



## **LIQUIDITY MANAGEMENT AND PROFITABILITY OF LISTED DEPOSIT MONEY BANKS IN NIGERIA**

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### **ABSTRACT**

Given the present global economic challenges, the role of Deposit Money Banks in improving national economic development cannot be emphasized. However, previous studies revealed that, several banks failed as the result of poor financial performance. Therefore, this study evaluated the influence of liquidity management on the profitability of quoted deposit money banks in Nigeria. The target population of this study included all the sixteen (16) quoted deposit money banks in Nigeria as at 31<sup>st</sup> December, 2020. Out of the sixteen banks, fourteen were purposively selected as sample based on their complete annual report and accounts of the banks over the period of the study. Using ex-post factor research design to define the structure and the strategy of the study, the required data were obtained from the financial statement of the banks for the period of ten years (2011-2020). The data obtained were analyzed using both descriptive and inferential statistics. The result of the analyses revealed a positive and significant relationship between liquidity ratio and return on assets, while loan to deposit ratio was found to have a positive but insignificant effect on return on assets. However, cash reserve ratio revealed a negative and significant relationship with returns on assets of the banks. Therefore, the conclusion that, liquidity management has significant effect on the profitability of the Nigerian quoted deposit money banks. In order for the banks to maximize their profitability, the study recommended that: the management of the banks should pay more attention to the level of the liquidity through prudent spending, aggressive deposit and debt recovery since were found to have a positive effect on return on assets of the banks. While shifting focus from cash reserve since it was found to negative effect on returns on assets of the banks.



**Keywords:** Deposit money banks, financial performance, liquidity management, Nigeria

## 1. INTRODUCTION

In the space of the present global economic challenges, countries across the globe are devising means of improving and sustaining economic growth. Thus, various policies were formulated to promote the establishment and development of private sector. Banking industry is one of the most important sector in any national economic planning. Therefore, the importance of the financial performance of Deposit Money Banks (DMBs) cannot be over emphasized.

Since deposit money banks deals in cash and cash equivalent, liquid assets form the highest percentage of the total assets of banks. Thus, the effective and efficient management of liquid assets by banks is very relevant to its performance. According to Fatihudin *et al.* (2018), liquidity management is a critical component of an organizational management that requires careful planning and management of cash and cash equivalent because of its influence on business operation. This involves the activities to maintain balance so as not to have neither too much nor too little of liquid assets. Poor management of liquid assets may result to illiquidity and eventually bankruptcy (Edem, 2017).

Therefore, the need for owners' wealth maximization requires effective capital structure. Firms' capital structure, however, is made up of debt and equity, which refers to borrowed funds and owned assets respectively (Umobong, 2015). A company's debt consists of short-term and long-term obligations that can only be settled with the availability of liquid assets. In addition, the concern of both investors and creditors is the ability of the business to generate profit and to satisfy both its long-term and short-term obligations when due. The ideal amount of liquidity that a firm must maintain in order to attain a specific level of profitability varies across businesses for lack of sets rules that determine the optimal level of liquidity that a business must maintain (Alhassan & Islam, 2021).

The recent economic condition of Nigeria can be qualified as a technical recession which leaves many indigenous businesses, particularly banks, vulnerable to existential threats due to cash concerns. This is evidence given the recent rate of bank



non-performing loans, and the hesitance of banks to extend credit to businesses. Thus, it could be due to the recent increases in foreign exchange rate, rate of inflation, low export, which had a significant impact on banks (Onyekwelu *et al.*, 2017). As a result, credit/loan extensions are unlikely during periods of rising inflation, emphasizing the significance of good and efficient liquidity management to meet a firm's obligations while also being profitable. Thus, the question is: what is the ideal level of liquidity that should be accessible in order to sustain the appropriate level of profitability? What effect does liquidity have on a company's performance? Thus, the objective of this study is to assess the effect of liquidity management on the profitability of Deposit Money Banks in Nigeria.

To achieve this objective, the study formulated the following null hypotheses and were tested at 5% significant level using multiple regression analysis.

**H<sub>01</sub>:** Liquidity ratio has no significant effect on return on assets of the quoted deposit money banks in Nigeria.

**H<sub>02</sub>:** Cash reserve ratio has no significant effect on return on assets of the quoted deposit money banks in Nigeria.

**H<sub>03</sub>:** Loan to deposit ratio has no significant effect on return on assets of the quoted deposit money banks in Nigeria.

This study adds to the literature by observing the effect of liquidity management on profitability of deposit money banks in Nigeria. The proxies of liquidity management considered were liquidity ratio, cash reserve ratio, and loan to deposit ratio, while returns on assets was used as a measure of profitability. The study empirically provided the evidence on the view that corporate performance is define by the level of efficient and effective utilization of organizational liquid assets.

## **2. LITERATURE REVIEW**

### **Financial performance**

Onyekwelu *et al.* (2018) defines bank performance as the capacity of a bank to generate sustainable profitability. While, Fatihudin *et al.* (2018) describes financial performance as the financial achievement of a company over a time as a result of the utilizations of corporate resources. It is the bottom-line for every organization thus, use as a measure of managerial ability and corporate analysis. In the words of



Investopedia (2015), financial performance is the act of performing financial activity. Hence, this study viewed financial performance as the degree to which financial objectives of an organization are attained.

Therefore, in order for a bank to be successful, managers must weigh complex trade-offs between growths, return and risk, favoring the adoption of risk-adjusted metrics (Basse *et al.*, 2016). According to Raza *et al.* (2011), bank's performance measure can be classified into traditional, economic and market-based. However, Mochklas and Teguh (2018) were of the view that, financial performance is mostly measured using profitability, market share growth, return on investment, return on equity and liquidity. Hence, based on the study of Purba and Bimantara (2019) that return on assets (ROA) is the most acceptable measure of financial performance when compared with assets management, in addition to the idea that, ROA measure the ability of the management to effectively and efficiently utilized firms' assets to generate value. Thus, adopted for this study to measured profitability. This ratio identifies the level of profitability and it measures the return on total assets after interest and taxes which shows the performance of management in using company assets to generate profits.

### **Liquidity management**

Oppler *et al.* (2016) described the concept of liquidity as the rate of inflows and outflows of cash and cash equivalent through the firm as product acquisition, sales payment and collection processes taking place over time, with which asset can be converted into cash without a significant loss of principal liquid asset. While in the words of Alhassan and Islam (2021), liquidity refers to an organization's ability to satisfy immediate and long-term requirements using cash or assets that can be easily transformed into cash. Viewing the term from the side of investment, Dzapasi (2020) described liquidity as the capacity to turn an investment portfolio into cash rapidly and with little or no loss of value. Hence, Edem (2017) posited that, the understanding and efficient utilization of business liquidity explain the managerial competence of the business which reflects in corporate profitability.

Thus, liquidity management as a concept is described by Nikolaou (2019) as an efficient and effective planning and organizing of bank's liquid assets that will enhance its profitability at a minimum possible cost. The concept of liquidity management has assumed a strategic position in bank management hierarchy due to



its critical nature highlighted by market turmoil. It is the core function of revenue generation, lending and payment. Thus, the view of Merrill (2018) that, the success of any bank depends on the level of liquidity that is sufficient for its operation. Inefficient management of liquidity results in serious impairment of banking functions and contagious effect on the economy. Therefore, an effective liquidity management involves obtaining full utilization of all reserves and deposit mobilization (Ezekiel, 2017).

Liquidity management is aim at ensuring banks solvency at all times for settlement of all cash outflow commitments on an ongoing daily basis; ensuing that funding is minimum by avoiding raising fund at market premiums or through the forced sale of assets; ensuring compliance with the statutory liquidity and reserve requirements through development of adequate management information system and internal control; optimizing the refinancing structure and coordinating issuance of own instruments in the money and capital markets; and optimizing intra-group cash flows such as liquidity pooling to reduce dependency on external refinancing (Jeanne & Ranciere, 2019; Berger & Bouwman, 2018). Thus, previous studies such as Ayo (2014) and Sinkey and Joseph (2018) suggested that, effective liquidity management can be mathematically measured through loan to deposit ratio, cash reserve ratio, and liquidity ratio.

### **Empirical Review**

Corporate entities have come to know the potential financial benefits of improved assets management, particularly liquid assets. Hence, some of the empirical studies conducted are reviewed as follows. Agbada and Osuji (2013) assessed the efficacy of liquidity management and the performance of twenty Nigerian banks. Adopting survey research design, data were collected through structured questionnaire. The study reported a positive and significant relationship between efficient liquidity management and banking performance. Similar, Njeri (2013) conducted research on the effect of liquidity on financial performance of deposit-taking micro finance institutions in Kenya over a period of 5 years (2009-2013). Adopting descriptive research design, the data collected was analyzed using multiple regression model. The researcher reported that, the financial performance of the selected MFIs were positively related with the level of institutional liquidity.



However, Muriithi and Waweru (2017) examined the effect of liquidity risk on financial performance of 43 registered commercial banks in Kenya covering a period 2005-2014. The study used Panel data techniques of random effects estimation and generalized method of moments (GMM) discovered that net stable funding ratio was negatively associated with bank profitability both in long run and short run, while liquidity coverage ratio does not significantly influence the financial performance of commercial banks in Kenya both in long run and short run. But Idowu *et al.* (2017) focused on the effect of liquidity management on financial performance of listed deposit money banks in Nigeria. The research made use of data extracted from the annual reports of 4 sampled banks from 2007 and 2016. The result revealed that liquidity management has significant positive relationship with profitability when proxies by return on equity while no significant relation was found with return on asset.

Onyekwelu *et al.* (2018) examined the effect of liquidity on financial performance of five deposit money banks in Nigeria over a period of ten years (2007-2016). Using multiple regression analyses, the results show that liquidity has positive and significant effect on banks' profitability ratios and that liquidity also has positive and significant effect on Return on Capital Employed. In the same vein, Akhter (2018) analyzed the influence of liquidity and profitability on operational efficiency of 30 Bangladeshi banks for 2011-2016. The study revealed that both liquidity and profitability significantly influenced operational efficiency of the banks. Bordeleau and Graham (2019) analyzed the effect of liquid asset on profitability of banks in the USA and Canada. Result provided that profitability is improved for banks that hold some liquid assets up to certain point before bank's profitability starts to diminish.

Sathyamoorthi *et al.* (2020) studied liquidity management and financial performance of commercial banks in Botswana over a period of nine years (2011-2019). Using both correlation and regression analyses, 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. However, 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.

However, Alhassan and Islam (2021) conducted a study on liquidity management and performance of ten listed oil and gas companies in Nigeria over a period of ten (10) years (2011-2020). Using multiple regression analyses, the findings revealed that debt has a significant negative impact on companies' profitability. Similarly, equity capital, as well as retained earnings, are more beneficial to firms than the debt financing of the oil and gas sector. Dahiyat *et al.* (2021) assessed liquidity and solvency management and its impact on financial performance of listed manufacturing companies in Jordan over a period of ten years (2010-2019). Using both correlation and multi-regression analysis, the results show a statistically significant impact of both liquidity and solvency management on financial performance.

Given the above reviewed of the previous empirical studies on liquidity management and financial performance much have left a lot to be desired. In addition to the conflicting findings and the paucity of the studies, most of the studies were conducted in other countries whose regulations and corporate environment differs significantly with that of Nigeria. Thus, a need to conduct a local study to address the economic and legal peculiarities in Nigeria. Furthermore, most of the studies proxies' liquidity management using current ratio, cash ratio and quick ratio which failed to adequately captured the concept of liquidity management. Therefore, this study filled these identified gaps by empirically examined the impact of liquidity management on the profitability of quoted deposit money banks in Nigeria.

## **Theoretical Review**

Various finance theories were applied by the previous researchers to explain the concepts of assets management and financial performance. Few of the theories mentioned by Dietrich and Wanzenried (2015) includes the Commercial loan theory, Shift-ability theory, Trade-off theory, Agency theory, Liquidity preference theory, Assets management theory and Anticipated income theory.

However, this research adopted the asset management theory. The theory believes that an entity maintain liquid assets to seek for high returns, reduce risk and make



adequate provisions. It is in support of the need for holding short term assets to cushion the effect of uncertainties in the business operations. Thus, banks must lend to borrowers who are willing to pay high interest and lower tendencies of defaults at a minimum cost, given that banks are not only funded by assets but they are largely financed by collateralized borrowing which cannot be relied on during financial distress (Brunnermeier & Pedersen 2008). Thus, Nwankwo (1990) was of the opinion that, the amounts of liquid assets to be held depend on the bank's apparent need for liquidity and deposits flow, financial market conditions and monetary policy directions. This was furthermore explained by Dietrich and Wanzenried (2015) that, in achieving high returns while holding a large portion of liquid assets at a low risk can be difficult as liquid assets are costly and have the tendency of reducing profits. Cash asset is presumed to have no unique role in the process of acquisition and disposal of financial assets but the easiness of exchange for cash balance.

The concept of the easiness of cash equivalent conversion was defined by Brunnermeier and Pedersen (2008) as ratio of stock of cash balances to meeting financial obligations on maturity. The closer assets to maturity, the greater in general are the possibilities of realizing them before maturity without risk of significant capital loss. The more liquid a bank is in this sense the greater is its capability to meet its obligations as they fall due. Higher ratio implies better performance while lower ratio is an indicator of threat to the bank and would tend to inhibit bank performance. Therefore, financial assets are categorized by Oppler *et al.* (2016) as running assets, reserve assets along with other liquid assets which are mostly short-term claim such as treasury bills and investment assets including long-term claims such as bonds.

In the same vein, Keney's (1937) explained the three motives of holding financial assets to include the transactional, precautionary and speculative motives. The economics and finance literature in support of Keney's assertion analyzed four possible reasons for firms to hold liquid assets: the transaction motive (Miller & Orr, 1966); the precautionary motive (Oppler *et al.*, 2016); the agency motive (Michael, 1986); and the tax motive (Foley *et al.*, 2007). Linking this theory with this study, seeking for high returns, reducing risk and making adequate provisions by holding liquid assets would increase the financial performance of deposit money banks. This theory is in support of the need for deposit money banks to hold short term assets to





cushion the effect of uncertainties in the banking operations as well as to pay for its short-term obligations to its depositors and creditors.

### 3. METHODOLOGY

The study adopted ex post facto research design to define the structure and strategy of the study. While the target population of the study was sixteen (16) quoted deposit money banks in Nigerian as at 31<sup>st</sup> December, 2020. Fourteen (14) out of the sixteen were selected as sample using purposive sampling techniques. This was based on the availability and the complete required annual reports and accounts of the banks over the period of the study. The time frame of the study was ten (10) years 2011 to 2020. This period was considered appropriate as was the preceding years that the federal government of Nigeria emphasized on economic diversification, hence the role of Deposit Money Banks in national economic development cannot be over emphasized. The data collected were analyzed using multiple regression analyses.

The models developed to evaluate the effect of liquidity ratio (LQR), cash reserve ratio (CRR), and loan to deposit ratio (LDR) on return on assets (ROA), while controlling capital adequacy ratio (CAR), and firms' size (FZS) of the quoted deposit money banks in Nigeria are presented as follows:

Y=F(LQR, CRR, LDR, CAR, FSZ).....equation

$ROA_{it} = \beta_0 + \beta_1LQR_{it} + \beta_2CRR_{it} + \beta_3LDR_{it} + \beta_4CAR_{it} + \beta_5FSZ_{it} + \mu_{it}$ .....model 1

**Table 1**  
**Variable identification and measurement**

Label	Variables	Descriptions	Sources
ROA	Return on assets	Profit before tax (PBT) divided by the total assets of the company	Zephaniah and Joel (2020)
LQR	Liquidity ratio	Credit facility to total deposit	Cole <i>et al.</i> (2015)
CRR	Cash reserve ratio	Reserves requirement with the Central Bank to Total Deposit of Customers	Reematuladhar (2017)
LDR	Loan to deposit ratio	Total Loan / Total Deposits	Choudhry <i>et al.</i> (2015)




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CAR	Capital adequacy ratio	Total capital to the risk-weighted sum of bank's assets	Athanasoglou <i>et al.</i> (2018)
FSZ	Firm's size	Natural logarithms of total assets	Musah <i>et al.</i> (2018)

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#### 4. RESULTS AND DISCUSSIONS

The results of the analyses of the data are presented in tables. It consists of the result of diagnostic test, descriptive statistics and regression analyses. Thus, to analyze the properties and pattern of the data collected, the analysis of descriptive statistics was carried out and the results is presented in Table 2 thus:

**Table 2**  
**Descriptive statistics**

Variables	Obs	Mean	Std. Dev.	Min.	Max.	Skewness	Kurtosis
ROA	140	0.1684	0.2391	-0.1156	0.7837	1.0049	2.7242
LQR	140	1.2146	2.6272	-22.4944	14.9113	-4.3324	53.7175
CRR	140	0.6102	4.7422	-40.4012	33.1349	-2.2655	56.8946
LDR	140	0.6153	0.4473	0.0011	2.2421	1.0359	3.9342
CAR	140	0.2810	0.2820	0.0000	0.9949	1.0573	2.8343
FSZ	140	24.2742	13.2482	0.0000	60.2634	0.9768	2.6103

Source: STATA Output 2020

Table 2 contain the result of the descriptive statistics that described the properties and pattern of the data collected in respect to both dependent and independent variables. The return on assets of the firms has mean value of 0.1684 which range between minimum and maximum value of -0.1156 and 0.7837 respectively with the standard deviation of 0.2391. This means that for every 1 Naira worth of assets the listed deposit money banks was able to generated 0.17 worth of revenue. Furthermore, the result shows the average values for liquidity ratio, cash reserve ratio, and loan to deposit of 1.2146, 0.6102 and 0.6153 respectively. In respect to control variable, the average value of capital adequacy ratio 0.2810 and firm size of 24.2742. In respect to their range, the minimum value among the independent variables ranges from -40.4012 and 0.000 and Maximum value ranges between



0.9949 and 60.2634. The highest value of standard deviation of 13.2482 is in respect to firm size, with others ranges from 0.2820 to 4.7422. This implies that, the selected banks are capitally strong banks. Hence, justifies the inclusion number of years in the model on other factor that influence firm performance.

In respect to skewness and kurtosis statistics, the result of the analyses in Table 2 reveals that the data obtained for the dependent and independent variables are not abnormal. Hence, the study is considered valid based on validity of data. The skewness values were all close between 0 and 1, and kurtosis more than 3. Hence, the data is considered to be moderately skewed and platy Kurtic in accordance to the rule of thumb (Gujarati, 2008). The test for normality of data is consistent with the skewness and kurtosis that the data were normally distributed. Therefore, the result from the two normality tests substantiates the validity of the regression result.

Furthermore, correlation analysis was carried using Pearson moment correlation statistics. And the result is presented in Table 3.

**Table 3**  
**Correlation analysis**

	ROA	LQR	CRR	LDR	CAR	FSZ
ROA	1					
LQR	0.0189	1				
CRR	0.0092	0.0212*	1			
LDR	0.3299*	-0.1453	0.0466	1		
CAR	-0.2551*	0.1455	-0.0142	-0.3773*	1	
FSZ	-0.4243*	0.1215	-0.0362	-0.5655	0.5253*	1

Source: STATA Output 2020 @ 5% significant level (2-tailed)

The correlation result in Table 3 shows that, ROA has a negative relationship (-0.2551 and -0.4243) with capital adequacy ratio and firm size, while return on assets was found to have a positive relationship (0.0189, 0.0092 and 0.3299) with liquidity ratio, loan to deposit ratio at 5% level of significant indicate a strong relationship. Although there were mixed result in the direction of the relationship of return on assets and the measures of liquidity management, most of the correlation values ranges from very low to moderate correlation. The minimum absolute value of correlation is 0.0092 and the maximum absolute value of 0.5655. This implies that,



the variables of the study were moderately correlated, thus, absence of harmful multicollinearity among the variables.

Moreover, variance inflation factor (VIF) was also employed to test the possible existence of multicollinearity. According to Hair et al. (1995) the value of VIF less than 5 and tolerance coefficient greater than 0.10 is free from multicollinearity incident. Thus, the result of VIF is presented in Table 4.

**Table 4**  
**Result of Variance Inflation Factor (VIF)**

Variables	Variance inflation factor (VIF)	Tolerance (1/VIF)
LQR	3.54	0.2825
CRR	3.44	0.2908
LDR	1.55	0.6432

The result of the VIF in Table 4 shows the maximum VIF value of 3.54 with a minimum value of 1.55, while the maximum tolerance coefficient of 0.6432 with a minimum value of 0.2825. Hence, the conclusion that, the data collected has no multicollinearity problem.

Since there were no issues of multicollinearity and autocorrelation, multi-regression analysis was carried out to examine the effect of liquidity management on financial performance of the selected deposit money banks in Nigeria. The result of the analyses is in Table 5.

**Table 5**  
**Regression Results**

Variables	Coefficient	t-statistics	p-value
Constant	0.2504	3.40	0.001
LQR	0.0292	3.48	0.001
CRR	-0.0139	-2.85	0.005
LDR	0.0917	1.30	0.194
CAR	-0.0513	-0.80	0.426
FSZ	-0.0062	-4.62	0.000
R2			0.6217
F-Sta.			11.32
P-Sig.			0.0000

Source: STATA Output 2020 @ 5% significant level



From the regression result in Table 5, the  $R^2$  value of 0.6217 signifies that 62% of the total variation in the performance of the quoted Deposit Money Banks (DMBs) in Nigeria over the period of the study was caused by their liquidity ratio, cash reserve ratio, loan to deposit ratio, capital adequacy ratio and firm size. Furthermore, given the F-statistic value of 11.32 and the p-value of 0.001 the model is fit and has a good predictive power.

In respect to the individual measure of liquidity management, the liquidity ratio showed a t-value of 3.48 with p-value of 0.001 and a beta value of 0.0292. This signifies that a liquidity ratio is positively, strongly and significantly impacting on financial performance of the DBMs in Nigeria. It therefore implies that a percentage increase in liquidity ratio by one Naira (N1), increases the return on assets of the DBM by (N0.03). This provides an evidence of rejecting null hypothesis one of the study which states that liquidity ratio has no significant impact on return on assets of listed DMBs in Nigeria. Furthermore, the result of the regression analyses presented in Table 5 showed a t-value of -2.85 with p-value of 0.005 and a beta value of -0.0139 for the cash reserve ratio. This signifies that a cash reserve ratio is negatively, but strongly and significantly impacting on return on assets of the listed DBMs in Nigeria over the period of the study. It therefore implies that for every one percent increase in the banks cash reserve ratio, the DMBs return on assets will decrease by 1.39%. This show that one percent (1%) increase in cash reserve level of the DBMs in Nigeria will impact negatively on their return on asset by 1.39%. Thus, the rejection of the null hypothesis 2 of the study which states that cash reserve ratio has no significant impact on return on assets of listed DMBs in Nigeria.

Moreover, the regression result in Table 5 showed a t -value of 1.30 with p-value of 0.194 and beta value of 0.0917. This signifies that a loan to deposit ratio is positively but insignificantly impacting on return on assets of the listed DBMs in Nigeria. It therefore implies that for every one 1% increase in loan to deposit ratio, the DMBs return on assets will increase by 9.17%. This positive relationship between loan to deposit ratio and return on assets of the listed DMBs, could be that the DMBs is having normal loan on deposit. Thus, the rejection of the null hypothesis three which states that loan to deposit ratio has no significant impact on return on assets of the listed DMBs in Nigeria.



## 5. CONCLUSION AND RECOMMENDATIONS

Given the findings of this study, it reveals that, liquidity ratio and loan to deposit ratio have positive effect on return on assets of the quoted deposit money banks in Nigeria over the period of the study. However, loan to deposit ratio had insignificant effect on return on the assets. Nevertheless, cash reserve ratio shows an inverse relationship with returns on assets. Hence, the conclusion that liquidity management has a significant effect on financial performance of the banks over the period of the study. This implies that adequate and efficient management of liquidity ratio and loan to deposit ratio by the banks will result to improve in banks financial performance. Therefore, this study recommends that, the listed DMBs should pay more attention to their liquidity by increasing its level through prudent spending, aggressive deposit and debt recovery so as to boost their profitability, in addition to shifting attention or focus at using of cash reserve ratio to maximize their financial performance since cash reserve ratio shows a negative impact on their financial performance. Furthermore, the regulatory agencies such as Nigeria Deposit Insurance Corporation and Central Bank of Nigeria should mandate the increase in percentage of loan that DMB's give to customers so as to increase their performance. Since the result of this study indicated that a loan to deposit ratio is positively but insignificantly impacting on return on assets of the listed DMBs.

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