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Credit Management and Liquidity of Listed Deposit Money Banks in Nigeria

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Abstract

Effective credit management is essential to maintaining liquidity and financial stability in deposit money banks (DMBs). This study examined the effect of credit management on the liquidity of listed DMBs in Nigeria over the 11-year period from 2014 to 2024. Liquidity, the dependent variable, was proxied by credit risk, whereas credit management was represented by the loan-to-deposit ratio, non-performing loan ratio, capital adequacy ratio, and loan loss provision. An ex post facto research design and census sampling were employed, covering all 12 DMBs listed on the Nigerian Exchange Group. Secondary data were obtained from the banks' audited annual reports and accounts and analyzed using descriptive statistics, Pearson's correlation, regression analysis, and robustness tests in Stata 14. The findings indicate that the loan-to-deposit ratio had a negative but statistically insignificant effect on liquidity, whereas the non-performing loan ratio had a positive but insignificant effect. Capital adequacy had a positive and significant effect on liquidity, while loan loss provision had a negative and significant effect. Regarding the control variables, firm age had a negative and significant effect, whereas firm size had a positive but insignificant effect. These findings demonstrate the importance of capital adequacy and loan loss provisioning in shaping bank liquidity. The study provides empirical insights for bank management and regulation in Nigeria and recommends that banks engage with the Central Bank of Nigeria regarding cash reserve requirements and loan-to-deposit ratio thresholds to prevent regulatory debits from constraining productive financial intermediation.

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Keywords: Bank Liquidity; Capital Adequacy; Credit Management; Deposit Money Banks; Non-Performing Loans

Introduction

Banks are central to the global financial system, wielding considerable influence over both broad economic trends and individual economic activities. Abidin (2017) notes that banks often hold the largest share of the financial market. Operating in a constantly changing and unpredictable landscape, the banking sector contends with various risks, including credit, market, liquidity, operational and regulatory risks (Fali et al., 2020). Ineffective management of these risks can seriously threaten the financial stability and well-being of banks. Considering the vital role banks play in Nigeria's economy, its crucial for decision makers to rigorously evaluate their performance.

Credit management is crucial for banking stability and profitability, as poor credit practices lead to increased exposure to risks such as liquidity, credit, and interest rate risks. Effective credit management strategies mitigate these risks and sustain profitability. Non-performing loans (NPLs) are a key metric for assessing credit risk, as they represent loans in default for over 90 days. Rising NPL levels can erode bank capital and investor confidence, making credit risk management essential. Proper assessment, approval, monitoring, and risk control mechanisms ensure loan recoverability and safeguard financial stability. Bank loans is the greatest earning asset, most liquid and highly risky. As a matter of fact, a bank cannot remain in business if it neglects the credit function (Osayeme,2000). Therefore, proper credit assessment, loan approval process, credit monitoring and control should be adopted in administering control loans to borrowers to avoid bad debts or rising bad debts to analyse the borrower's ability, books of accounts and collateral which if overlooked can create increase on the effects on which it can pose in the banks, in turn endangers the reputation and confidence held by the banks. The existence of the department for credit management oversees the processes of credit granting in collaboration, with a good credit officer who has the ability to intelligently and resourcefully manage the borrowers credit lines to mitigate these crises to maintain a healthy balance between risk and reward.

The nexus between credit management and liquidity is primarily manifested through the efficient flow of funds within the bank. Loans, while being income-generating assets, are generally illiquid. When loans become non-performing, the expected cash inflows from repayments cease or become erratic. These immediately affect a bank's liquidity position, as it may struggle to meet its short-term obligations, such as depositor withdrawals or funding new lending opportunities. Chilokwu et al. (2024) focusing on cooperative societies, illustrates this point by noting that low credit standards (collateral) have significant influence on member loan repayment which can lead to liquidity strains. Conversely, sound credit management ensures timely repayment of loans, contributing to a healthy cash flow and a robust liquidity position. This allows banks to redeploy funds efficiently, maintain public confidence, and avoid liquidity crises.

Statement of the Problem

The capability of banks to effectively manage their credit is crucial to their overall performance. Poor credit and risk management have resulted in credit losses in loan portfolios for many Nigerian commercial banks, leading to mergers or acquisitions (Gadzo *et al.* 2019). In response to the 2005 recapitalization of Nigerian banks, which mandated a minimum capital base of ₦25 billion by December 31, 2005, many banks were able to comply by merging or seeking other alternatives (Komolafe et al., 2020). However, despite various regulatory policies and reform programs, Nigerian banks continue to experience distress, which can be attributed to inadequate credit management. This belief is strengthened by the fact that several other banks have experienced distress, which has resulted in their forced takeover or merger. An example is the merger of Access and Diamond bank in 2018. This raised concerns for this study, as it suggests that the credit management policies of these banks may no longer be effective. In Nigeria, the case of Access and Diamond Bank showed that the breach of government rules, as a result of exposure to the oil sector, led to a significant number of non-performing loans, wrong decisions, and disharmony among board members. This had a negative impact on Diamond Bank and brought the bank to its knees. According to AlTamimi and Al-Mazrooei (2007), the banking industry is inherently risky, and this is especially true in developing nations with weak economies where risk-taking is prevalent.

Banks are central to the financial system, with credit risk being their primary challenge (Eno and Iniabasi, 2022). Credit facilities, such as loans, expose banks to

significant risk. According to Yinka *et al.* (2015), the collapse of many Nigerian banks in the late 1990s and earlier was largely due to poor management of these facilities, evidenced by high levels of non-performing loans. Recently, deposit money banks (DMBs) in Nigeria have faced heightened exposure to credit risk. The Nigerian economy has encountered various difficulties in recent years, including the COVID-19 pandemic, which has exacerbated loan defaults and credit losses for DMBs. As a result, banks are contending with significant risks that impact both their operations and performance. With rising interest rates, unstable exchange rates, and liquidity constraints, managing credit facilities has become increasingly challenging, thereby adversely affecting their financial performance.

Furthermore, practically liquidity is an effective indicator of corporate health and performance of not only the commercial banks, (Eljelly, 2004) but all profit-oriented ventures. These performance indicators are very important to shareholders and depositors who are major publics of a bank. Hence, proper sound credit management practices should be implemented to avoid worsening credit quality which is the most frequent cause of poor financial performance of banks. The prevalence of non-performing loans, escalating bad debts, and loan losses are major threats to banking profitability. Many Nigerian banks have faced insolvency due to poor credit management, as evidenced by the collapse of several banks in the 1990s and 2000s, including Heritage Bank. Also, economic challenges, such as the COVID-19 pandemic, have further exacerbated loan defaults. Weak credit management structures and inadequate collateralization have also contributed to rising NPL levels.

Aim and Objectives of the Study

The main objective of this study is to examine the impact of credit management on liquidity of listed DMB's in Nigeria. The specific objectives are:

i. To determine the effect of loan to deposit ratio on liquidity of listed DMB's in Nigeria;
ii. To ascertain the effect of non-performing loans ratio on liquidity of listed DMB's in Nigeria;
iii. To evaluate the effect of capital adequacy ratio on liquidity of listed DMB's in Nigeria;
iv. To assess the effect of loan loss provision on liquidity of listed DMB's in Nigeria.

Literature Review

Credit Management and Liquidity

Natufe and Evbayiro-Osagie (2023) examined credit risk management and return on equity (ROE) of Nigerian deposit money banks (DMB's) over a twelve-year period (2010–2021), following the Central Bank of Nigeria's (CBN) 2009 mandate for a unified accounting year end. The study used capital adequacy ratio (CAR), liquidity ratio (LQR), loan-to-deposit ratio (LDR), risk asset ratio (RAR), non-performing loans ratio (NPLR), loan loss provision ratio (LLP), and firm size (FSZ) as independent variables, with ROE as the dependent variable. Employing panel data regression analysis, the study found that CAR, RAR, NPLR, and FSZ are significant determinants of ROE. The study also discovered that Nigerian DMB's increasingly depend on offshore borrowings in Eurobonds to create risk assets, as a way to circumvent the CBN's restrictions on using local depositors' funds for this purpose. Additionally, it found that shareholders of DMB's with international banking licenses in Nigeria during the study period were not significantly better compensated for their risk exposure compared to investors in risk-free assets like treasury bills.

Bhatt *et al.* (2023) examined the determinants of credit risk management and their relationship with the performance of commercial banks in Nepal. Their findings are multifaceted, with partial least- squares structural equation modelling (PLS-SEM) to analyze data collated from a self-administered questionnaire. They found that, there is a positive relationship between environmental risk and credit risk; also, credit appraisal measurements have a significant effect on credit risk. Finally, market risk analysis has a significant effect on credit risk management; and lastly, credit risk management intermediates the relationship between environmental risk, credit appraisal measurements, market risk analysis, and the performance of commercial banks in Nepal.

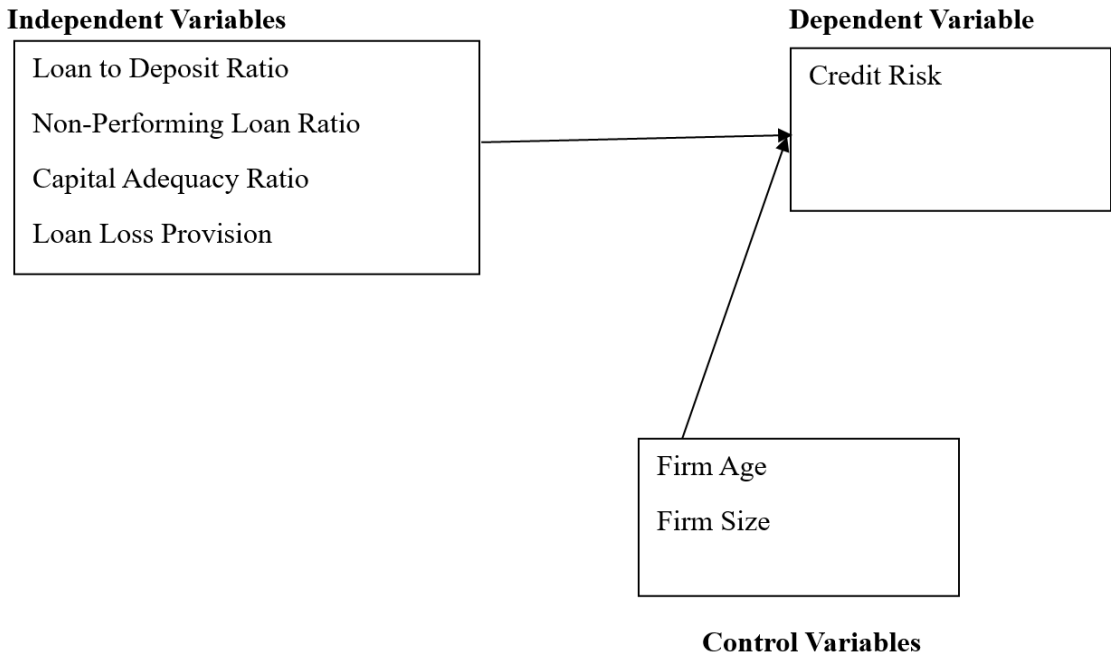
Asymmetric Information Theory

The asymmetric information theory was first explained by Akerlof's in the 1970. The theory explains that information asymmetry exists when banking lending applications are being assessed (Binks & Ennew, 1997). This theory explains when important information is unknown to every party involved in a transaction (Ekumah & Essel, 2003). Espy (2005) explains the condition whereby the parties that are part of transaction are not aware of all the important facts. The theory explains that when information asymmetry is

perceived then financial institutions have two core challenges including moral hazard, in the monitoring of the behaviour of the entrepreneur and adverse selection whereby the firm makes errors as it lends to the wrong people. Information asymmetry occurs when business managers have better knowledge of their company's future prospects and risks than lenders. This knowledge gap can lead to credit rationing, where some borrowers are excluded from the loan market due to perceived risks. To address this, banks use contracts and employ credit management strategies to gather detailed information about borrowers. Contracts may include restrictive terms, shortening loan maturity and reducing information asymmetry and credit risk. Collateral guarantees are often used to assess credit applications and minimize risks, though there may be inaccuracies in risk assessment. While contracts are crucial, banks' relational advantage stems from their ability to gather both objective and subjective data, fostering long-term relationships with borrowers and enhancing their understanding of clients' behaviour. This advantage enables banks to manage credit distribution more effectively.

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Conceptual Framework for the Study



Methodology

This study adopted the ex post facto research design to examine the effect of credit management on liquidity of listed DMB's in Nigeria. Ex post facto is a method used by researchers to examine a potential cause and effect relationship between variables when the independent variables have already occurred and cannot be manipulated by the researcher. Panel data will be used in conducting a multiple regression analysis, given the nature of the model variables. This approach allows the examination of both time and cross-sectional effects in the data for this study.

This study adapts the model below with changes that align with previous research to test the effect of credit management on liquidity of listed DMB's in Nigeria.

$$LIQ_{it} = \beta_0 + \beta_1 LDR_{it} + \beta_2 NPLR_{it} + \beta_3 CAR_{it} + \beta_4 LLP_{it} + \beta_5 FA_{it} + \beta_6 FSZ_{it} + \varepsilon_{it} \quad (1)$$

Variable Definitions and their Measurements

Table 1: Measurement of Variable

Variable	Indicator	Measurement	Source
Liquidity (Dependent variable)	CR	Current Assets / Current Liabilities	Ehiedu (2014)
Loans to Deposit Ratio (Independent variable)	LDR	Total Loans & Advances / Total Deposits	Shrestha (2018); Sadino (2019);
Non-Performing Loans Ratio	NPLR	Non-Performing Loans	Natufe & Osagie (2023)

(Independent variable)		Total Loans & Advances	
Capital Adequacy Ratio (Independent variable)	CAR	Ratio of Shareholders Fund to Risk Weighted Assets	Natufe & Osagie (2023)
Loan Loss Provision (Independent variable)	LLP	Loan-loss provision / Total loan and advances	Muriithi, (2016), Annor & Obeng (2017)
Firm Age (Control variable)	FA	Year of listing – Year of observation	Pranesh & Chinmoy (2017); Salah (2018);
Firm Size (Control variable)	FSZ	The natural logarithm of the total assets of the selected companies	Aifuwa & Embele (2019); Ilaboya & Lodikero (2017)

Source: Researchers' Compilation, 2026

Results and Discussions

To verify whether there was evidence of multicollinearity, we used the Variance Inflation Factor (VIF). A VIF above 10 indicates that multicollinearity is harmful (Gujarati and Porter, 2009). The outcome shows that 1.66 is the maximum VIF and 1.04 is the lowest VIF, both of which are less than 10, indicating the absence of multicollinearity.

Table 2: Descriptive Statistics

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
CR	132	0.1534	0.3168	0.0000	1.1827
LDR	132	0.2906	0.3080	0.0118	0.9690
NPLR	132	0.0524	0.0875	0.0002	0.6274
CAR	132	0.1841	0.1838	-0.861	0.7527
LLP	132	0.1378	0.1935	0.0012	0.8881
FA	132	24.000	12.280	8.0000	53.000
FSZ	132	21.051	1.6918	18.142	24.091

Source: Stata 14 Output based on data extracted (2014-2024)

Table 2 shows that credit risk (CR) has a mean of 0.1534, standard deviation of 0.3168, minimum of 0.0000 and the maximum of 1.1827. The mean value of 0.1534 suggests that on average the credit risk is approximately 15.34 for the periods under review. The standard deviation implies that there is a dispersion of data from the mean because the standard deviation is greater than the mean value. The minimum value of 0.0000 suggests that the bank's credit management strategies are highly effective at securing certain segments of their portfolio while, the maximum value of 1.1827 suggests that for certain exposures, the potential loss exceeds the actual principal amount loaned out for the periods under review.

The mean value of loan to deposit ratio (LDR) is 0.2906 the standard deviation is 0.3080, while the minimum and maximum values are 0.0118 and 0.9690 respectively. The mean value of 0.2906 suggests that, on average for every ₦1,000,000 customers deposit, the banks are lending out ₦290,600 which implies that some of these banks are sitting on cash rather than pumping it into the economy. The standard deviation of 0.3080 signifies that there is high dispersion of the data from their mean because the standard deviation value is higher than the mean value. The minimum value of 0.0118 suggest that for every ₦1,000,000 it takes in, it lends out ₦11,800 which entails that the bank is extremely safe (high liquidity) but likely has a very low interest income. Conversely, the maximum value of 0.9690 suggests that for every ₦1,000,000 deposited, it has lent out ₦969,000. In the event that many depositors show up at once to make withdrawals, this bank might struggle because virtually all its cash is tied up in loans.

Table 2 also shows that the non-performing loan ratio (NPLR) has a mean value of 0.0524, standard deviation of 0.0875 with 0.0002 and 0.6274 as the minimum and maximum values respectively. The mean value of 0.0524 implies that, on average, for every ₦1,000,000 lent out, ₦52,400 is considered bad debt. The figure for standard deviation of 0.0875 signifies high dispersion of data from their mean because the standard deviation is greater than the mean value. Furthermore, the minimum value of 0.0002 (0.02%) indicates that there are banks with an incredibly clean book. For every ₦1,000,000 lent, only ₦200 is non-performing. Conversely, the maximum value of 0.6274 (62.74%) is a distressed state because for every ₦1,000,000 lent, ₦627,400 is not being repaid.

Table 2 also shows that capital adequacy ratio (CAR) has a mean and standard deviation values of 0.1841 and 0.1838 respectively. Also, with a minimum and maximum values of -0.861 and 0.7527 respectively. The mean value of 0.1841 means that, on average, some banks have 18.41% capital backing their risky assets. The standard deviation of 0.7527 is higher than the mean value suggesting high dispersion of the data from the mean value. The minimum value of -0.861 implies that for every ₦1,000,000 in loans, the bank has a negative ₦861,000 in capital. This also implies that the bank has wiped out all its shareholders money and is effectively operating on depositor's fund alone. Conversely, the maximum of 0.7527 implies that some banks hold ₦752,700 for every ₦1,000,000 it lends. While this may appear safe, a CAR this high is actually inefficient. It suggests that the entity is sitting on a mountain of cash and is not lending enough to the economy.

Table 2 also shows that loan loss provision (LLP) has a mean value of 0.1378, standard deviation of 0.1935 with 0.0012 and 0.8881 as the minimum and maximum values respectively. The mean figure depicts that, on the average, for every ₦1,000,000 lent out, some banks are setting aside ₦137,800 to cover potential defaults. The figure for standard deviation of 0.1935 signifies high dispersion of data from their mean because the standard deviation is greater than the mean value. The minimum value of 0.0012 suggest that the bank is only setting aside ₦1200 for every ₦1,000,000 lent. Conversely, the maximum value of 0.8881 suggest that the bank is setting aside ₦888,100 for every ₦1,000,000 lent. This is a red alert, as it implies that approximately 89% of this bank's portfolio is expected to fail. This bank is likely in a distressed state, barely holding onto its capital because it expects almost none of its loans to be repaid.

Additionally, 2 reveals that firm age (FA) has mean and standard deviation of 24.00 and 12.280 respectively, while having a minimum and maximum values of 8.0000 and 53.000 respectively. Conclusively, firm size (FSZ) has a mean and standard deviation of 21.051 and 1.6918 respectively with a minimum and maximum values of 18.412 and 24.091 respectively.

Table 3: Correlation Matrix

VAR	CR	LDR	NPLR	CAR	LLP	FA	FSZ
CR	1.0000						
LDR	0.2573*	1.0000					
	0.0029						
NPLR	0.2481*	0.0465	1.0000				
	0.0041	0.5965					
CAR	-0.2957*	-0.0490	-0.0260	1.0000			
	0.0041	0.5770	0.7670				
LLP	-0.1385	-0.0034	-0.0604	0.0942	1.0000		
	0.1131	0.9693	0.4916	0.2827			
FA	-0.1868*	-0.1811*	-0.0737	0.3374*	-0.3428*	1.0000	
	0.0320	0.0377	0.4007	0.0001	0.0001		
FSZ	0.4222*	0.2368*	0.1860*	0.0559	-0.4747*	0.0248	1.0000
	0.0000	0.0063	0.0328	0.5423	0.0000	0.7775	

Source: Stata 14 Output based on data extracted (2014-2024)

=significant at 1% (0.01), **= significant at 5% (0.05), *= significant at 10% (0.1)*

Table 3 revealed a positive and significant relationship between loan to deposit ratio (LDR) and credit risk (CR) which is at 1% level of significance to the tune of 26% approximately. Similarly, non-performing loan ratio (NPLR) has a positive and significant

relationship with credit risk to the tune of 25% approximately. Also, NPLR also has a positive but insignificant relationship with LDR to the tune of 5% approximately.

Additionally, the association between capital adequacy ratio (CAR) and credit risk (CR) is negative but significant to the tune of 30% approximately. Conversely, the nexus between CAR and LDR is negative and insignificant to the tune of 5% approximately. Similarly, the relationship between CAR and NPLR is negative and insignificant to the tune of 2% approximately.

Furthermore, the relationship between loan loss provision (LLP) and credit risk (CR) is negative and insignificant to the tune of 14% approximately. Also, the relationship between LLP and LDR is negative and insignificant to the tune of 3% approximately. Similarly, the relationship between LLP and NPLR is negative and insignificant to the tune of 6% approximately. On the other hand, the nexus between LLP and CAR is positive but insignificant to the tune of 9% approximately.

Table 4: Regression Result

Variables	Coefficients	T	p>|t|
Constant	-0.0466	-0.15	0.879
LDR	-0.0444	-0.73	0.466
NPLR	0.0435	0.32	0.750
CAR	0.3009	2.40	0.018
LLP	-0.277	-2.16	0.033
FA	-0.008	-2.29	0.024
FSZ	0.0189	1.20	0.232
R^2		0.1295	
F-Stat.		2.83	
Prob>Chi2		0.0133	

Source: Stata Output (2025)

The cumulative R^2 (0.1295) which is the multiple coefficients of determination gives the proportion of the total variation in the dependent variable explained by the independent variables jointly. Hence, it signifies that approximately 13% of the total variation in liquidity of listed DMB's in Nigeria is caused by their loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, loan loss provision, firm age and firm size. This indicates that the model is fit and the variables are properly selected, combined and used. The F-Statistics are really the same thing in that after normalization chi-squared is the limiting distribution of

the F as the denominator degrees of freedom goes to infinity. So, the F-Statistic of 2.83 which is significant at 1% indicating that the model is fit for regression.

The table 4 revealed that loan to deposit ratio (LDR) has a coefficient value of -0.0444, t-statistics value of -0.73 and p–value of 0.466 which is not significant at all levels of significance. From the coefficient value of -0.0444 it can be deduced that LDR and liquidity of listed DMB's are negatively related which implies that when LDR increases by 1 unit, will lead to a decrease in the liquidity of listed DMB's in Nigeria by 4% approximately. In addition, the result provides evidence to reject the null hypothesis which states that loan to deposit ratio has no significant effect on liquidity of listed DMB's in Nigeria. This finding is consistent with the findings of Naufe and Evbayiro-Osagie (2023), Bhatt et al. (2023) and Mboto et al. (2022). Conversely, findings from this study disagreed with findings of Majani (2022), Kwashie et al. (2022) and Mudanya et al. (2022). This is in tandem with commercial loan theory which suggests that a bank becomes increasingly illiquid as its LDR rises because it is tying up its primary source of funding (deposits) in credit facilities that may not be immediately payable. Therefore, a high LDR is negatively related to liquidity because it signals that the bank has fewer liquid assets available to meet its obligations to debtor.

Conversely, non-performing loan ratio (NPLR) has a coefficient of 0.0435, t-statistics of 0.32 and a p-value of 0.750 which is not significant at all levels of significance. The positive coefficient value of 0.0435 signifies NPLR and liquidity of listed DMB's are directly related which implies that for every 1 unit increase in NPLR, liquidity of listed DMB's will increase to the tune of 4% approximately. This provides evidence of failing to reject null hypothesis of the study which states that NPLR has no significant impact on the liquidity of listed DMB's in Nigeria. The finding is consistent with the findings Naufe and Evbayiro-Osagie (2023), Haile and Joshi (2022) and Omorokunwa and Ogbeide (2020) of who documented a positive but insignificant relationship between NPLR and liquidity. This implies that NPLR is one of the factors that influences liquidity. Conversely, the finding contradicted the findings of Ademola et al. (2022) and Iyinomen et al. (2020) which revealed a negative significant relationship between NPLR and liquidity of listed DMB's in Nigeria. This finding is in tandem with asymmetric information theory which suggest that when a bank's NPLR rises, management knows the true risk before the market does. To prevent a loss of investors' confidence, managers may aggressively accumulate cash and liquid assets to signal strength.

Capital adequacy ratio (CAR) has a coefficient of 0.3009, t-Statistics of 2.40 and a p-value of 0.018 which is significant at 1% level of significance. The positive coefficient of value of 0.3009 signifies that CAR and liquidity of listed DMB's are directly related which implies that for every 1 unit increase in CAR, liquidity of listed DMB's will increase to the tune of 30% approximately. This provides evidence of rejecting null hypothesis of the study which states that CAR has no significant impact on the liquidity of listed DMB's in Nigeria. The finding is consistent with the findings of Natufe and Evbayiro-Osagie (2023), Siddique et al. (2022) and Ademola et al. (2022) who documented a positive effect of CAR on liquidity. However, it contradicts the findings of Majani (2022) and Kwashie et al. (2022), which documented a negative relationship between CAR and liquidity. This is in tandem with the asymmetric information theory as a high capital adequacy theory serves as a credible signal to the market. When a bank maintains high capital levels, it signals financial health and low risk. This reduces adverse selection because the market trusts the firm's stability, the firm can access liquid funds more easily and at a lower cost. In this context, higher capital levels unlock better liquidity positions by reducing the information gap between the firm and its creditors.

Additionally, table 4.5.1 revealed that loan loss provision (LLP) has a coefficient value of -0.277, t-statistics value of -2.16 and p–value of 0.033 which is significant at 1% level of significance. From the coefficient value of -0.277 it can be deduced that LLP and liquidity of listed DMB's are negatively related which implies that when LLP increases by 1 unit, will lead to a decrease in the liquidity of listed DMB's in Nigeria by 28% approximately. In addition, the result provides evidence to reject the null hypothesis which states that loan loss has no significant effect on liquidity of listed DMB's in Nigeria. This finding is consistent with the findings of Naufe and Evbayiro-Osagie (2023), Bhatt et al. (2023) and Mboto et al. (2022). Conversely, findings from this study disagreed with findings of Majani (2022), Kwashie et al. (2022) and Mudanya et al. (2022). This is in tandem with liquidity preference theory which suggests a precautionary motive for holding liquid assets. This is because when a bank increases it loan loss provisions, it is essentially acknowledging that a portion of its loans are at a risk of default. This triggers a greater need for cash to cover potential losses.

On the control variables, result from the table shows that firm age (FA) has a coefficient value of -0.008, t-statistics value of -2.29 and p-value of 0.033 which is significant at 1% level of significance. The negative value of the coefficient (-0.008))

signifies that FA and liquidity are negatively related which implies that for every 1 unit increase in FA of listed DMB's will lead to a decrease in the firm age by 1% approximately. Conclusively, result from the table shows that firm size (FSZ) has a coefficient value of 0.0189, t-statistics value of 1.20 and p-value of 0.232 which is not significant at all levels of significance. The positive value of the coefficient (0.0189) signifies that FSZ and liquidity are positively related which implies that for every 1 unit increase in FSZ of listed DMB's will lead to an increase in the liquidity by 2% approximately.

Conclusion

This study examined the effect of credit management on liquidity of listed DMB's in Nigeria. Based on the analysis conducted on the data obtained, the following conclusions were drawn:

Loan to deposit ratio is found to have a negative and statistically insignificant effect on liquidity of listed DMB's in Nigeria. Non-performing loan ratio has a positive but insignificant effect on liquidity of listed DMB's in Nigeria. Capital adequacy ratio showed a positive and significant effect on liquidity of listed DMB's in Nigeria. Loan loss provision revealed a negative but statistically significant effect on liquidity of listed DMB's in Nigeria. Furthermore, firm age revealed a negative but significant effect on liquidity of listed DMB's in Nigeria. Conversely, firm size revealed a positive but insignificant effect on liquidity of listed DMB's in Nigeria.

This study recommends the following:

i. Banks should engage with the Central Bank of Nigeria (CBN) regarding the cash reserve ratio and liquidity ratio thresholds to ensure that regulatory debits do not inadvertently stifle productive intermediation.
ii. Banks should adopt a robust internal liquidity adequacy assessment process to determine their actual liquidity needs based on their unique risk profile, rather than hitting the CBN's statutory floor.
iii. Furthermore, banks should also clearly communicate capital strength in quarterly briefings to investors and depositors. A transparently safe bank can attract cheaper deposits, reducing the overall cost of funds.

iv. Conclusively, banks should also implement robust monitoring to identify potential defaults before they require heavy provisioning. This prevents the negative signal that prompts investors and interbank lenders to tighten credit.

References

Adegbola, A. J., Olatilewa, O. M., Akor, S., & Obarein, O. (2020). Needs assessment in intervention programs for rural development. *Journal of Applied Sciences and Environmental Management, 23*(12), 2151–2158. https://doi.org/10.4314/jasem.v23i12.11

Aifuwa, H. O., & Embele, K. (2019). Board characteristics and financial reporting quality. *Journal of Accounting and Financial Management, 5*(1), 30–49.

Ajayi, L. B., & Ajayi, F. I. (2017). Effects of credit risk management on the performance of deposit money banks in Nigeria. *International Journal of Research in Management & Business Studies, 4*(3), 50–55.

Eljelly, A. M. A. (2004). Liquidity–profitability tradeoff: An empirical investigation in an emerging market. *International Journal of Commerce and Management, 14*(2), 48–61. https://doi.org/10.1108/10569210480000179

Gabriel, O., Victor, I. E., & Innocent, I. O. (2019). Effect of non-performing loans on the financial performance of commercial banks in Nigeria. *American International Journal of Business and Management Studies, 1*(2), 1–9. https://doi.org/10.46545/aijbms.v1i2.82

Gambo, H., Bambale, A. J., Ibrahim, M. A., & Sulaiman, S. A. (2019). Credit risk management and financial performance of quoted deposit money banks in Nigeria. *Journal of Finance, Accounting and Management, 10*(1), 26–42.

Majani, S. I. (2022). The relationship between credit risk management and financial performance of commercial banks listed at the Nairobi Securities Exchange, Kenya. *International Journal of Managerial Studies and Research, 10*(5), 88–126. https://doi.org/10.20431/2349-0349.1005008

Mboto, H. W., Anake, A. F., Matthew, D. J., & Nkamare, S. E. (2022). Credit administration and performance of some selected microfinance banks in Cross River State. *Journal of Contemporary Research, 1*(1), 60–75.

Natufe, O. K., & Evbayiro-Osagie, E. I. (2023). Credit risk management and the financial performance of deposit money banks: Some new evidence. *Journal of Risk and Financial Management, 16*(7), Article 302. https://doi.org/10.3390/jrfm16070302

Nwanna, I. O., & Oguezue, F. C. (2017). Effect of credit management on profitability of deposit money banks in Nigeria. *IIARD International Journal of Banking and Finance Research, 3*(2), 137–160.

Otieno, S., Nyagol, M., & Onditi, A. (2016). Relationship between credit risk management and financial performance: Empirical evidence from microfinance banks in Kenya. *Research Journal of Finance and Accounting, 7*(6), 115–142.

Ozurumba, B. A. (2016). Impact of non-performing loans on the performance of selected commercial banks in Nigeria. *Research Journal of Finance and Accounting, 7*(16), 95–109.

Siddique, A., Khan, M. A., & Khan, Z. (2022). The effect of credit risk management and bank-specific factors on the financial performance of the South Asian commercial banks. *Asian Journal of Accounting Research, 7*(2), 182–194. https://doi.org/10.1108/AJAR-08-2020-0071

Tola, H. M., & Sankar, D. G. (2019). Collision of NPLs on the financial performance of commercial banks: A case study of Ethiopia. *Asian Finance & Banking Review, 3*(1), 1–11. https://doi.org/10.46281/asfbr.v3i1.230

Uwuigbe, U., Uwuigbe, O. R., & Oyewo, B. (2015). Credit management and bank performance of listed banks in Nigeria. *Journal of Economics and Sustainable Development, 6*(2), 27–32.

Yimka, A. S., Agbatogun, T., Abimbola, C., & Olusegun, A. (2015). Credit risk management and financial performance of selected commercial banks in Nigeria. *Journal of Economic & Financial Studies, 3*(1), 1–11.