



**LIQUIDITY RISK MANAGEMENT AND THE PERFORMANCE OF DEPOSIT
MONEY BANKS IN NIGERIA (2011-2017)**

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Abstract

This study examined the impact of liquidity risk management on financial performance of selected Deposit Money Banks (DMBs) in Nigeria for the period 2011-2017. Using ex-post facto research design, annual time series data was obtained from the annual reports and accounts of 10 DMBs. Panel data regression was used for data analysis. From the findings, funding risk has a negative and significant relationship with return on asset. However, financing cost reported an insignificant positive relationship with return on assets. Interest coverage ratio has a negative and significant relationship with return on assets. However, capital adequacy ratio has a positive and significant relationship with return on assets but loan loss provision shows a negative and insignificant relationship with return on asset. Similarly, non-performing loan has a negative effect on banks' return on assets. The study, thus concludes that there exists a significant and negative relationship between liquidity risk management (funding risk, interest coverage ratio and non-performing loan) and banks performance (ROA). It is, therefore, recommended that the regulator of DMBs should be cautious about increasing the minimum liquidity ratio as this would adversely affect their financial performance. Nigerian DMBs should increase the amount of core capital since capital adequacy was noted to have a positive and significant effect on financial performance.

Keywords: Deposit Money Banks, Funding Risk, Financial Performance, Liquidity Risk Management, Random effects

1. Introduction

The significance of liquidity risk management as it affects the financial health of financial institutions such as banks in their business operations is enorous. As a core banking activity, lending is considered to be one of the most viable sources of profitability. The administration of credit by lending institutions such as banks if not properly handled could constitute a risk that can lead to reduction in their performance, profitability and also leads to bank distress (Berger and Christa, 2009). Thus, effective liquidity risk management is very vital for banks safety and soundness (Sensarma & Jayadev, 2015). Illiquidity of banks constitutes a risk, which is caused



by cash flows mismatch or unexpected liquidity needs arising from contingency conditions. This brings about the need for effective liquidity management, so as to ensure the survival and prosperity of financial institutions such as bank (Elliott, 2014).

Lending exposes banks to liquidity risk and underpins their profitability in relations to asset and liability transformation (Ikeora & Andabai, 2015). The subject matter of liquidity in management of banks is key in the process of investment analysis. However, there appears to be an interminable argument in the literature on the role and determinants of liquidity and credit management. Acharya and Naqvi (2012) opined that a liquid bank stores enough liquid assets and cash together with the ability to raise funds quickly from other sources to enable it meet its financial obligations efficiently. According to Saunders and Cornett (2005) cited by Ibe (2016), the nature of the banking business is sensitive because more than 85% of their liability is deposits. Banks employ these deposits to generate credit for their borrowers, which in fact is a revenue generating activity for banks. This credit creation process, according to the author, exposes banks to high default risk especially where a bank suffers loan maturity mismatch which usually lead to liquidity crisis and sometimes financial distress.

However, most of the empirical studies such as Acharya and Naqvi (2012), Bassy (2016) and Ikeora and Andabai (2015) among others that have examined the impact of liquidity risk management on bank's performance in Nigeria omitted some important variables such as funding risk ratio and financing cost ratio. These ratios are essential in modeling liquidity risk of banks. The ratios give information on the sources and application of fund by banks which facilitates optimum of loan-deposit match. This further emphasizes the need for prudent management of liquidity risk by banks in order to mitigate the effect of bad loan quality on profitability of the banks. Based on the foregoing, this study sought to investigate the impact of liquidity risk management on the performance of DMBs in Nigeria. Specifically, the study aims to determine the relationship between funding risk and banks performance; ascertain the influence of financing cost on bank performance; examine the impact of interest cover ratio on bank performance; determine the relationship between capital adequacy and bank performance; evaluate the effect of non-performing loan on bank performance; and examine the relationship between loan loss provision and bank performance.

2. Literature Review

Conceptual Issues

Liquidity refers to the amount of capital that is available for investment (Sunny, 2013). According to Aishatti (2015) as cited in Musah (2018), liquidity simply refers to the ability of banks to meet the financial needs of their increased assets and meeting liabilities as and when due without incurring avoidable losses. The liquidity of assets, according to Jhingan (2010), cited by Ejoh, Okpa and Egbe (2014), is the ease and certainty with which the assets can be turned into cash. Therefore, a bank is said to be liquid if it can conveniently finance its current maturing financial obligations from its stock of current assets without incurring avoidable losses. Thus, liquidity can be described as the ease, economy, and effectiveness with which assets could be turned to cash. The possession of highly marketable and liquid assets and investments could also be termed liquidity.



Liquidity risk is the possibility that over a specific time period, the bank will become unable to settle its obligations with immediacy (Zaphaniah, 2013). It is a risk arising from a bank's inability to meet its obligations when they come due without incurring unacceptable losses (Drehmann & Nikolaou, 2010). Liquidity risk is a serious threat to the performance of banks which when unchecked would lead to the total collapse of banks. It is also a snare to banks with an unsound risk assessment and control policy (Coyle, 2000).

Liquidity management is the process, techniques as well as strategies of planning, organising, directing and controlling the resources of an organisation in such a manner that it has adequate liquid assets in stock as well the effective, speedy, and economic transformation of the said assets into cash immediately when the need arises. The proper planning, containment, curtailment and control of risk arising from illiquidity of a firm is called liquidity risk management. It also includes all web of policies and decisions as well as the proactive managerial planning and control measure put in place to mitigate events, activities, and operations capable of threatening the liquidity position of a firm. Liquidity risk management measures include capital adequacy ratio (CAR), financing cost (FC), loan loss provision ratio, funding risk, non-performing loan, market risk. CAR is the ratio of a bank's capital to its risk. Financing cost (FC) refers to the cost, interest, and other charges incurred on loans, advances and other credit facilities accessed by the firm. Funding liquidity risk is the risk that a bank will be unable to pay its debts when they fall due. Market liquidity risk, on the other hand, is the risk of not being able to sell assets in a timely fashion without having to offer a heavy discount.

Organisational performance as a term refers to how well a firm utilises its human and financial assets as well other resources in business operations to generate income and grow the organisation. Performance could be measured operationally or financially; this study employed the latter approach. This, banks performance was measured using return on assets (ROA). ROA simply refers to the proportion of a firm profit compared to its entire. It is quotient of a firm's net income (or profit after tax) to total assets.

Liquid assets could be regarded as life blood of any bank. This is because these assets constitute the working capital. Banks employ depositors' money in their lending and other profit-yielding activities. The depositors could make demand for their money any time. This brings about the need to maintain an optimum balance of liquid assets and profitability. Liquidity is a necessity in banks operations. According to Anjum (2012), optimum liquidity helps in the proper management of funding risk. It enhances the ability of a firm to replace net outflows either through withdrawals of retail deposits or non-renewal of wholesale funds. Adequate liquidity is also a panacea for default risk. Similarly, according to the author, it is easier for banks with sufficient liquid assets to access funds to meet their financial obligations as and when due.

As a working capital, liquid assets if properly invested and managed could also help banks to generate profit. It also boosts public confidence in the operations of the banks. High premium is place on liquidity of banks by the Central Bank of Nigeria (CBN) that it prescribes the liquidity ratios for all the banks in the nations. According to Jhingan (2010), cited by Ejoh, et al. (2014), a bank needs a high level of liquidity in its assets portfolio. Thus, the bank must hold a sufficient large proportion of its assets in the form of cash and liquid assets for the purpose of profitability. According to the author, there is an inverse relationship between bank's liquidity



and its profitability. Thus, a bank must strike an optimum balance between the two while managing its investment portfolio. Goodhart (2008) cited by Bassy (2016), maintains that the liquidity of an asset should be based on its capacity to generate the liquidity but on its accounting treatment. Jeanne and Svensson (2007) therefore suggest that banks should hold adequate cash balance to avoid liquidity problems.

Theoretical Framework:

The two theories examined in this study are the liquidity management theory and the anticipated income theory.

The Liquidity Management Theory - This theory focuses on the liability side of the balance sheet (statement of financial position (SOFP)) of the banks. The theory states that bank can rely on items on the liability side of its SOFP as part of the sources of their liquidity. It uses liability (such as customer deposits) as asset in from liquid asset. Nwankwo (1991) argues further that since banks can buy all the funds they need, there is no need to store liquidity on the asset side of the SOFP.

The Anticipated Income Theory - Unlike the liquidity management theory, the anticipated income theory focuses on the asset side of the SOFP, particularly on its short term self-liquidating loans and advances made to customers. Proper management of the loans by banks enhances liquidity position. According to Nwankwo (1991), the theory points to the movement towards self-liquidating commitments by banks. The author contends that an optimum liquidity position is attained at the point at which interest-sensitive asset equate interest-sensitive liability.

Empirical Review

Dimitrios (2016) investigates the impact of liquidity on the profitability of 50 largest European banks during the period 2009-2015, and found that liquidity ratios had a negative impact on profitability. Similarly, Muhammad, Muhammad and Sobia (2017)'s findings show that liquidity management has positive impact on banks profitability. Maqsood (2016) examines the impact of liquidity management on profitability in banking sector of Pakistan. The author found that liquidity management had significant impact on banks profitability. Salim and Bilal (2016) investigates the impact of liquidity management on financial performance of Omani banking sector from 2010 to 2014. Their findings show that a significant relationship exists between four liquidity management indicators (loans to total assets, loans to short term liabilities and deposits, bank's loans, customer deposits to total assets) and financial performance (ROA). However, the study found no significant relationship between liquidity position and net interest margin (NIM).

Ikeora and Andabai (2015) investigate the impact of liquidity management on banks' profitability in Nigeria from 1989-2013. The authors confirmed a positive relationship between profitability and liquidity management. Similarly, Bassy's (2016)s study concluded that proper management of liquidity is necessary for survival and successful operations of banks. In another study, Ejoh, *et al.* (2014) evaluates the impact of credit risk and liquidity risk management on the profitability of DMBs in Nigeria. They found that there is a significant relationship between credit management and bank profitability. Ibe (2016) found that liquidity management was an important problem in the Nigeria.



3. Methodology

The study is based on ex-post facto research design. The paper is a census study of ten topmost DMBs quoted on the Nigerian Stock Exchange (NSE). These banks were rated as the ten topmost Nigerian banks based on the credit score rating by Fitch rating and Bankers’ magazine as at January 2017. Statistical sampling was not used because of the small size of the population. The study period covers 2011 to 2017.

This study used secondary data obtained from CBN’s statistical bulletin, and the annual reports and accounts of the banks. The study employs balance panel data, which was examined through panel regression equation. With the aid of STATA 10, the model estimation was carried using panel least squares regression technique.

This study was modeled according to the works of Agu (2016), Ahmed and Ahmed (2012), Anjum (2012), Ibe (2016), and Muhammad, Muhammad and Muhammed (2017). Specifically, this study adapts the model of Muhammad, et al. (2017), which studied liquidity management and its impact on the Pakistan banks’ profitability from the year 2005-2015. In this study, financial performance of the banks (dependent variable) was measured by ROA and liquidity risk management (independent variable) was represented by funding risk, financing cost, interest coverage ratio, capital adequacy ratio, non-performing loan and loan loss provision.

Financial performance= function of(Liquidity risk management) 1

ROA=f (FR, FC, ICR, CAR, NPL, LLP) 2

The panel regression model that was estimated is as expressed in equation 3 below:

$$ROA_{it} = \beta_0 - \beta_1 FR_{it} - \beta_2 FC_{it} - \beta_3 ICR_{it} + \beta_4 CAR_{it} - \beta_5 NPL_{it} - \beta_6 LLP_{it} + U_{it} \dots\dots\dots 3$$

Where: ROA_{it} = Return on Assets of the selected banks in year t; FR_{it} = Funding risk in year t, FC_{it} = Financing cost in year t; ICR_{it} = Interest coverage ratio in year t; CAR_{it} = Capital adequacy ratio in year t; NPL_{it} = Non performing loan in year t; LLP_{it} = loan loss provision in year t; $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and β_6 parameters to be estimated; U_{it} = the error term; i = cross-sectional variable, the 10 banks; t = time series in years from 2011 to 2017.

4. Results

Descriptive Statistics

Table 1 contains the descriptive statistics of the data for the study. Table 1 shows that return on asset (ROA) has minimum and maximum values of 0.1033 and 0.8241 respectively and the mean value of 0.1159 as well as the standard deviation (S.D.) of 0.1928. The S.D. of 0.1928 signifies that the data deviate from the mean value from both sides by 0.1928. This implies that the liquidity management has an average performance.

Furthermore, Table 1 reveals that the average value of funding risk (FR) of the selected banks is 0.6091 with a S.D of 0.7000, and minimum and maximum values of 0.1213 and 0.9677 respectively. Since, the S.D. of FR is more than the average of its value; this implies that the sampled banks deviate significantly from the average value of the FR. Financing cost (FC) of the banks reported an average of 0.1024 with standard deviation of 0.2060. The minimum and maximum values are 0.0304 and 0.3286 respectively. This implies that the liquidity



management has an average performance in term of financing cost of 0.1024. The S.D. value indicates that the FC value deviates from the mean from both sides by 0.2060. In other words, that there is a significant dispersion of the FC from its average value.

Table 1: Descriptive Statistics

Variables	Observation	Mean	Std. Dev.	Minimum	Maximum
ROA	70	0.1928	0.1159	0.1033	0.8241
FR	70	0.6091	0.7000	0.1213	0.9677
FC	70	0.1024	0.2060	0.0304	0.3286
ICR	70	0.0183	0.02493	-0.0164	0.1554
CAR	70	0.1839	0.2116	0.0000	1.4061
NPL	70	0.0319	0.0261	-0.0242	0.0879
LLP	70	0.0106	0.0178	-0.0205	0.1034

Source: Authors' computation using STATA 10, (2019)

Furthermore, the table shows that the average value of the interest coverage ratio (ICR) of the banks is 0.0183 with S.D. of 0.0249. The minimum and maximum values are -0.0164 and 0.1554 respectively. The S.D. indicates that the value of the banks' ICR deviates from the mean value from both sides by 0.0249. This implies that there is significant dispersion of the data from the mean because the standard deviation is higher than the mean. Capital adequacy ratio (CAR) has a mean value of 0.1839 with standard deviation of 0.2116. The minimum and maximum values are 0.0000 and 1.4061 respectively. The S.D. indicates that the value of CAR of the banks deviates from the mean value from both sides by 0.2116. This further implies that there is wide dispersion in the data from the mean because the standard deviation is larger than the mean value.

The table also indicates that the selected banks' non-performing loans (NPL) have an average value of 0.0319 with S.D of 0.0261. The minimum and maximum values are -0.024 and 0.0879 respectively. The S.D. implies that the value of short-term growth of the selected firms' deviates from the mean value from both sides by 0.0261. Finally, the selected banks' Loan Loss Provision (LLP) has the minimum value of -0.020 and maximum value of 0.1034 with a mean value of 0.0106. This implies that the liquidity management has an average performance in term loan loss provision.

Pairwise Correlation Analysis

Presented in Table 2 is the result of the pairwise correlation analyses among the variables. Table 2 indicates that FR of the banks is negatively related to ROA with a coefficient -0.7718. FC has a strong negative relationship with ROA with a coefficient -0.2189 and significant at 5% level. ICR is negatively correlated with ROA with a coefficient of -0.1597. Also, from the table, (CAR) has a negative but weak correlation with ROA with a coefficient of -0.0192.

Table 2 also reveals that the banks' NPL has a negative but weak correlation (-0.2798) with ROA. Short term growth has a positive relationship with ROA with a coefficient of 0.1371. On the other hand, LLP of the banks has a positive correlation (0.3465) with ROA. Generally, the analysis results indicate that all the independent variables were not significantly correlated with each other and the series don not suffer multi-collinearity problems.



Table 2: Pairwise Correlation

Variables	ROA	FR	FC	ICR	CAR	NPL	LLP
ROA	1.0000						
FR	-0.7718	1.0000					
FC	-0.2189	0.1972	1.0000				
ICR	-0.1597	-0.0360	0.4198	1.0000			
CAR	-0.0192	0.0188	0.2671	0.4793	1.0000		
NPL	-0.2798	0.2151	0.0621	-0.2885	-0.1682	1.0000	
LLP	0.0432	-0.1376	-0.0455	-0.1214	-0.0304	-0.0217	1.0000

Source: Authors' computation using STATA 10, (2019)

Panel Regression Analysis

The results of the panel data regression (random effect) are presented in table 3.

Table 3: Panel Data Regression (Random Effect) Results

ROA	COEF	STD ERR	Z	P> ZI	95% ConfInterval
FR	-0.4589	0.0525	-8.73	0.000	-0.5620 -0.3559
FC	0.1984	0.1892	1.05	0.294	-0.1724 0.5694
ICR	-3.0416	0.7309	-4.16	0.000	-4.4742 -1.6091
CAR	0.2377	0.0766	3.10	0.002	-0.0876 0.3879
NPL	-1.0382	0.4135	-2.51	0.012	-1.8487 -0.2277
LLP	-0.8585	0.5702	-1.51	0.132	-1.9762 0.2591
C	0.5064	0.0363	13.92	0.000	0.4351 0.5777
Sigma U	0	Sigma E	0.0624	Rho	0
R-square	within	=0.7046	between	=0.8826	Overall =0.7443
Corr (u _i , X)	=0	Wald	=101.87	(assumed)	=0.0000
		chi2(6)		Prob>	
				Chi2	
Hausman Test	Chi2(6)	=0.15	Prob.>Chi2	=0.9999	
Breusch-Pagan		439.40			
LM		(P<0.05)			

Source: Authors' computation using STATA 10, (2019)

In order to determine the impact of liquidity risk management on the banks performance in Nigeria, the pooled regression was estimated, based on the assumption that the intercept is constant across banks and years. Thereafter, based on assumption of different constant for each bank, both fixed and random effect regressions were estimated. We compared the pooled regression with the random effect based on the Breusch-Pagan LM test statistics while the comparison between the fixed and random effect was carried out using the Hausman test statistic value. In table 3, the Breusch-Pagan LM value of 439.40 (P<0.05) rejects the null hypothesis that random effect is not appropriate. This implies that there is an evidence of differences across banks. Thus, we consider Hausman testing between random and fixed effect. The Hausman test value of 0.9999 (P>0.05) does not reject the null hypothesis that difference in



coefficients are not systematic. Therefore, we accept and interpret the random effect model. This generally indicates a strong goodness of fit of the model.

Table 3 indicates that the model has a R-squared value of 0.7046, which implies that explanatory variables (FR, FC, ICR, CAR, NPL, LLP) jointly explain 70% of the total variation in the independent variable (ROA) and the unobserved features in the model constitute about 30%. The F-statistics was significant at 1%, 5% and 10%, evidenced by its probability of 0.0000. This implies that all independent variables were jointly significant in explaining performance of the banks.

Furthermore, as shown in table 3, funding risk (FR) records a negative relationship with ROA with a coefficient of 0.4589 and is significant at 1%. This implies that a unit change in the bank funding risk will result in about 0.459 units decline in ROA. Interest coverage ratio (ICR) has a negative coefficient of -3.041676 in ROA and is significant at 1%. This implies that a unit change in the ICR will precipitate a 0.11unit decline in banks' ROA. Non-performing loan(NPL) has a negative coefficient of 1.038237 in ROA, implying that a unit change in the banks' NPL will result in about -1.0382 units decrease in ROA. Loan loss provision (LLP) shows an insignificant negative effect on the financial performance of selected deposit money banks as it poses a negative coefficient of 0.8583. This implies that a unit increase in loan loss provision will result to 0.86units decline in banks ROA.

Financing cost (FC) reveals an insignificant positive coefficient of 0.1984. This implies that a unit increase in FC will bring about 0.198 units increase ROA of the banks. Finally, with a coefficient of 0.2377, capital adequacy ratio (CAR) reported a significant positive relationship with ROA. This implies that an increase in CAR will result to 0.237 units rise in ROA.

Discussion of Findings

The descriptive statistics as presented in table 1 indicates an average ROA of about 0.1928 for the selected banks. This represents an average percentage distribution of about 19% for the period. On the other hand; funding risk, financing cost, interest coverage ratio, capital adequacy ratio, non-performing loan and loan loss provision maintain an average distribution value of 0.1928, 0.6091, 0.1024, 0.0183, 0.1839, 0.0319 and 0.0106 respectively for the banks.

Furthermore, the pairwise correlation analysis in table 2 on the relationship between liquidity risk management and banks performance reveals that there is a negative relationship between all the independent variables and the performance of the selected banks, except loan loss provision that reported a positive correlation with ROA. This confirmed the absence of multi-collinearity problem among the independent variables as its highest correlation coefficient of 0.4793 is still less than 0.80. This conclusion is in consonance with the findings of Salim and Bilal (2016), Epure and Lantuenta (2012).

Similarly, findings from the F-Statistics which is a prove of the validity of the estimated model as reflected in table 3, presents a value whose p-value is less than 0.05. This indicates that the explanatory variables are jointly and significantly related with the dependent variable. This finding is in tandem with Dimitrios (2016)'s but contrary to the findings of Epure and Lantuenta (2012).



Similarly, further empirical findings presented in table 3 indicate that there is a significant negative association between the performance of banks and the funding risk of the sampled banks. This is evident in the t-statistics value of -8.73 and a p-value of 0.000. This implies that the higher the financing risk, the less likely banks' financial performance will be. This led to the rejection of H_{01} (which states that there is no negative and significant relationship between funding risk and banks performance). In essence, the more banks finances risk assets the lesser banks performance in term of profitability. This is consistent with our a priori expectations (i.e. $\beta_1 < 0$) and also in congruence with Masood and Ashraf (2012)'s finding.

Furthermore, the results from regression analysis also indicate clearly that a significant relationship does not exist between financing cost and banks profitability. This is evident in the t-statistics value of 1.05 and a p-value of 0.294, which is above 0.05 significant level. We therefore, fail to reject H_{02} (which states that financing cost does not negatively and significantly influence bank performance). This is inconsistent with our a priori expectation (i.e. $\beta_2 < 0$) and not in tandem with Suminto and Yasushi's (2011) study which found a negative significant relationship between financing cost and banks profitability.

The study also found a significant negative relationship between interest coverage ratio and banks profitability (ROA). This is evident in the t-statistics value of -4.16 and a p-value of 0.000). Thus, we do not reject H_{03} (which states that interest cover ratio does not have a negative and significant impact on bank performance). This outcome implies that the higher the interest coverage ratio, the less likely banks' financial performance will be and this is in congruence with a priori expectation(i.e. $\beta_3 < 0$) and the findings of Salim and Bilal (2016), Epure and Lantuenta (2012).

Furthermore, regression result shows that there is a significant positive relationship between capital adequacy ratio and banks' ROA. This is evident with the t-statistics value of 3.10 and a p-value = 0.002. We therefore reject H_{04} (which states that there is no positive and significant relationship between capital adequacy and bank performance). This implies that banks with higher capital adequacy were able to take on higher risks and thus reaped higher returns (profitability). And also affirm our theoretical expectation($\beta_4 > 0$).

However, non-performing loan reported a negative (-1.0382) but insignificant (with p-value 0.4135 > 0.005) effect on the financial performance of the banks and this implies that higher non-performing loan is a bad signal for banks financial performance. This conclusion led to the rejection of H_{05} (which states that non-performing loan does not have a negative and significant effect on bank performance). This finding is therefore in tandem with the findings of (Kargi, 2011) also concur with our a priori expectation ($\beta_5 < 0$). Finally, the regression results also indicate a negative and insignificant relationship between loan loss provision and financial performance of the banks and this is evident in the t-statistics value of -1.51 and a p-value of 0.132. The study rejected H_{06} (which states that there is no negative and significant relationship between loan loss provision and financial performance). This implies that the higher the loan loss provision, the lower the ROA of the banks. This outcome is in consonance with the a priori (that is, $\beta_6 < 0$).



5. Conclusion and Recommendations

This study is on the impact of liquidity risk management and financial performance of selected money deposit banks in Nigeria for 2011 to 2017. The random effect panel regression analysis shows that funding risk has a negative and significant relationship with return on asset. Financing cost, however, has an insignificant positive relationship with return on assets. Interest coverage ratio also has a negative relationship with return on assets. Capital adequacy ratio revealed a positive relationship with return on assets. Loan loss provision shows a negative and insignificant relationship with return on asset. Finally, non-performing loan has a negative effect on the banks' return on assets.

The study, therefore, concludes that liquidity risk measures have negative and significant effect on the performance of deposit money banks in Nigeria. Similarly, funding risk, interest coverage ratio and assets quality ratio measures (capital adequacy ratio, non-performing loan) constitute key factors affecting banks' performance. This was due to the high statistical significance recorded by them in this study. Liquidity risk was found to be a key factor influencing bank profitability due to the level of statistical significance. This implies that banks with high exposure to liquidity risk record lower returns and vice versa, banks with lower level of liquidity risk reports a degree of profitability.

Based on the findings of the study, it is recommended that deposit money banks (DMBs) in Nigeria should formulate and implement strategies that help will them attain an optimum level of liquidity in their operations in order to remain competitive in the highly volatile and competitive environment in which they operate. They should also manage the funding risk carefully as it was noted to be an important determinant of financial performance. Furthermore, the banks regulators should be cautious about increasing the minimum liquidity ratio as this would adversely affect their financial performance. Similarly, the banks should increase the amount of core capital since capital adequacy was noted to have a positive and significant effect on financial performance. DMBs should also maintain adequate quality assets in their portfolio and should adhere strictly with the CBN prudential guidelines on provisioning and management of non-performing loans. This will avert the negative consequence of non-performing loan on banks' performance as was noted in this study.

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