Liquidity Management and Profitability of Deposit Money Banks in Nigeria: An Impact Analysis

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Abstract

This study empirically examined the impact of liquidity management on profitability of deposit money banks in Nigeria. The specific objectives were to determine the impact of cash management on banks' return on asset, evaluate the impact of shareholders' capital on banks' return on asset and ascertain the relationship between loan to deposit ratio and return on assets of banks. Expost facto design was adopted. The data used for this study were collected from Central Bank of Nigeria (CBN) and Nigeria Deposit Insurance Corporations (NDIC) covering the period 1995-2021. Data collected were analyzed using descriptive statistics and multiple regression analysis. Findings revealed that cash management and shareholders' capital have significant relationship with banks' return on assets. It however showed that there is significant relationship between loan to deposit ratio and return on assets. Based on the findings, it recommended that the bank management device efficient cash management policies to enhance their profitability

Keywords: *Liquidity management, Shareholders' capital, Cash management, Loan to deposit ratio, Return on assets*

1.0 Introduction

The capacity of a business to fulfil its immediate obligations is known as liquidity (Daruwala, 2023). It is the business's capacity to turn its assets into cash. The ability of a bank to guarantee the availability of money to satisfy maturing debts or financial commitments at a fair price at all times is referred to as bank liquidity. In a nutshell, bank liquidity is the ability of a bank to hold money where it is needed, especially to meet customer withdrawal requests. Liquidity management is the planning and oversight required to guarantee that the company keeps adequate liquid assets, either as a duty to its clients to satisfy certain requirements incidental to the business's survival or as a means of complying with the central bank's monetary policies. (Olagunju, Adeyanju & Olabode, 2011; Joseph & Adelegan, 2023; Onyeka-Iheme & Akintoye, 2023). The survival of

commercial banks depends greatly on how liquid they are since illiquidity being a sign of imminent distress can easily erode the confidence of the public in the banking sector and results to panicky deposit withdrawal (Ghenimi, Chaibi & Omri, 2020). Ajibola and Olowolaju (2017) opined that the stability of Deposit Money Banks as whole in the economy depends on proper asset liability management structures. Better asset liability management has the tendency to manage risks and shocks that Deposit Money Banks can face. The performance of a bank to a great extent depends on its management and the efficiency with which the liquid assets of the bank are combined. Equally important is the need for adequate income through interest on loan to ensure continued provision of productive resources and survival (Igwenwanne Ozurumba, Nwaimo, Anyanwu & Ubah 2023). It therefore becomes uneconomic and financially unreasonable for banks to allow excess idle cash in the vault or excess liquidity. Hence, a need for effective liquidity management to maximize revenues while holding risks of insolvency to desired level (Effiong & Enya, 2020; Isa, Rahaman, Romli, & Romli, 2023). Banks notably commercial banks accept various forms of deposits and lend such funds to borrowers at determined interest rates. Banks also engage in borrowing from creditors which include interbank loans, Bankers Unit Funds etc (mainly short-term in nature) and debenture, term-loans etc (long-term in nature) and lend such funds to borrowers at an interest rate which serves as an income. The granting of loans and advances is the major form of investment which banks engage in to make profits; thus a measure of banks profitability is return on assets (Solomon, 2016). Based on the foregoing, this research study therefore takes more in-depth look at liquidity management strategies of banks and its impact on profitability of commercial banks in Nigeria.

Objectives of the study

This study is aimed at assessing the impact of liquidity management on profitability of commercial banks in Nigeria. Other specific objectives are:

1. to determine the impact of cash management on banks' return on assets.
2. to evaluate the impact of shareholders' capital on banks' return on assets.
3. to ascertain the relationship between loan to deposit ratio and return on assets of banks.

Research questions

The study questions as follows

i. To what extent does cash management impact on banks' return of assets?
ii. What effect has shareholders' capital on banks' return of assets?
iii. Is there any relationship between loan to deposit ratio and return on assets of banks?

Research hypotheses

The research hypothesizes as follows:

H_{01}: There is no significant relationship between cash management and banks return on assets.
H_{02}: There is no significant relationship between shareholders' capital and bank return on assets.
H_{03}: There is no significant relationship between loan to deposit ratio and return on assets of banks.

2.0 Review of Related Literature

Liquidity management

Liquidity is a financial term that means the amount of capital that is available for investment (Kyari, Adamu & Ali, 2023). It is the bank ability to immediately meet with maturing obligations, cash, cheese, other withdrawals obligations and legitimate new loan demand while abiding by existing reserve requirements. Nwaezeaku (2008) defined liquidity as the degree of convertibility to cash or the ease with which any asset can be converted to cash. The liquidity needs of the banking system are usually defined by the sum of reserve requirements imposed on banks by a monetary authority (CBN, 2012). Liquidity management is an essential ingredient for the success and survival of business concerns. At the macroeconomic level, liquidity is critical for the conduct of monetary policy, financial sector soundness and economic growth. Consequently, efficient and effective management of liquidity is at the heart of the conduct of monetary policy (Ajayi & Lawal 2021).

Liquidity Management and Bank Returns

Liquidity is a term that measures the availability of cash whether direct or indirect. It also involves the rate and time of converting some current assets into cash to meet ordinary and extra- ordinary demands (Olagunju, Adeyanju & Olabode, 2011). Liquidity also means the ability to convert an asset to cash with minimum delay and minimum loss/cost. Adequate liquidity is also needed to avoid forced sale of asset at unfavourable market conditions and at heavy loss. Adequate liquidity serves as vehicle for profitable operations especially to sustain confidence of depositors in meeting short run obligations (Ibe, 2013). Globally, the adequacy of liquidity plays very crucial roles in the successful functioning of all business firms. However, the issue of liquidity though important to other businesses, is most paramount to banking institutions and that explains why banks showcase cash and other liquid securities in their balance sheet statement annually. Unlike other conventional firms, bank assets are arranged in terms of the most liquid asset beginning with cash. With respect to finance and financial institutions, liquidity may be defined as the bank's ability to meet maturing obligations without incurring unacceptable losses. A study of liquidity is of major importance to both the internal and external environments of a financial institution and analysts because of its close relationship with day to day operations of a business (Bhunia, 2010). Liquidity shortage, no matter how small, can cause great damage to a financial institution's operations and customer relationship in particular. Every business relies on its clients to succeed and it is a strategic business plan to build good client relationships. Liquidity crisis, if not properly managed can destroy those relationships instantly. In order to avoid liquidity crisis, management of businesses and financial institutions in particular needs to have a well-defined policy and established procedures for measuring, monitoring, and managing liquidity. Managing liquidity is therefore a core daily process requiring managers to monitor and project cash flows to ensure that adequate liquidity is maintained at all times (Andrew & Osuji, 2013). A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions. A study of liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business (Bhunia & Malayendu, 2012). Dilemma in liquidity management is to achieve desired trade-off between liquidity and profitability (Nahum & Amarjit, 2007). In their contribution, Olagunju, Adeyanju and Olabode (2011) noted that liquidity management helps a commercial bank to maintain stability in operations and earnings by serving as a guide to investment portfolio packaging and management. Effective liquidity

management serves as a veritable tool through which commercial banks maintain the statutory requirements of the central bank as it affects the proportion of deposits to liquid assets and deposits to loans and advances. Liquidity management reduces the incidence of bankruptcy and liquidation/failure which can be the later effect of illiquidity or insolvency, and help them to achieve some margin of safety for their customers' deposits. In other words, adequate liquidity helps to generate and sustain public confidence of the depositors and the financial markets. If the financial market perceives a bank to have liquidity problems, the bank may find it difficult to raise further funds except at a premium. Olalekan and Adeyinka (2013) explaining the importance of liquidity to banks noted that adequate capital enables banks to absorb unexpected losses from the normal earnings which imply that capital serves as an insurance function. They stated further that adequate capital boost banking confidence and provide the customer, the public and the regulatory authority with confidence in the continued financial viability of the bank. That is, confidence to the depositor that his money is safe; to the public that the bank will be, or is, in a position to give genuine consideration to their credit and other banking needs in good as in bad times and to the regulatory authority that the bank is, or will remain, in continuous existence (Effiong & Enya, 2020). The nexus between liquidity management and profitability is particularly pronounced given the significance of business profit as a tool for risk mitigation, business survival and a sign of successful product development (Albertazzi & Gambacorta, 2009, Fonseca & Gonzalez, 2009, Onaolapo & Adebayo, 2012, Igwenwanne, Ozurumba, Nwaimo, Anyanwu & Ubah, 2023). Adegbaju and Olokoyo (2008) argue that some capital resulted in increased profitability, and for most, the effect was neutral. Some had negative effects in operational efficiency, profitability improvement and resources maximization. On his part, Asedionlen (2004) argued that contrary to views, recapitalization may raise liquidity in short term but will not guarantee a conducive macroeconomic environment required to ensure high asset quality and good profitability.

Theoretical framework

This study considers the following theories:

Liability management theory: Liquidity management theory, according to Dodd's (1982) consists of the activities involved in obtaining funds from depositors and other creditors (from the market especially) and, determining the appropriate mix of funds for a particular bank. This point of view contends that liability management must seek to answer the following questions: how do we obtain funds from depositors? How do we obtain funds from other creditors? What is the appropriate mix of the funds for any bank? Management examines the activities involved in supplementing the liquidity needs of the bank through the use of borrowed funds.

Shiftability theory: The shiftability theory by Harold Moulton (1915) posits that a bank's liquidity is maintained if it holds assets that could be shifted or sold to other lenders or investors for cash. This point of view contends that a bank's liquidity could be enhanced if it always has assets to sell and provided the Central Bank and the discount Market stand ready to purchase the asset offered for discount. Thus this theory recognizes and contends that shiftability, marketability or transferability of a bank's assets is a basis for ensuring liquidity. This theory further contends that highly marketable security held by a bank is an excellent source of liquidity.

The loanable funds theory: The classical theory of interest was developed at the time of classical economists like Adam Smith, David Ricardo and Thomas Malthus, who held the view that

economic activities were guided by some kind of invisible hand through the self-interest motive and the price mechanism and Government interference was unnecessary and should be kept at minimum. Loanable funds theorists believe that higher saving through lower consumption and lower deficits would lead to higher credit supply, lower interest rates, more investment and thus higher capital stock and higher future income (Kyari, Adamu & Ali, 2023). They explained the net of interest in terms of the demand for money and supply of loanable funds. The demand comes from firms wishing to invest. As the rate of interest gets low, the number of profitable projects increase. Thus, the demand curve for funds will slope downwards from left to right. The supply of loanable funds comes from savings. If people are to save they will require a reward interest to compensate them for forgoing present consumption. If the interest rate is high, people will be encouraged to save and lend. If the interest rate is low people will be discouraged from saving and lending. Hence, the supply curve of loanable funds slopes upwards. The hypothesis of the loanable funds theory is that Individuals care only about real variables (output gains or losses, purchasing-power gains or losses). The marginal productivity of capital assets (MPk) is given and determined by the technical characteristics of the productive assets.

Empirical review

Otekunrin, Fagboro, Nwanji, Asamu, Ajiboye, and Falaye (2019) looked at the liquidity management and performance of a few Nigerian-listed deposit money banks. The ordinary least square approach was used to examine the data collected. Findings revealed that there is a positive correlation between the firm's performance as measured by return on assets and liquidity management as measured by capital ratios, current ratios, and cash ratios. The outcome demonstrates that managing liquidity is a crucial aspect of corporate operations, which ultimately results in business profitability. Ajayi and Lawal (2021) examined the relationship between liquidity management and bank performance using secondary data from the published annual reports of five (5) sampled Deposit Money Banks in Nigeria for a period of ten years (2009-2018). Data was analysed using Auto Regressive Distributed Lag (ARDL) and results from the study showed that there is a negative and significant relationship between loan to deposit ratio and return on assets (ROA), a positive and significant relationship between loan to asset ratio and return on assets (ROA) and a positive and insignificant relationship between liquidity ratio with p-value 0.1808 and return on assets (ROA). The study concludes that there is a significant and positive relationship between liquidity management and profitability of banks in Nigeria. Alim, Ali, and Metla, (2021) tests the effect of liquidity risk management on the financial performance of commercial banks in Pakistan. In this study, the effect of liquidity risk management on financial performance is studied using panel data for Ordinary Least Square analysis. Financial data of all commercial banks operating in Pakistan during the period of study was taken from the year 2006 to 2019 using data archives of the State Bank of Pakistan website. It concluded that higher liquidity increases banks' performance in commercial banks of Pakistan. Kehinde and Solape (2021) researched on bank performance and liquidity management, conducted from 2011 to 2020. Secondary data from the annual reports of deposit money banks listed on the Nigerian Stock Exchange were used for the study, while financial performance were measured using return on asset, return on equity, and net profit margin. The results demonstrated that liquidity management affects deposit money institutions' financial performance in Nigeria in a favourable and significant

way. The effect of liquidity management on the financial performance of quoted deposit money banks in Nigeria was evaluated by Okere, Okeke, Echeonwu, Emili, and Rufai (2021). Secondary data were sourced from fifteen (15) banks' corporate annual reports and financial statements for the eleven (11) years from 2007 to 2017. The data were analysed using both descriptive and inferential statistics. The findings showed a strong correlation between liquidity management and the financial success of deposit money banks in Nigeria. Amira, Alala and Musiega (2023) determined the effect of liquidity risk management on the financial performance of Kenyan commercial banks. The study's target population consisted of 32 Commercial Banks in Kenya. The study utilized panel data consisting of time series and cross-sectional data spanning a decade from 2010 to 2019. Descriptive and inferential statistics were used to analyse the collected data, and the study found out that Liquidity risk management had an insignificant negative relationship with ROE and ROA. It observed that liquidity risk management has a negative effect on financial performance measured either in ROA or ROE, it recommended that commercial banks should keep this parameter as minimum as possible so as not involve in loss making undertakings. Igwenwanne, Ozurumba, Nwaimo, Anyanwu and, Ubah (2023) examined the effect of liquidity management on banks' performance in Nigeria for the period of ten (10) years (2012-2021). Four proxies for liquidity management (liquidity ratio, cash ratio, efficiency ratio and loan-to-deposit ratio) were regressed against Tobin's q using Fixed Panel Least Square method in the model estimation. The study concluded that there is a significant positive relationship between liquidity management and bank performance in Nigeria. Isa, Rahaman, Romli, and Romli (2023) sought to identify the factors that influence the profitability of commercial banks in Malaysia by examining recent data from 2010 to 2020. Additionally, secondary data sources are utilized to gather information and provide evidence for the analysis. The aim of the investigation is to assess whether the determinants of commercial bank profitability in Malaysia are capital adequacy, credit risk, management efficiency, and liquidity risk. Multiple Linear Regression is employed to examine the factual relationship and evaluate the hypotheses, and the software used to analyse the results is E-views 2012. The study found that capital adequacy and management efficiency have a significant relationship with return on asset, while credit risk and liquidity risk have an insignificant relationship with return on asset. Additionally, none of the independent variables have a positive relationship with return on asset. Joseph and Adelegan (2023) empirically investigated the impact of liquidity management on financial performance of deposit money bank in Nigeria using time series data from 2011 to 2020. The study analyses the data with descriptive and correlation analysis. Loan deposit ratio and deposit to asset ratio were found to negatively but insignificantly impact on returns on assets of DMBs in Nigeria. Cash reserve ratio has positive but statistically insignificant relationship with returns on equity of DMBs in Nigeria. Kyari, Adamu and Ali (2023) examined the relationship between liquidity and performance of deposits money banks in Nigeria. The data used were secondary data. The panel data used were sourced from the bank’s annual report and Nigerian Stock Exchange fact book. The panel data collected were analysed and the results show that current ratio have insignificant negative relationship with performance of deposits money banks in Nigeria.

3.0 Methodology

This study adopts exposit facto design as it involves the use of time series data to determine the economic relationship between two or more variables and such data have already been documented thus cannot be manipulated. The data used for this study were collected from Central Bank of Nigeria (CBN) and Nigeria Deposit Insurance Corporations (NDIC) covering the period 1995-2021.

Model specification

The model as in the stated hypotheses are expressed in the following functions:

$Y = f(X)$

Where y= dependent variable and x= independent variable

That is:

ROA = f (CASH, SHF, LDR)

$ROA = a_0 + a_1 CASH + a_2 SHF + a_3 LDR + e$ …….. eqn 1

Where

ROA = Return on assets

CASH= Cash balance

SHF = Shareholders' fund

LDR= Loan to Deposit Ratio (computed as Total Loan/Total Deposit)

a_0 = This represents estimate of the constant

a_1 a_2 a_3 = These represents estimate of the independent variables

Data analysis technique

In analyzing the data gathered, regressions model is employed to establish the relationship between dependent and independent variables. The study made use of econometric approach. The ordinary least square (OLS) techniques were employed in obtaining the numerical estimates of the co-efficient in different equation in the model. The ordinary least square (OLS) method was chosen because it possesses some optimal properties.

4.0 Results

Table 1: *Descriptive Statistics*

Date: 10/10/23
Time: 13:11
Sample: 1995 2021

	ROA	CASH	SHF	LDR
Mean	1.476667	16727.38	1399.804	58.23148
Median	2.580000	14753.58	1560.030	53.95000
Maximum	11.31000	59237.10	3664.000	87.69000
Minimum	-64.72000	338.6200	6.530000	45.59000
Std. Dev.	13.59923	16793.22	1280.181	11.57828
Skewness	-4.472394	0.899202	0.162469	0.928163
Kurtosis	22.45192	2.911308	1.398732	3.011487
Jarque-Bera	515.6846	3.647391	3.003350	3.876842

Probability	0.000000	0.161428	0.222757	0.143931
Sum	39.87000	451639.4	37794.70	1572.250
Sum Sq. Dev.	4808.413	7.33E+09	42610433	3485.470
Observations	27	27	27	27

Source: Author's computation

The Jarque-Bera statistics for all the series shows that ROA has a prob-value of 0.801748, CASH has a prob-value of 0.654617, EQT has a prob-value of 0.804851, LOANS has a prob-value of 0.853459, while TDL has a prob-value of 0.565891. It indicates that ROA, CASH, EQT, LOANS and TDL are not significant and normally distributed.

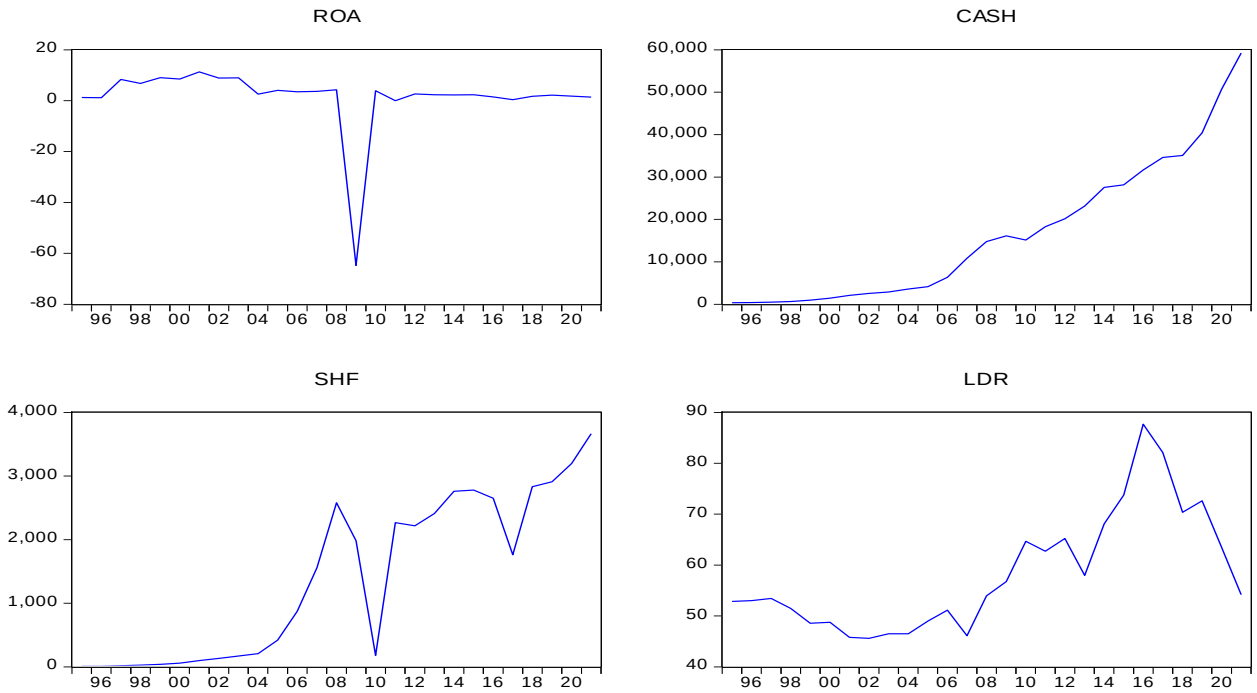
Table 2: *Correlation Matrix*

	ROA	CASH	SHF	LDR
ROA	1.000000	-0.131433	-0.233194	-0.115340
CASH	-0.131433	1.000000	0.900771	0.661430
SHF	-0.233194	0.900771	1.000000	0.630996
LDR	-0.115340	0.661430	0.630996	1.000000

Source: Author's computation

In the table 2 above, to examine whether multicollinearity exists amongst independent variables, the highest variance is 0.885564 while the lowest is 0.743515; therefore, there is a high level of multicollinearity amongst the independent variables.

Figure 1: *Graph Analysis*



Source: EViews 8

In the graph which indicates the graphs of the individual series, it shows that LDR and LDR shows a fluctuating trend while CASH is on the increase.

Table 3: *Result of OLS Analysis*

Dependent Variable: LOG(ROA)
Method: Least Squares
Date: 10/10/23 Time: 13:20
Sample: 1995 2021
Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.01432	3.154264	3.808915	0.0010
LOG(CASH)	-0.233933	0.364485	-0.641819	0.5279
LOG(SHF)	0.151929	0.264544	0.574303	0.5719
LOG(LDR)	-2.406533	0.987290	-2.437515	0.0238

R-squared	0.451508	Mean dependent var	1.136215
Adjusted R-squared	0.373153	S.D. dependent var	0.824804
S.E. of regression	0.653028	Akaike info criterion	2.131254
Sum squared resid	8.955363	Schwarz criterion	2.326274
Log likelihood	-22.64067	Hannan-Quinn criter.	2.185344
F-statistic	5.762276	Durbin-Watson stat	1.845801

Prob(F-statistic)	0.004877

Source: **EViews 8**

Estimated model from the e-view shows that the model is linear and given as
LOG (ROA) = 12.014323529 - 0.233933350435*LOG(CASH) + 0.151928508302*LOG(SHF) - 2.40653276189*LOG(LDR). The coefficient of determination R^2 is 45.15%, indicating that the variables are poorly fitted on regression. The adjusted coefficient of determination is 37.32% implying that 37.32 percent of the total variation found in ROA is explained by the presence of CASH, SHF and LDR while the remaining 62.68% is the presence of the unexplained variable.
The F-statistics shows that F-cal is 5.762276 with a prob-value of 0.004877 which implies that the overall regression is statistically significant and the variables jointly impact on return on assets. That is, liquidity management has impact on profitability of deposit money banks.
CASH is negatively related to ROA. This means that the higher the cash balance, the lower the return on asset which conforms to apiriori expectation. The t-test shows a prob.value of 0.5279 thus indicating that that the null hypothesis is accepted that there is no significant relationship between cash management and banks return on assets. SHF is positively related to ROA. This means that the higher the equity capital, the higher the return on assets which conform to expectation. The t-test shows a prob.value of 0.5791, thus indicating that the null hypothesis is accepted that there is no significant relationship between shareholders' capital and banks return on assets. LDR is negatively related to ROA. This means that the higher the loan to deposit ratio, the higher the return on assets which conform to apriori expectation. The t-test shows a prob.value of 0.0236 thus indicating that the null hypothesis is rejected and alternative accepted that there is significant relationship between loan to deposit ratio and return on assets.

Diagnostic tests

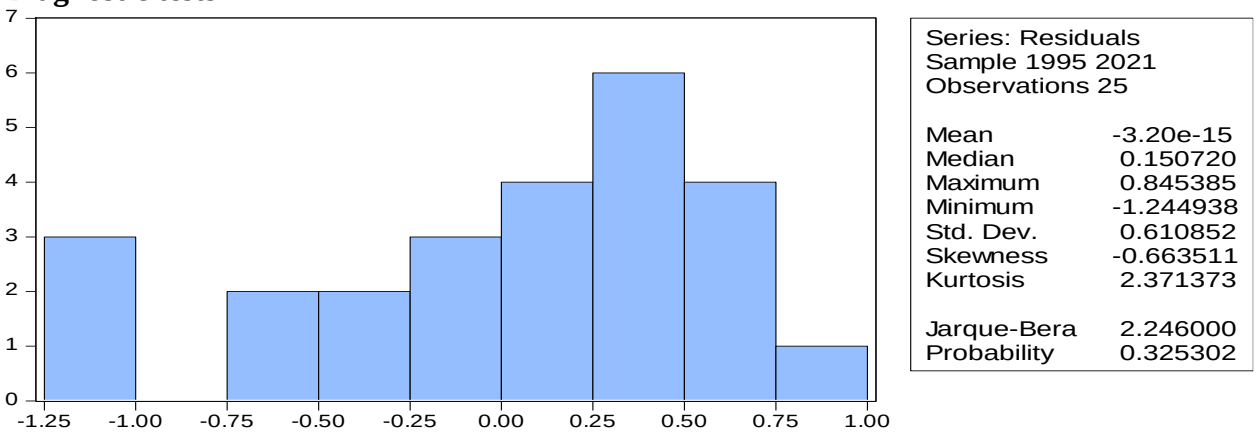


Figure 2: Standardized residuals

Further analysis using the standardized residuals shows a skewness of -0.663511 and Kurtosis of 2.371373 indicating low level of significance. The Jarque Bera value of 2.246000 with a probability value of 0.325 suggests that the residuals are normally distributed and linear.

Table 4.5: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.067180	Prob. F(2,19)	0.3637
Obs*R-squared	2.524752	Prob. Chi-Square(2)	0.2830

The BG, LM test in table 4.5 shows that the F-statistic and obs*R-Squared are insignificant to result to serial correlation, suggesting that there is no first order serial correction in the series with lagged ECM, an independent variable.

Table 4.6: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	8.887266	Prob. F(3,21)	0.0005
Obs*R-squared	13.98489	Prob. Chi-Square(3)	0.0029
Scaled explained SS	6.766175	Prob. Chi-Square(3)	0.0797

Is there any heteroskedasticity in our short run model? Table 4.6, BPG test's F-stat, obs* R^2 and scaled explained SS stats respectively suggest that the residuals in our model were significantly influenced by the presence of heteroskedasticity. Therefore, there is no homogeneity in our model.

Discussion of findings

Findings from the analysis revealed at cash is negatively related to return on asset which conforms to apriori expectation and an indication that ideal cash do not make returns and that the banks keeps higher liquid cash. This may be that Nigerian banks are always in dilemma on keeping more cash to meet the needs of banking customers or investing such cash to make more returns. This supports the earlier study of Nwude, Itiri, Agbadua, and Udeh (2016) which found that cash balances of Nigerian banks do not impact on their returns. The policy implication of this to bank management is the need to review their cash balances and see more productive sectors to invest while also ensuring it doesn't constrain them from meeting the needs of their depositors. The study also revealed that equity capital is positively related to its return on assets which could be attributed to the fact that the banks have the obligation of maintaining shareholders capital which often forms part of its liquidity. The policy implication is that it is an indication that the present capital formation of the banks is poor to maintain higher profitability hence the need for more recapitalization by the banks. Analysis also found that loans to deposit ratio and advances negatively relates to return on assets. Banking business is not all about accepting deposit but creating loans and advances which provides returns through interest charges. Thus, poor use of customer deposits for loans leads to poor returns and better use of customer deposits for loans leads to higher returns. This supports the findings of Abata (2015) and Solomon (2016). The policy implication of this is that banks must constantly review which investment favours them while also

reviewing their non-performing loans to ensure that the level of defaults do not depreciate their assets quality.

5.0 Conclusion and Recommendations

Over the years, major concern for the public and banking regulators has been the poor management of banks assets. Various policies and framework have been adopted since the deregulation of the industry in 1986 which includes recapitalization, universal banking system, electronic technology, prudential guidelines, uniform accounting system and many more all aimed at ensuring the banking system remains healthy and efficient in their services. Some of these services mainly include deposit mobilization, investments and loans creation. However banks in Nigeria have been awash with liquidity problems that still persist. To this end, this study has carried out empirical investigation on liquidity management of deposit money banks in Nigeria. Banks return on assets has been insignificantly related to their share capital and cash balance. Findings from the study further showed an insignificant relationship exist between loan to deposit ratio and return on assets. Conclusion can therefore be drawn that liquidity management has impact on profitability of deposit money banks in Nigeria. Based on the findings, it is recommended that bank management has to device efficient cash management policies to enhance their profitability. It is imperative that bank recapitalization be looked into as the present state of capital is too poor to ensure better profitability.

References

Adegbaju, A.A. & Olokoyo, F.O. (2008), Recapitalization and banks performance: a case study Nigeria banks, *African economic and business review*, 6(1), 1-17.

Ajayi, A. & Lawal, O. (2021). Effect of liquidity management on banks profitability. Izvestiya Journal of the University of Economics - Varna. 65. 220-237. 10.36997/IJUEV2021.65.2.220

Albertazzi, U. & Gambacorta, L. (2009). Bank profitability and the business cycle. *Journal of Financial Stability*, 5 (4), 393-409.

Alim, W., Ali, A. & Metla, M. R. (2021): The effect of liquidity risk management on financial performance of commercial banks in Pakistan. Munich Personal RePEc Archive Paper No. 112482.

Amira, E. A., Alala, B. O., & Musiega, M. (2023). Influence of Liquidity Risk Management on Financial Performance of Commercial Banks in Kenya. *African Journal of Empirical Research*, *4*(2), 7–13. https://doi.org/10.51867/ajernet.4.2.3

Asediolen, A. (2004), For the economic and financial interest of Nigeria. *Nigerworld*, 1(2).

Bhunia, A. (2010). A trend analysis of liquidity management efficiency in selected private sector industry, Indian steel. *International Journal of Research in Commerce and Management*, 1 (5), 9-21.

Bhunia, A. & Malayendu, S. (2012). How far India has gone down the road towards financial integration with US since Subprime Crisis? An econometric analysis. MPRA Paper 38731.

Daruwala, Z. (2023). Influence of financial leverage on corporate profitability: Does it really matter?. *International Journal of Economics and Financial Issues*, *13*(4), 37–46. https://doi.org/10.32479/ijefi.14461

Effiong, S. A. & Enya, E. F. (2020). Liquidity risk management and financial performance: Are consumer goods companies involved? *International Journal of Recent Technology and Engineering*, *9*(1), 580 – 589.

Fonseca, A.R. & Gonzalez, F. (2009), How bank capital buffers vary across countries: The influence of cost of deposits, market power and bank regulation, *Journal of Banking and Finance*, accepted manuscript.

Ghenimi, A., Chaibi, H. & Omri, M. A. B. (2020). Liquidity risk determinants: Islamic vs conventional banks. *International Journal of Law and Management*, 1 – 31, DOI 10.1108/IJLMA-03-2018-0060, https://www.emerald.com/insight/1754-243X.htm.

Ibe, S. O. (2013). The impact of liquidity management on the profitability of banks in Nigeria. *Journal of Finance and Bank Management*, 1(1), 37-48.

Igwenwanne I. E., Ozurumba B. A., Nwaimo, C. E., Anyanwu F. A. & Ubah C. P. (2023). Evaluation of the Liquidity Management on Deposit Money Banks' Performance in Nigeria. International Journal of Economics, Business and Management Research, 7 (1), 122. doi: 10.51505/IJEBMR.2023.7111

Isa, A., Rahaman, A. R. S., Romli, N., & Romli, J. M. M. N. (2023). Determinants of commercial banks profitability in Malaysia. International Journal of Academic Research in Accounting Finance and Management Sciences, 13(2), 129–140. DOI:10.36997/IJUEV2021.65.2.220

Joseph, I. E. & Adelegan, O. (2023). Liquidity management and financial performance of Deposit Money Banks in Nigeria. Available at SSRN: https://ssrn.com/abstract=4349839 or http://dx.doi.org/10.2139/ssrn.4349839

Kehinde, A. & Solape, B.(2021). Liquidity management and financial performance of Deposit Money Banks in Nigeria. *Nigerian Defence Academy Journal of Economics and Finance* 5 (2), 267-276

Kyari, A. M., Adamu, H. B. & Ali, U. S. (2023). Impact of liquidity on financial performance of deposit money banks in Nigeria. *International Journal of Business Systems and Economics, 14* (1), 111 – 129

Nahum, N. & Amarjit, S. G. (2013). *The impact of corporate governance on working capital management efficiency of American manufacturing firms*, Emerald Publishing Ltd.

Nwaezeaku, N. C. (2006). *Theories and Practice of Financial Management*. Owerri: Ever Standard Publishing.

Okere, W., Okeke, O.C., Echeonwu, S.I., Emili, E.C. &Rufai, O. (2021). Liquidity management: Implications for financial performance of Deposit Money Banks (DMBS) In Nigeria. *Journal of Asian Business Strategy*, 11 (1), 24-32.

Olagunju, A., Adeyanju, O. D. & Olabode, O. S. (2011). Liquidity management and commercial banks' profitability in Nigeria. *Research Journal of Finance and Accounting*, 2 (7/8), 24-38.

Onyeka-Iheme, C. V. & Akintoye, I. R. (2023). Liquidity risk management and financial stability of manufacturing companies quoted on the Nigeria Stock Exchange, Ramagundam, *International Journal of Management, 14*(5), 60-79 doi: https://doi.org/10.17605/OSF.IO/6PKVM

Otekunrin, A.O., Fagboro, G.D., Nwanji, T.I., Asamu, F.F., Ajiboye, B.O. &Falaye, A.J. (2019). Performance of deposit money banks and liquidity management in Nigeria. *Banks and Bank Systems*, 14 (3). 144-161. http://dx.doi.org/10.21511/bbs.14(3).2019.13

Solomon, O. (2016). The implication of excess liquidity in the banking industry. *www.independent.academia.edu*