing firms selected for the period of five years 2012–2016. Secondary data were collected from the annual reports and accounts of these firms. Descriptive statistics, correlation and regression analyses were used for data analysis. The study revealed that the current ratio has a negative and significant impact on profitability (ROA) of the selected firms while quick and cash ratios have positive but insignificant relationship with ROA. In the same vein, Ali (2015) studied the effect of liquidity management on profitability in Thirteen Jordanian commercial banks from (2005–2012). The liquidity indicators used are investment ratio, quick ratio, capital ratio, net credit facilities/ total assets and liquid assets ratio, while return on equity (ROE) and return on assets (ROA) are the proxies for profitability. The study adopted Augmented Dickey Fuller (ADF) stationary test model to test for a unit root in a time series of the research variables and regression analysis for test of hypothesis. The empirical results show that quick ratio and investment ratio of the available funds have a direct relationship, while capital ratio and liquid assets ratio show an inverse relationship with the banks' profitability.

In a related study, Francis et al., (2016) examined liquidity management and the performance of banks in Nigeria from 2000–2010. The study applied bank deposit and bank investment variables as proxies for bank performance while cash reserves

requirement and cash ratio were used as liquidity management variables. The data were mainly collected from CBN's statistical bulletin and analyzed using simple percentages and simple regression model. The results indicate that a strong relationship exists between bank deposit and bank reserve requirement, and bank investment and cash ratio, signifying that successful operations and survival of banks anchored on efficient and effective liquidity management and suggested that banks should devise other measures to reduce illiquidity rather than concentrate purely on deposits. Understanding the effect of bank's optimum liquidity level on return on investment is not only significant but crucial in banking while monitoring adequate liquidity to satisfy the regulatory authorities. Banks holding optimum liquid assets benefit from a superior sensitivity in funding markets, reduction in financing costs and increased profitability. However, holding liquid assets involves an opportunity cost because of their low return relative to other assets.

Adegbie et al., (2018) evaluated the effect of risk asset and liquidity management on the sustainable performance of Deposit Money Banks in Nigeria. The study adopted both the ex post facto and survey research methods. The population of this study comprises three Deposit Money Banks operating in Nigeria. Primary and secondary data were analyzed using descriptive statistics and regression analysis and the result showed that risk asset and liquidity management has an effect on sustainable performance of Deposit Money Banks in Nigeria.

In vain, Kajola et al., (2019) examines the effect of liquidity management on profitability in ten deposit money banks in Nigeria between 2008 and 2017. Return on asset served as a proxy for profitability while four variables - current ratio, loan to deposit ratio, deposit to asset ratio and liquidity ratio surrogated for liquidity management. Using Random effects generalized least squares as estimation technique, results reveal a positive and statistically significant relationship between two liquidity management proxies (current ratio and liquidity ratio) and return on asset. The study did not find empirical evidence in support of loan to deposit ratio and deposit to asset ratio as having influence on profitability of the selected banks, as results produced insignificant relationship with profitability. Also, Toby et al (2021) analyzed the effect of liquidity management and BASEL capital adequacy on financial distress resolution in Nigeria. The study adopts a unidirectional causal research design within the single-equation dynamic autoregressive distributed lag (ARDL) framework. The empirical analysis is based on annual time series data covering the period from 1986 to 2018 obtained from different Central Bank of Nigeria (CBN) statistical bulletins and Nigeria Deposit Insurance Corporation (NDIC) quarterly as well as the factsheet of the Nigerian Stock Exchange (NSE). The stationery test results indicate that the study variables are integrated at different levels, with most of them being I (1) series. The ARDL results show that micro-prudential liquidity management has no significant effect on the ratio of distressed banks, while the effect of macro-prudential liquidity management on the ratio of distressed banks is significant. The results also show that capital adequacy regulation has no significant effect on both ratios of distressed banks and

governance/compliance breaches of distressed banks, while it has a significant effect on business risk exposure of the distressed banks and asset quality of distressed banks. Further, monetary policy measures have no significant effect on the level of distress in the Nigerian banking industry. Based on these findings, they conclude that in Nigeria, prudential measures aimed at achieving macro-level financial sector stability have significant policy implications for financial distress resolution. Also, while traditional monetary policy measures are not effective tools for achieving financial sector stability, the effect of capital adequacy regulation on financial distress resolution depends on how the former is measured.

Kajola et al (2021) examined the determinants of liquidity management in twelve Nigerian banks during 2009–2018. Liquidity ratio (LQR) and deposit to asset ratio (DAR) were used as surrogates for liquidity management. As the potential liquidity management determinant indicators, five bank-specific variables (capital adequacy, size, asset quality, profitability and deposit growth) and three macroeconomic variables (GDP growth rate, inflation rate and interest rate) were used as proxies. Results from balanced fixed effects least square regression analytical techniques show that size, profitability, GDP growth rate and inflation rate are important liquidity determinants in Nigerian banks. Specifically, bank size has a positive and significant influence on LQR, while GDP growth rate and inflation rate exhibit a negative and significant relationship with LQR. It further reveals a positive and significant relationship between profitability (ROA) and DAR. It is recommended that banks' management should focus attention on both bank-specific (size and profitability) and macroeconomic (GDP growth and inflation rate) factors when deciding appropriate liquidity management strategies to be adopted. These four variables have the capacity to influence the profitability, sustainable growth and survival of banks operating in a volatile business environment such as Nigeria.

3. METHODOLOGY

4.1 Data Collection

This study adopted ex-post facto research design. Ex-post facto research design involves the use of already existing documented evidence to examine how an independent variable of the study affects a dependent variable and which allows the use of secondary data. The population of this study is the all sixteen (16) listed Deposit Money Banks in Nigeria as at 31st December 2020 and the sample size is fourteen (14) listed Deposit Money Banks in Nigeria as at 2020. The 14 samples arrived after two banks were filtered out on the basis of listing on the floor of the Nigerian stock exchange. Data were sourced from the annual reports and accounts of the sample banks and the data was analyzed using multiple regression techniques with the help of STATA package.

Table 1: Variables and their Measurements

Variables	Acronym	Measurement	Source
DV: Financial Performance Return on assets	ROA	Profit before Tax/ Total asset	Ahmed & Teru (2020)
IV: Liquidity Management Liquidity Ratio (Edem, 2017)	LR	Loan/ Total Deposit Reserve requirement with	Choudhry et al (2015), Onyekwelu (2018), Choudhry et al (2015)
Cash Reserve Ratio	CRR	CBN/ Total Deposit of customers	
Loan to Deposit Ratio	LDR	Total loan and Advances/ Total Deposit	
Control Variables Capital Adequacy Ratio	CAR	Equity/Total assets	Ikpefan (2013)
Firm Size	FSZ	Natural Logarithm of Total Assests	Agu & Nwankwo (2019)

Source: Authors' Compilation (2020)

4.2 Model Specification

The model that will be used in testing the hypotheses of this study is presented below using liquidity ratio, cash reserve ratio and loan to deposit ratio to predict the financial performance of deposit money banks. In addition, this study will include capital adequacy ratio (CAR) and firm size (FSZ) as control variables of the model as follows:

$$ROA_{it} = \alpha_0 + \beta_1 LR_{it} + \beta_2 CRR_{it} + \beta_3 LDR_{it} + \beta_4 CAR_{it} + \beta_5 FSZ_{it} + \varepsilon_{it}$$

Where:

ROA= Return on Assets

LR = Liquidity Ratio

CRR = Cash Reserve Ratio

LDR = Loan to Deposit Ratio

CAR = Capital Adequacy Ratio

FSZ = Firm Size

α_0 = Constant Parameter

$\beta_1 - \beta_5$ = Parameters to be estimated/Coefficient of explanatory variables

i,= number of cross-section/banks

t = time dimension

ε = error term of the model

4. RESULTS AND DISCUSSION

4.1 Robustness Tests conducted

This section presents the results of robustness tests conducted in order to improve the validity and reliability of all statistical inferences derivable from the findings of the study. These test include, multicollinearity test, heteroscedasticity, Hausman specification test and lagragian multiplier test.

Table 2: Multicollinearity test

Variable	VIF	1/VIF
Lr	3.54	0.282492
Crr	3.44	0.290759
Fsz	1.76	0.567054
Ldr	1.55	0.643246
car	1.43	0.700983
Mean	2.34	

This is to check whether there is a correlation among the independent variables which will mislead the result of the study. Table 2 below presents the matrix of the linear relationship among the independent variables. From observation, only CRR has a coefficient of more than (0.5) and the remaining correlation coefficient among the independent variables is less than 0.5. The low magnitude of the correlations amongst the exogenous variables indicates that multicollinearity even though it does not constitute a problem for the sample of the study. To further substantiate the absence of multicollinearity among the independent variables, collinearity diagnostics are observed and that the variance inflation factor (VIF) and tolerance values indicate absence of multicollinearity in the data. The variance inflation factor (VIF) and tolerance values for all the explanatory variables were found to be less than ten and one concurrently indicating absence of multicollinearity among the explanatory variables.

Table 03: Heteroscedasticity test

Chi 2(1)	31.18
Prob > chi 2	0.0000

The above test is to check whether the variability of error term is constant or not. The presence of heteroscedasticity signifies that the variation of the residuals or error term is not constant which would affect inferences in respect of beta coefficient, coefficient of determination (R^2) and F-statistics of the study. The result of the test (P-value 0.0000) reveals that there is presence of heteroscedasticity in the data and this shows the violation of assumption number four of classical linear regression model which states that there must be constant variance that is the disturbances appearing in the population regression function are homoscedastic. Therefore, as a result of the presence of heteroscedasticity, the researchers decided to conduct fixed and random effects.

Table 3: Hausman Specification Test

	Fixed (b)	Random (B)	Difference (b-B)	Sqrt (diag (V_b-V_B) S.E.
lr	-0.0000329	0.0062759	-0.0063088	0.0030996
crr	0.0000325	-0.0028911	0.0029236	0.0012656
ldr	-0.0481229	0.0286469	-0.0767698	0.0307926
car	0.0636624	0.0034143	0.0602481	0.0244815
fsz	-0.0009612	-0.0036408	0.0026796	0.0009644

In order to decide between fixed or random effect models output, Hausman specification test is conducted in table 3. The hausman test is designed to detect violation of the random effects modeling assumption that the explanatory variables are orthogonal to the unit effects. If there is no correlation between the independent variables and the unit effects, then the estimates of β in the fixed effects model should be similar to estimates of β in the random effects model. The hausman test statistics H is a measure of the differences between the two estimates. Under the null hypothesis of orthogonality, H is distributed chi-square with degrees of freedom equal to the number of regressors in the model. The result obtained from the hausman specification test conducted in this study is insignificant which led to the lagrangian multiplier test.

Table 4: Lagrangian Multiplier Test

	Var	Sd = sqrt t (Var)
roa	0.0571742	0.2391113
e	0.0300699	0.1734068
u	0.0159109	0.1261383
chi 2(1)	44.35	
prob > chi 2	0.0000	

The table 4 above shows the Lagrangian Multiplier test which helps one to decide between a random effects regression and OLS regression. The test is conducted after running the random effects model. The rule is that if it is significant, random effect is the preferred model otherwise OLS regression. In this study, we failed to reject the null and conclude that a random effect is not appropriate. This is evidenced by the p-value of 0.4321. Therefore, the researchers ran a Robust OLS regression as presented on table 4 accordingly.

Table 5: Correlation Analysis

Var.	ROA	LR	CRR	LDR	CAR	FSIZE
ROA	1.0000					
LR	0.0189	1.0000				
CRR	0.0092	0.8212**	1.0000			
LDR	0.3299*	-0.1453	0.0466**	1.0000		
CAR	-0.2551*	0.1455**	-0.0142	-0.3773	1.0000	
FSIZE	-0.4243*	0.1215**	-0.0362	-0.3655	0.2253*	1.0000

*Correlation is significant at 1% level (2-tailed), **Correlation is significant at 5% level (2-tailed), ***Correlation is significant at 10% level (2-tailed)

Source: Authors' based on survey data

In Table 5 above, ROA shows a negative relationship between capital structure variables (CAR and FSIZE) and positive relationship with LR, CRR and LDR at 1% level of significance indicating a strong relationship. Although there were mixed directions of the relationship in terms of positive and negative between dependent and independent variables of the study. Among the independent variables, LR at 5% level of significance, has positive relationships with CRR, CAR and FSIZE, a negative relationship also exists between the variable (LR) and LDR. CRR has a positive relationship with LDR at the 5% significant level, and a negative relationship with FSIZE and CAR at no significant level.

Table 5, also shows an insignificant negative relationship between LDR, CAR and FSIZE, LDR. On the other hand, CAR has a positive relationship with FSIZE at 1% significance level. There was a mix of direction and strength among the independent variable being positive or negative, weak or strong. But there is absence of multicollinearity among the variables as it is shown that none of the relationships have a coefficient value greater than 0.80.

The tolerance values and the variance inflation factor are two good measures of assessing multicollinearity between the independent variables in a study. The result shows that variance inflation factor was consistently smaller than ten (10) indicating complete absence of multicollinearity (Cassey et al, 1999). This shows the

suitability of the study model to fit with the six independent variables. Also, the tolerance values were consistently smaller than 1.00, therefore extending the fact that there is complete absence of multicollinearity between the independent variables (Tobachmel & Fidell, 1996).

4.2 Regression Results and Discussion

The summary of the regression result obtained from the model of the study is presented on the table below.

Table 6: Regression Results

Variables	Coefficients	t-statistic	t-sig.
Constant	0.3003	2.10	0.000
LR	0.1901	1.84	0.000
CRR	-0.0236	-2.31	0.004
LDR	0.2700	2.20	0.020
CAR	-0.8750	-0.40	0.782
FSIZE	-0.0062	-2.52	0.050
R ²			0.4219
F-Stat.			5.72
P-sig.			0.0000

Source: Authors' based on survey data

The cumulative R² (0.42) which is the multiple coefficient of determination gives the proportion of the total variation in the dependent variable explained by the independent variables jointly. Hence, it signifies that 42% of the total variation in the performance of listed pharmaceutical firms in Nigeria is caused by their liquidity ratio, cash reserve ratio, loan to debt ratio, capital adequacy ratio and firm size. This indicates that the model is fit and the regressions are properly selected, combined and used. This further implies that for any changes in the liquidity management of listed Deposit Money Banks in Nigeria, their financial will be directly affected. The F-Statistics are really the same thing in that, after normalization chi-squared is the limiting distribution of the F as the denominator degrees of freedom goes to infinity. So therefore, the F-Statistic of 5.72 which is significant at 1% indicates that the model is fit.

The liquidity ratio showed a t-value of 1.84 with P value of 0.000 and a beta value of 0.1901. This signifies that a liquidity ratio is positively, strongly and significantly impacting on financial performance of the listed deposit money banks in Nigeria. It therefore implies that a percentage increase in liquidity ratio by one, the return on assets of listed deposit money banks will increase by 19%. This provides evidence for rejecting the null hypothesis of one of a study which states that liquidity ratio has no significant impact on return on assets of listed DMBs in Nigeria. The empirical evidence obtained from table 6 showed a t-value of -2.31 with P value of

0.004 and a beta value of -0.0236 for the cash reserve ratio. This signifies that a cash reserve is negatively, strongly and significantly impacting on return on assets of the listed deposit money banks in Nigeria. It therefore implies that for every one percent increase in company cash reserve ratio, the DMBs return on assets will decrease by 2% approximately. This shows that one percent (1%) increase in cash reserve level of the listed deposit money banks in Nigeria will impact negatively on their return on asset by 2%. This provides evidence to reject null hypothesis II of the study which states that cash reserve ratio has no significant impact on return on assets.

Empirical result obtained from the table above showed LDR has a t -value of 2.20 with P value of 0.02 and beta value of 0.2700. This signifies that a loan to deposit ratio is positively and significantly at 5% impacting on return on assets of the listed deposit money banks in Nigeria. It therefore implies that for every one Naira increase in loan to deposit ratio, the DMBs return on assets will increase by 27% approximately. This supports theory of liquidity preference which suggests that credit managers are held with the responsibilities of monitoring the company's credit facilities and advise accordingly (Tobin, 1947). This provides an evidence of rejecting null hypothesis three of the study which states that loan to deposit ratio has no significant impact on return on assets of the listed deposit money banks in Nigeria. The liquidity ratio that is positively significant on banks financial performance, is an indication that one percentage increase in liquidity might lead to 19% increase in the return on assets of the listed deposit money banks. This provides evidence for rejecting null hypothesis of one of the study which states that liquidity ratio has no significant impact on return on assets of listed DMBs in Nigeria. However, this contradicts stewardship theory which assumed that those handling the companies' are not expected to keep too much that might yield unhealthy financial performance (Chizema & Kim, 2010).

5. CONCLUSION AND RECOMMENDATION

Liquidity ratio has a significant positive effect on the financial performance of listed deposit money banks in Nigeria. Therefore, it is considered as an important element that influences the performance of banks. It is therefore recommended that the listed DMBs should pay attention to their liquidity by increasing its level through prudent spending and aggressive deposit and debt recovery. Loan to deposit ratio has a positive effect on the financial performance of listed insurance companies in Nigeria in the period under review. Hence, the study also recommended that the regulatory agencies such as Nigerian Deposit insurance commission (NDIC), Central bank of Nigeria and the Board of directors should mandate the the increase in percentage of loan that DMB's give to customers in order to increase their performance.

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