Unlocking the Upside Potential of Credit Risk: Evidence from Deposit Money Banks in Nigeria

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Abstract
Though, risk connotes with bad outcome, this study tried to dissect the downside bad outcome from potential good ones inherent in credit risk and its impact on the performance of deposit money banks (DMBs) in Nigeria. While credit risk is traditionally perceived as a threat to banking stability, emerging evidence suggests that it can also present opportunities for enhanced profitability if effectively managed. The study obtained data from the Nigerian Deposit Insurance Corporation where credit risk proxied by non-performing loan to total loan (NPLTL) (non–performing loans) and average liquidity ratio (ALR) as explanatory variables, whereas return on assets (a proxy of bank performance) as dependent variable, spanning from 1990 to 2023. Autoregressive Distributive Lags (ARDL) was employed to estimate the models established. After the analysis it was discovered that non-performing loans (credit risks) significantly exerted bank return on asset; proxy of deposit money banks performance, while, average liquidity ratio insignificantly impacted return on asset. From the findings, Deposit money banks should adopt a dynamic credit risk management practice; flexible risk management frameworks that allow them to exploit profitable lending opportunities while controlling potential losses, among others. The study contributes to the literature on banking risk management by shifting the focus from solely risk mitigation to exploiting the profit potential inherent in credit risk.

Keywords: *Credit Risk, Upside Potential, Deposit Money Banks, Bank Performance, ARDL, Nigeria*

1. Introduction

Upside potential in credit risk refers to the ability of banks to generate additional profits by exploiting favourable risk-taking opportunities while mitigating potential losses through effective risk management strategies. This perspective aligns with modern risk management theories, which posit that risk is a dual-edged phenomenon, while it may result in financial losses, it also presents opportunities for enhanced profitability if appropriately managed (Altman & Saunders, 1998; Hull, 2018). For deposit money banks in Nigeria, leveraging the upside potential of credit risk could be a key driver of performance, particularly in a challenging economic environment characterized by volatile interest rates, high non-performing loans, and regulatory pressures (Adegbite & Ayadi, 2021, Ejem et al, 2023). This is because lending constitutes the highest earning assets of in the

banks' statement financial position. Though, being the highest earning asset, it is also most illiquid of the bank assets. It is also the riskiest of the banks' operation. Since, borrow short and lend long (maturity transformation), the failure to repay bank loans prejudices the banks' capability to honour their obligations (Nwankwo, 1991). Deposit Money Banks (DMBs) are involved in maturity transformation; also seen as financial mismatch (accepting short deposits and lending long) (Nwankwo, 1991; Rose & Hudgins, 2010). Maturity transformation is central to the traditional banking business model. By accepting demand and short-term deposits and extending medium- to long-term credit facilities, banks create liquidity for depositors while simultaneously financing investment and consumption activities. This intermediation process generates income primarily through interest rate spreads, which constitute a significant portion of bank profitability (Diamond & Dybvig, 1983). However, maturity transformation also exposes banks to credit risk, liquidity risk, interest rate risk, and rollover risk, especially in environments characterized by economic instability and fluctuating monetary policy conditions. In the Nigerian context, where economic cycles are often influenced by oil price shocks, inflationary pressures, and exchange rate volatility, the balance between risk and return in maturity transformation becomes particularly critical. However, the word risk is perceived differently by experts; downside risk and upside potential. Succinctly put, risk has to do with bad outcome, potential with good outcome (Ogbulu, Ejem & Uruakpa, 2024). The banking sector is a critical pillar of economic development, serving as a conduit for financial intermediation, mobilization of savings, and allocation of credit resources in both developed and developing economies. In Nigeria, deposit money banks (DMBs) play a pivotal role in providing financial services that stimulate economic activities and promote financial stability (Sanusi, 2010). Despite their strategic importance, DMBs are inherently exposed to credit risk, which is the risk of loss arising from a borrower's failure to meet contractual debt obligations as a result of maturity transformation (Nwankwo, 1991). Traditionally, credit risk is viewed primarily as a threat to bank stability; however, emerging scholarship suggests that credit risk also contains potential upside opportunities for financial institutions, as banks can earn higher returns by carefully assessing and managing the risk-return trade-off inherent in their lending activities (Basel Committee on Banking Supervision (BCBS),2019). The concept of bank performance is multidimensional, encompassing financial indicators such as return on assets (ROA), return on equity (ROE), net interest margin (NIM), and overall operational efficiency (Rose & Hudgins, 2010; Beck et al., 2013). While traditional studies link these indicators primarily to macroeconomic factors, regulatory compliance, and internal management efficiency, there is growing recognition that effective credit risk management; particularly the ability to identify and exploit upside opportunities which plays a decisive role in shaping these performance outcomes (Ghosh, 2015). In the Nigerian context, where banks face stiff competition and economic fluctuations, leveraging the upside potential in credit risk could serve as a strategic lever for enhancing financial performance and sustaining competitive advantage. The significance of this study is underscored by the need to shift the narrative from perceiving credit risk solely as a liability to understanding its dual nature as both a challenge and an opportunity. By evaluating the relationship between credit risk upside potential and bank performance, this research contributes to the existing literature on banking risk management in Nigeria and provides empirical evidence that could inform policy formulation and managerial decision-making. Moreover, in light of the increasing complexity of the Nigerian financial system, where regulatory frameworks such as the Central Bank of Nigeria's Prudential Guidelines (CBN, 2014) seek to ensure stability while promoting growth, understanding how credit risk can be harnessed for performance improvement is particularly timely and relevant.

Empirical studies on credit risk in Nigerian banks often focus on its adverse effects, highlighting the association between non-performing loans and diminished financial performance (Ogbulu & Gbalam, 2016; Okoye & Ezejiofor, 2013; Ejem et al, 2023). However, there is limited scholarly attention on the positive dimensions of credit risk, particularly its upside potential, and how this might enhance bank performance. Understanding this relationship is vital because it informs strategic credit management practices, enhances profitability, and ensures long-term sustainability. Consequently, this study investigates how the upside potential inherent in credit risk influences the performance of deposit money banks in Nigeria, offering insights for bank managers, regulators, and policymakers.

1.2 Statement of the Problem

Credit risk remains one of the most significant challenges facing deposit money banks in Nigeria. According to the Central Bank of Nigeria (CBN, 2022), non-performing loans (NPLs) in Nigerian banks have persisted at concerning levels, raising alarms about the potential for financial distress and erosion of shareholder value. While much of the existing literature emphasizes the negative consequences of credit risk, such as financial losses, liquidity constraints, and systemic instability; there is limited attention on its positive dimensions, notably the upside potential inherent in risk-taking. This gap in knowledge is critical because ignoring the upside of credit risk may lead to overly conservative lending practices that constrain profitability and stifle growth opportunities.

Despite the recognition that risk and return are intrinsically linked, many Nigerian banks lack empirical evidence to guide decision-making on balancing credit risk and performance outcomes. For instance, banks often adopt blanket risk-averse strategies to mitigate losses, which can inadvertently reduce their potential for higher earnings from strategic lending (Sanusi, 2010). Conversely, excessive risk-taking without proper management could result in financial distress, highlighting the delicate balance required in credit risk management. The absence of research that explicitly examines the relationship between the upside potential of credit risk and bank performance limits the ability of bank managers to make informed, evidence-based decisions that maximize profitability while safeguarding financial stability.

In the Nigerian context, the performance of Deposit Money Banks has been marked by periods of strong profitability as well as episodes of financial instability. Following the banking consolidation reforms of 2004–2005 and subsequent regulatory tightening, Nigerian banks recorded improvements in capitalization and asset quality. However, subsequent economic downturns, particularly those linked to oil price shocks and currency depreciation, led to increased non-performing loan (NPL) ratios and liquidity pressures. Studies such as Ogbulu and Gbalam, (2016), Sanusi (2010), Ejem et al (2023) documented how weak risk management practices and excessive exposure to long-term assets funded by volatile short-term deposits contributed to systemic fragility in the pre-reform era. Olarewaju and Adeyemi (2015) reported a significant relationship between liquidity ratios and bank performance, suggesting that effective liquidity management enhances profitability. This historical experience underscores the need to critically evaluate how maturity transformation affects bank performance within Nigeria's unique economic environment.

Furthermore, the dynamic economic environment in Nigeria, characterized by fluctuating inflation rates, volatile exchange rates, and changing regulatory frameworks, exacerbates the complexity of credit risk management. Deposit money banks operate in an environment where borrowers' creditworthiness can rapidly change, making it imperative for banks to adopt strategies that not only mitigate potential losses but also exploit profitable lending opportunities. Hence, understanding how upside potential in credit risk affects financial performance could provide

practical insights into enhancing returns, optimizing portfolio management, and improving resilience against economic shocks.

Thus, the problem this study addresses is the lack of empirical research on how the upside potential inherent in credit risk correlates with the performance of deposit money banks in Nigeria. While the negative impacts of credit risk are well-documented, there is scant evidence on how strategic risk-taking can be leveraged to achieve superior bank performance. By bridging this gap, this research seeks to provide actionable insights for bank managers, regulators, and policymakers, enabling them to design effective credit policies that balance risk mitigation with profit maximization.

2. Review of Related Literature

2.1.1 Concept of Credit Management

Credit management is a pertinent issue in any organization and cannot be ignored by any economic agents engaged in credit irrespective of its business nature. It is simply the means by which an entity manages its credit sales, the process which ensures that customers will pay for the products delivered or the services rendered (Nelson, 2002). Myers and Brealey (2003), describe credit management as methods and strategies adopted by a firm to ensure that they maintain an optimal level of credit and its effective management.

In the words of Chua and Zhang (2021). Credit management refers to the strategies and policies adopted by financial institutions to ensure efficient credit allocation, monitoring, and recovery while mitigating risks associated with lending (The objective of credit management is to maintain a balance between profitability and risk exposure, ensuring that non-performing loans (NPLs) do not significantly impair a bank's financial stability (Akande, Omotayo & Okon, 2022). Also, Credit Management is extremely important as granting credit is considered to be the equivalent of investing in a customer. However, payment of the debt should not be postponed for too long as delayed payments and bad debts are a cost to the company. (Hettihewa, 1997).

Credit management plays a vital role as it ensures the financial sustainability of banks by minimizing loan default risks and maximizing profitability (Adegbite & Olayemi, 2020). Hence, effective credit management practices ensure that banks maintain a healthy loan portfolio while reducing the risk of financial distress (Akande et al., 2022). Berger and Christa, (2009) added that when credit isn't properly redirected, managed, and regulated, it has a significant negative impact on banks, reducing their production and causing greater hurt and disappointment (Berger and Christa, 2009). Poor credit management and insufficient credit administration, according to Alalade, Binuyo, and Oguntodu (2014), are the main reasons why Nigeria's banking industry is having trouble. For financial institutions to survive and expand, it is essential that credit risk be managed effectively.

The Key Components of Credit Management includes:

i. Non-Performing Loans

Non-performing loans are those loans that are not earning income and full payment of principal and interest is no longer anticipated, principal or interest is ninety days or more delinquent or the maturity date has passed and payment in full has not been made. Non-Performing Loans (NPLs) Ratio measures the percentage of a bank's loans that are overdue beyond 90 days. High levels of NPLs have been linked to deteriorating bank performance, as they reduce profitability and capital adequacy (Beck, Jakubik, & Piloiu, 2015). Also, a high NPL ratio reflects poor credit quality and inefficient loan management (Adegbite & Olayemi, 2020; Hou & Dickinson, 2007).

In addition, Hou and Dickinson (2007) stated that non-performing loans cause insolvency of financial institutions and ultimately hurt the whole economy by causing reluctance by banks to provide credit. In a high NPL condition, banks increasingly tend to carry out internal consolidation to improve asset quality which minimizes granting of loans. High level of NPLs require banks to raise provision for which decreases the banks' revenue and reduces the funds for new lending impairing the corporate sector as they have difficulties in expansion. To manage NPLs effectively, banks must implement strict credit risk assessment policies, conduct borrower due diligence, and strengthen debt recovery mechanisms. Effective monitoring of credit portfolios enables banks to detect potential defaults early, thereby minimizing financial losses (Boudriga, Taktak, & Jellouli, 2009).

ii. Loan Loss Provision

Loan loss Provision represents funds set aside to cover potential defaults. As a result of the difficulties and crises facing banks recently Loan loss Provision (LLP) has a key role to strengthen the financial position of the banks. LLP is a policy that is followed by commercial banks by putting some money aside (reserves) to face any potential loans default, which in turn would help to protect banks' positions in terms of profitability and capital. The main objectives of LLP are to provide special information about the bank's future, reduce taxes by managing earnings, and management of regulatory capital, managing the level of income volatility and the volatility of earnings and avoiding fluctuations which occur in risk-weighted assets that in turn affect the bank's risk and profitability. An increase in loan loss provisions negatively affects profitability by reducing the funds available for investment and lending (Klein, 2013). An effective provisioning strategy ensures a balance between risk mitigation and financial performance. Banks that allocate sufficient reserves while maintaining profitable lending activities tend to achieve sustainable growth and stability (Chua et al., 2021).

iii. Interest Rates on Loans

Interest rates on loans represents the cost of borrowing which affects repayment behavior. It implied that higher interest rates may increase default risk, while lower rates can lead to increased lending but lower returns. Interest rate is main tool of monetary policy and an important macroeconomic variable. Banks as financial intermediary plays a vital role in operations of economic development and its efficiency can also influence the economic advancement. The financial services provided by banks are quite different from other financial institutions and in return bank charges interest. Depositors provide maximum amount of the funds and they receive interest in return. Interest margin is the difference between the interest paid and the interest received. (Ogege & Shiro,2022). To optimize performance, banks must develop strategic interest rate policies that align with market conditions, inflation trends, and borrowers' ability to repay loans. A well-balanced interest rate policy ensures that banks maximize earnings while minimizing default risks.

2.1.2 Credit Risk Management Strategies

The credit risk management strategies are measures employed by banks to avoid or minimize the adverse effect of credit risk. A sound credit risk management framework is crucial for banks so as to enhance profitability guarantee survival. The key principles in credit risk management process are sequenced as follows; establishment of a clear structure, allocation of responsibility, processes have to be prioritized and disciplined, responsibilities should be clearly communicated and

accountability assigned (Rose & Hudgins, 2010). The strategies for hedging credit risk include but not limited to these;

i. Credit Derivatives: This provides banks with an approach which does not require them to adjust their loan portfolio. Credit derivatives provide banks with a new source of fee income and offer banks the opportunity to reduce their regulatory capital. The commonest type of credit derivative is credit default swap whereby a seller agrees to shift the credit risk of a loan to the protection buyer. Frank Partnoy and David Skeel in Financial Times of 17 July, 2006 said that "credit derivatives encourage banks to lend more than they would, at lower rates, to riskier borrowers". Recent innovations in credit derivatives markets have improved lenders" abilities to transfer credit risk to other institutions while maintaining relationship with borrowers.

ii. Credit Securitization: It is the transfer of credit risk to a factor or insurance firm and this relieves the bank from monitoring the borrower and fear of the hazardous effect of classified assets. This approach insures the lending activity of banks. The growing popularity of credit risk securitization can be put down to the fact that banks typically use the instrument of securitization to diversify concentrated credit risk exposures and to explore an alternative source of funding by realizing regulatory arbitrage and liquidity improvements when selling securitization transactions. A cash collateralized loan obligation is a form of securitization in which assets (bank loans) are removed from a bank's balance sheet and packaged (tranche) into marketable securities that are sold on to investors via a special purpose vehicle (SPV).

iii. Compliance to Basel Accord: The Basel Accord is an international principles and regulations guiding the operations of banks to ensure soundness and stability. The Accord was introduced in 1988 in Switzerland. Compliance with the Accord means being able to identify, generate, track and report on risk-related data in an integrated manner, with full audit ability and transparency and creates the opportunity to improve the risk management processes of banks. The New Basel Capital Accord places explicitly the onus on banks to adopt sound internal credit risk management practices to assess their capital adequacy requirements (Chen & Chen, 2012).

iv. Adoption of a sound internal lending policy: The lending policy guides banks in disbursing loans to customers. Strict adherence to the lending policy is by far the cheapest and easiest method of credit risk management. The lending policy should be in line with the overall bank strategy and the factors considered in designing a lending policy should include; the existing credit policy, industry norms, general economic conditions of the country and the prevailing economic climate (Chen & Chen, 2012).

v. Credit Bureau: This is an institution which compiles information and sells this information to banks as regards the lending profile of a borrower. The bureau awards credit score called statistical odd to the borrower which makes it easy for banks to make instantaneous lending decision. Example of a credit bureau is the Credit Risk Management System (CRMS) of the Central Bank of Nigeria (CBN).

vi. Policy Strategy: Banks and other financial institutions should endeavour to have a credit policy manual which should be updated regularly to meet the changing business environment. Such credit manuals should provide rules and regulations guiding the important aspect of work being

performed within their credit department. The reason for the manual is to understand and recognize important issues and to ensure consistent thinking and action on these issues by people inside the department. One of the fundamental things to remember is that the work being done by the credit department affects many people and departments within the organization. Graham suggested that the credit policy manual should be detailed and provides guidelines in terms of the following: documentations required; department of credit analysis and format to be used; statutory requirements; approval process; credit procedure; Communication channels between headquarter, the branches and customers; Penalties for defaulters, etc. (Harcourt, 2017).

2.2 Theoretical Review

The theoretical underpinning for this study has been discussed as follows:

2.2.1 Net Income View (Theory)

The approach as suggested by David Durand, suggests that firms should borrow as much as possible in order to take full advantage of the lower cost of debt. The assumption is that the cost of debt and equity remain constant as borrowing is increased. On this basis, it would be best to borrow as much as possible in order to minimize the WACC (overall cost of capital) (Bose, 2010; Banerjee, 2010). Other words, this theory give idea for increasing market value of firm and decreasing overall cost of capital (WACC). A firm can choose a degree of capital structure in which debt is more than equity share capital. It will be helpful to increase the market value of firm and decrease the value of overall cost of capital. Debt is cheap source of finance because its interest is deductible from net profit before taxes. After deduction of interest firm has to pay less tax and thus, it will decrease the WACC (Ejem, 2026).

2.2.2. Modern Portfolio Theory (MPT)

Proposed by Markowitz (1952), Modern Portfolio Theory suggests that financial institutions can optimize returns by strategically diversifying their investment portfolios to balance risk and reward. In the context of banking, MPT implies that credit portfolios should not only aim to minimize risk but also exploit upside potential from calculated lending decisions. By diversifying loans across sectors, borrower types, and geographies, banks can reduce the probability of total loss while capitalizing on profitable opportunities (Altman & Saunders, 1998). MPT is relevant to this study because it provides a theoretical explanation for how banks can structure their credit portfolios to achieve optimal performance outcomes. Banks that recognize and strategically manage credit risk upside are essentially applying the principles of portfolio diversification and risk-return optimization advocated by MPT.

2.2.3 Risk-Return Trade-Off Theory

The Risk-Return Trade-Off Theory postulates that higher potential returns are generally associated with higher risk (Fama & French, 2002). In banking, this means that loans with higher risk levels may yield higher interest income if properly managed. The upside potential inherent in credit risk aligns with this theory: banks willing to take on calculated risk, supported by sound credit evaluation and monitoring systems, can achieve superior financial performance (Hull, 2018).

2.2.4 The Asymmetric Information Theory

The asymmetric information theory was introduced by Akerlof (1970) and Stiglitz & Weiss (1981). The theory argues that borrowers have better information of their financial conditions and ability to repay loans than lenders (banks). This creates two major problems in credit management:

adverse selection (lending to uncreditworthy borrowers) and moral hazard (borrowers engaging in high-risk activities after receiving loans). This theory underscores the importance of credit scoring models, financial statement analysis, and borrower monitoring in maintaining a sound loan portfolio. The implications are that when banks cannot accurately assess borrower risk, they may issue loans that increase the likelihood of default, resulting in higher NPLs. Also, it suggests that banks should adopt credit screening techniques in order to mitigate moral hazards and the use of credit scoring models and collateral requirements can help reduce information asymmetry.

2.2.5. Loan Pricing Theory

Loan pricing theory examines how banks set interest rates on loans based on risk levels, funding costs, market competition, and regulatory requirements. The goal is to ensure that loans are priced efficiently to cover default risks, operational costs, and capital requirements, while remaining attractive to borrowers. The Loan Pricing Theory does not have a single originator, as it has evolved over time through contributions from multiple economists and financial theorists. However, its foundation is built upon key theories related to credit markets, risk assessment, and interest rate determination. (Stiglitz & Weiss, 1981; Black & Scholes, 1973; Merton, 1974). Loan pricing directly impacts bank profitability, liquidity, and risk exposure. A well-priced loan generates stable income, while underpriced loans lead to low margins and high risk. While an overpriced loan may drive away creditworthy borrowers, reducing loan volume. Likewise, in Liquidity Management, if loans are priced too low, banks may face liquidity shortages. Hence, improper loan pricing can result in high default rates, increasing Non-Performing Loans (NPLs). Banks cannot always set high interest rates. Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship. If banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behaviour or so-called borrower moral hazard since they are likely to take on highly risky projects or investments. From this reasoning, it is usual that in some cases we may not find that the interest rate set by banks is commensurate with the risk of the borrowers. Loan pricing theory is essential for effective credit management and bank performance. By accurately pricing loans based on risk, banks can reduce loan defaults, improve profitability and ensure financial stability.

2.2.6 Credit Risk theory

Credit risk theory was developed by Merton (1974). It was refined by Basel Committee (1999), credit risk theory explains that higher exposure to default risk negatively affects financial performance. This theory underscores the need for stringent credit control measures to minimize loan defaults and sustain profitability. Hence, the theory suggests that banks must balance risk and expected returns by using risk-based lending models, loan diversification, and proper provisioning for loan losses. Credit risk theory highlights on the relevance of the inclusion of loan loss provisions (LLP) as a risk mitigation strategy and emphasizes the importance of credit risk assessment to minimize defaults.

2.2.8 Liquidity Preference Theory

Liquidity Preference Theory was developed by John Maynard Keynes (1936) in his book 'The General Theory of Employment, Interest, and Money'. The theory explains the demand for money and the relationship between interest rates and liquidity preferences. It states that banks must

balance the need for liquidity with their lending operations. It plays a crucial role in credit management and bank performance, influencing how banks allocate resources, set interest rates, and manage liquidity risks. The theory highlights the importance of maintaining sufficient liquidity while lending. A well-managed liquidity structure ensures that banks meet withdrawal demands while sustaining profitability. The theory argues that banks must maintain an optimal balance between liquidity (cash reserves) and profitability (lending activities). Also, it pointed that banks loan-to-deposit ratio (LDR) must be optimized to prevent liquidity crises and Banks should avoid excessive lending without maintaining adequate liquidity buffers ie Banks must balance liquidity holdings with credit allocation, since High liquidity preference may lead to tight lending policies, affecting loan availability. Hence, it is crucial for credit management as it influences loan supply, interest rates, and risk-taking behavior. It affects bank performance by shaping profitability, stability, and regulatory compliance. Poor credit management can lead to excessive liquidity constraints, reducing profitability and operational efficiency (Keynes, 1936)

This study is anchored on Modern Portfolio Theory (MPT), proposed by Markowitz (1952), suggesting that financial institutions can optimize returns by strategically diversifying their investment portfolios to balance risk and reward. In the context of banking, MPT implies that credit portfolios should not only aim to minimize risk but also exploit upside potential from calculated lending decisions. By diversifying loans across sectors, borrower types, and geographies, banks can reduce the probability of total loss while capitalizing on profitable opportunities (Altman & Saunders, 1998).

2.3 Empirical Review

Here, efforts are made to review scholarly articles on the influence of credit risk management on performance of Deposit Money Banks in Nigeria. Such as Animasaun, Omotunwase, Babayanju and Bamgboye (2025) who examined the effect of credit risk management on the financial performance of listed DMBs in Nigeria from 2013 to 2022. The study employed Panel Ordinary Least Square (OLS) regression, and revealed that credit risk management has a significant effect on return on assets (ROA). The study concluded that effective credit risk management practices are crucial for enhancing the financial performance of DMBs in Nigeria and recommended that bank management focus on strengthening these practices to ensure sufficient liquidity and mitigate negative impacts on profitability. Again, Ugwu and Agada (2024) evaluated the effect of credit management practices on the financial performance of deposit money banks listed on the Nigerian Exchange Group (NGX) between 2014 and 2023. The study utilized correlation and ex-post facto research methodologies. Data analysis involved descriptive statistics and multiple regressions. Secondary data were sourced from the Central Bank of Nigeria's statistical bulletin and the Audited Annual Reports of the listed deposit money banks in Nigeria. The study used net interest margin (NIM) as a measure of bank performance, while credit risk, liquidity risk, and asset quality served as the independent variables. Firm size was also included as a control variable. The study found that that credit risk has a non-significant negative correlation with financial performance. Additionally, liquidity risk shows a significant negative correlation with financial performance, whereas asset quality demonstrates a non-significant negative correlation with the financial performance of listed deposit money banks in Nigeria.

Whereas, Saminu and Ernest (2024) investigated credit management mechanisms in quoted banks on the floor of Nigerian Exchange Group, spanning a decade, from 2013 to 2022. Net interest margin was a proxy for financial performance while the explanatory variables were proxy with; asset quality, credit risk and liquidity risk. The random effect regression result showed that,

liquidity risk had negative and significant effect on financial performance of quoted banks on the floor of Nigerian Exchange Group. This showed that, the higher the liquidity risk, the lower the performance level recorded by quoted banks on the floor of Nigerian Exchange Group. Asset quality and credit risk had negative but insignificant effect on the financial performance of quoted banks on the floor of Nigerian Exchange Group. Therefore, the study recommended that, to mitigate financial failure, quoted banks on the floor of Nigerian Exchange Group should ensure lower liquidity risk. Others are Oladele and Akinwumi (2024) who evaluated the effect of reforms and credit management on the performance of deposit money banks in Nigeria, with population comprising deposit money banks that were listed on the Nigeria Exchange Limited as of December 31st, 2023. The study employed the fixed and random effect regression and found that all variables employed for measuring credit risk management have a significant effect on financial performance of deposit money banks in Nigeria. For the operational performance, all the variables except LATD have a significant effect on operational performance of banks in Nigeria. Also, the findings indicated that reform(s) is a significant driver of bank performance in Nigeria.

Afolabi, Rotimi and Adeyemi. (2024) examined the effect of credit administration on the performance of deposit money banks in Nigeria. The research utilized three explanatory variables, namely non-performing loans, loan loss provisions, and loans and advances, to assess the impact of credit administration on the performance of deposit money banks in Nigeria. The study employed a panel data analysis approach, which involves the analysis of cross-sectional and time-series data. A sample size of five (5) deposit money banks was selected for the research study (Zenith Bank, First Bank PLC, United Bank of Africa, Guaranty Trust Bank, and Access Bank). The empirical analysis revealed that non-performing loans had a positive effect on the performance of deposit money banks in Nigeria. The results showed that total loans and advances had a negative effect on the performance of deposit money banks in Nigeria. On the other hand, the negative effect of total loans and advances on bank performance could be attributed to factors such as high default rates, inadequate risk assessment processes, or inefficient credit administration practices.

With panel data analytical tools, Ebhodaghe, Monday and Alaikhue (2023) investigated the impact of credit risk management on the profitability of DMBs in Nigeria. The study used return on assets (ROA), return on equity (ROE), and return on investment (ROI) as dependent variables. Non-performing loans (NPL) and loan loss provisions (LLP) were among the independent variables analyzed. The result of the analysis indicated that both NPL and LLP exerted negative impacts on ROA, ROE, and ROI across the models.

Olabisi, Sulaiman and Bello-Olatunji (2023) examined the influence of credit risk management on the performance of Nigeria Money Deposit Banks, where credit risk management is proxied with non-performing loans and secured loans while the dependent variable 'performance' was proxy with profit after tax margin. 13 money deposit banks were randomly selected for this study. 10 years' period starting from 2010 to 2019 were covered by the study. With Descriptive statistics and inferential statistics, it is revealed that there is negative and significant connection between non-performing loans ratio and profit after tax margin. Whereas, there is a positive significant relationship between secured loans and profit after tax margin of quoted DMB in Nigeria.

Ejem, Okore and Effe-Nnamdi (2023) examined the relationship between credit risk management and performance of deposit money banks in Nigeria. Error Correction Mechanism was employed to estimate the various models specified. It was found among others that non-performing loans (credit risks) exert significant impact on bank performance within the period of the study, while average liquidity ratio insignificantly relates to bank performance within same period.

Odion, Yusuf and Shuaibu (2022) examined the effect of credit risk management on the profitability of deposit money banks in Nigeria using non-performing loans, loan loss provision and growth in interest earnings on loans and advances as proxies for credit risk management for a period of 5 years, between 2015 and 2021, the impact of these proxies on the profitability of posit money banks was analyzed in this study using correlation and regression analysis. Based on the empirical analysis, the study found a positive non-significant relationship between non-performing loans and profitability. The study also found a positive insignificant relationship between loan loss provision and bank profitability. On the contrary, the study found a negative but significant relationship between growth in interest earnings on loans and advances and the profitability of deposit money banks. Kipkoech and Bogongo (2023) ascertained the impact of credit management on financial performance of commercial banks in Eldoret Kenya; focused effects of credit terms, credit standards and collection policy on financial performance of commercial banks operating in Eldoret. The data collected was analyzed through both descriptive and inferential statistics. In the study, the descriptive statistics comprised of means, average and standard deviation whereas the inferential statistics comprised of regression correlation analysis. The results of the study established that credit terms, credit standards and collection policy affects financial performance of commercial banks in Eldoret to a positive and significant level.

Olurotimi and Isibor (2020) examined the impact of credit risk management on the financial performance of Nigerian deposit money banks over a 10-year period from 2010 to 2020. Five deposit money banks were used: First Bank Plc, Zenith Bank Plc, Access Bank Plc, Guarantee Trust Bank Plc, and United Bank of Africa (UBA) Plc. Equity returns measured bank performance while credit risk was explained using non-performing credits, capital adequacy ratio, plus provision for credit loss. Fixed plus Random panel regression was used to analyze the panel data and the Hausman test selected the fixed regression for discussion. The findings revealed that capital adequacy ratio and loan loss provision had a significant positive impact on bank performance, while non-performing loans had a significant negative effect.

Using panel regression, Omorokunwa and Ogbeide (2020) investigated effect of credit risk management on the profitability of quoted deposit money bank in the Nigerian capital market. The return on the asset was used as a proxy for bank performance (dependent variable) and the bank nonperforming loan ratio, bank loan to deposit ratio as well as bank leverage were used as the independent variables. The result of the empirical tests showed a significant relationship between credit management and bank performance. The bank non-performing loan ratio had an indirect (negative) relationship with the performance of the banks. On the other hand, a bank loan to deposit ratio had a direct impact on the performance of banks in Nigeria. However, bank leverage did not have any impact on the performance of the banks in Nigeria.

Ogbulu and Gbalam (2016), investigated the impact of credit risk management on the performance of deposit money banks in Nigeria using the ECM and Granger causality techniques in addition to the IRF and VDC methodology. The analysis of the study revealed that credit risk management indicators under study significantly impact on the performance of deposit money banks measured as return on equity, return on total assets, and return on shareholders' fund respectively. However, the findings reported no evidence of significant granger causality relationship between the various credit risk management indicators and the various measures of performance except for a uni-directional granger causality relationship from ROE to RNPD and from ROTA to RNPS respectively.

3. Methodology

3.1 Sources of Data

The study employed aggregated data collected from Nigeria Deposit Insurance Corporation (NDIC) for credit risk proxied by non-performing loan to total loan (NPLTL) (non-performing loans) and average liquidity ratio (ALR) and return on assets (a proxy of bank performance) from 1990 to 2023.

3.2 Technique of Data Analysis

In this study, the following tools are employed in the analysis and estimation; Descriptive Statistics is employed to describe the variables. In testing for multicollinearity, the correlation matrix is engaged. Ordinary Least Square (OLS) is employed to examine the global utility of the model. Augmented Dickey Fuller (ADF) unit root test is used to check the stationarity of the variables, Autoregressive Distributive Lags (ARDL) is engaged for estimating the models.

3.3. Model Specification

The function model is as follows.

Bank Performance = f (Credit Risk) (1)

Bank Performance = f (Non-performing Loan to Total Loal, Average Liquidity Ratio) (2)

ROA = f (NPLTL, ALR) (3)

Explicitly;

$$\ln ROA = \alpha_0 + \alpha_1 \ln ROA_{t-1} + \alpha_2 \ln NPLTL + \alpha_3 \ln NPLTL_{t-1} + \alpha_4 \ln ALR + \alpha_5 \ln ALR_{t-1} + e_{t-1} \quad (4)$$

Where, ROA = Return on Asset (Bank Performance)

NPLTL = Non-performing Loan to Total Loal

A LR = Average Liquidity Ratio

e_t = Stochastic Elements

3.4. Apriori Expectation

It is expected that ROA = f (NPLTL, ALR), $\mathbf{f_1}$, $\mathbf{f_2} > \mathbf{0}$. $\mathbf{f_1}$, $\mathbf{f_2}$ are the coefficients of NPLTL, and ALR respectively. It is expected that credit management will significantly affect the performance of deposit money banks.

4. Data Presentation and Analysis

Data on Return on asset (ROA), a proxy of Bank performance, non-performing loan to total loan (NPLTL) and Average liquidity ratio (ALR) for credit risk from Nigeria Deposit Insurance Corporation (NDIC) spanning 1990 to 2023.

The time series plot of the data is shown in figure I below.

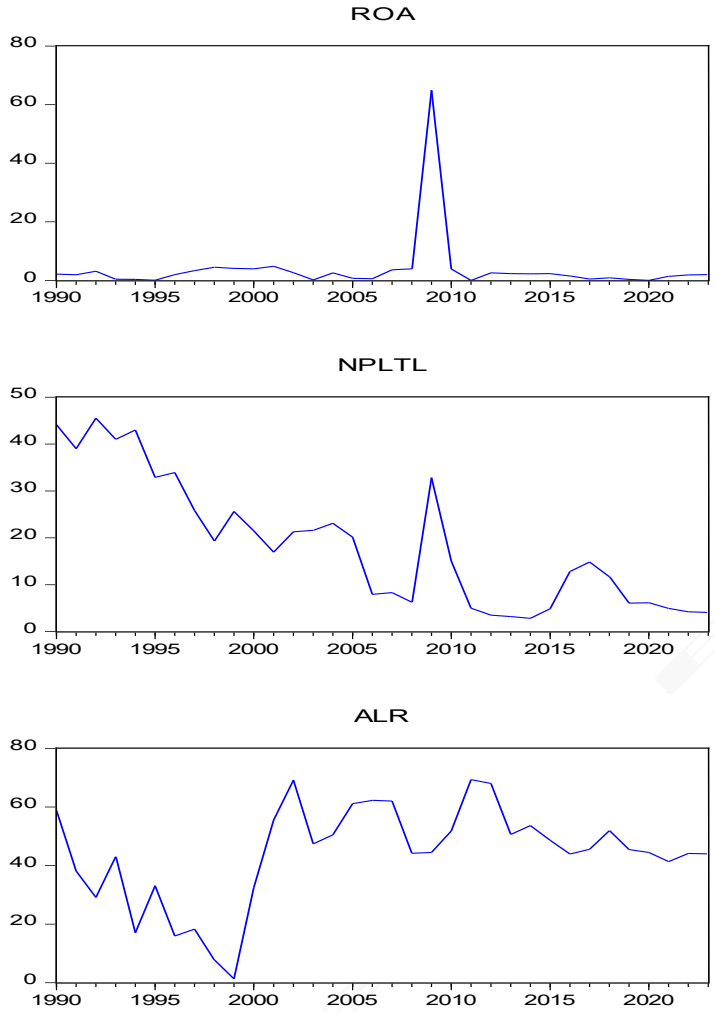


Figure 1: Trend Analysis of ROA, NPLTL and ALR

The figure above shows that all variables (ROA, NPLTL and ALR) trended upward and downward, sometimes undulation over the period of the study, except ROA that was trended smoothly with sharp upshoot in 2010, indicating non-stationarity of the variables as expected. In all, the variables there are periods of troughs and peaks. It can be recognized as outliers in the years.

4.2. Descriptive Statistics

Descriptive statistics provide an overview of the variables used in the study: non-performing loan to total loan (NPLTL) (non–performing loans) and average liquidity ratio (ALR) and return on assets (a proxy of bank performance) Return on assets (a proxy of bank performance) as seen on table 4.2 below. The variables recorded average of the following: 3.88%, 18.5% and 43.93%.for ROA, NPLTL, and ALR respectively. This shows ALR is higher than other variables, while ROA is the least. The risk (standard deviation) inherent in each of the variables are 10.87%, 13.66% and 16.8% for ROA, NPLTL, and ALR respectively. These also suggest that ALR is the most volatile with ROA recording the least. ROA, and ALR showed Kurtosis greater than 3, suggesting a leptokurtic distribution, which is excess from the normal distribution. NPLTL has Kurtosis lower than 3 indicating platykurtic distributions, suggesting that small shocks of either sign are likely to present itself with economic volatility within the scope of the study. Jarque-Bera normality distribution test statistical probability values show that ROA has abnormal distribution while

NPLTL and ALR are normally distributed. ALR has skewness with negative coefficients, confirming asymmetry in the series. It is important to point out that the skewness is negatively skewed suggesting the distribution has a long-left tail. This shows large negative movements in interest rate are not normally followed by the same magnitude of positive movement, whereas ROA and NPLTL have positive skewness, suggesting otherwise. The wide differences in Maximum and minimum values for all the variables show conspicuous fluctuations within the scope of the study.

Table 4.2: Descriptive Statistics of ROA, NPLTL, and ALR

	ROA	NPLTL	ALR
Mean	3.887059	18.50147	43.93588
Median	2.080000	15.97000	44.95000
Maximum	64.92000	45.50000	69.29000
Minimum	0.020000	2.810000	1.310000
Std. Dev.	10.87897	13.66873	16.80801
Skewness	5.417746	0.588939	-0.770122
Kurtosis	30.93257	2.102441	3.217372
Jarque-Bera	1271.652	3.106764	3.427771
Probability	0.000000	0.211531	0.180164
Sum	132.1600	629.0500	1493.820
Sum Sq. Dev.	3905.617	6165.527	9322.798
Observations	34	34	34

4.3 Global Utility Test:

In macroeconomic analysis, it is important to check the global utility or usefulness of the specified models. To achieve this, the researchers engaged correlation matrix and ordinary least square.

Multicollinearity Test

Table 4.3 below reveals the correlation of the variables. The correlation matrix shows the linear relationships between credit risk and bank performance indicators.

Table 4.3: Correlation Matrix

	ROA	NPLTL	ALR
ROA	1	0.182532	-0.025086
NPLTL	0.182532	1	-0.437929
ALR	-0.025086	-0.437929	1

The correlations between NPLTL, ALR and ROA are -0.025086 and 0.182532 respectively, between NPLTL and ALR is -0.437929. The highest value here is 0.182532, suggesting that the variables are not linearly correlated. Positive and significant correlations between NPLTL and performance indicators suggest that banks with higher credit ratios tend to achieve better profitability. Therefore, the researchers have sufficient evidence to say no presence of multicollinearity in the model.

The researchers now proceeded to check the global usefulness of our model by using Ordinary Least Square (OLS) method as shown in Table 4.4 below. Table 4.4 below depicts the Ordinary Least Square (OLS) estimated model for the relationship between credit risk variables and performance of deposit money banks.

Table 4.4: Ordinary Least Square (OLS) Methods

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPLTL	0.168933	0.156034	1.082667	0.2873
ALR	0.043926	0.126891	0.346170	0.7316
C	-1.168361	7.555129	-0.154645	0.8781
R-squared	0.037041	Mean dependent var		3.887059
Adjusted R-squared	-0.025086	S.D. dependent var		10.87897
S.E. of regression	11.01458	Akaike info criterion		7.720414
Sum squared resid	3760.950	Schwarz criterion		7.855093
Log likelihood	-128.2470	Hannan-Quinn criter.		7.766343
F-statistic	0.596214	Durbin-Watson stat		1.778857
Prob(F-statistic)	0.557088			

From the table above, Durbin-Watson statistics is 1.778857, showing absence of autocorrelation. But F-statistic value is 0.596214 with probability value of 0.557088 showing that null hypothesis cannot be rejected; there is overall insignificance and invalid for comparison. Therefore, cannot be used for further analysis and policy formulation.

4.4. Stationarity/Unit Root Test:

This is statistical valid procedure in macroeconomics time series analysis that assists to determining the best estimation method for the data. It is due to the peculiarities of time series data. To do this the popular Augmented Dickey Fuller (ADF) unit root/stationary test is used as shown below.

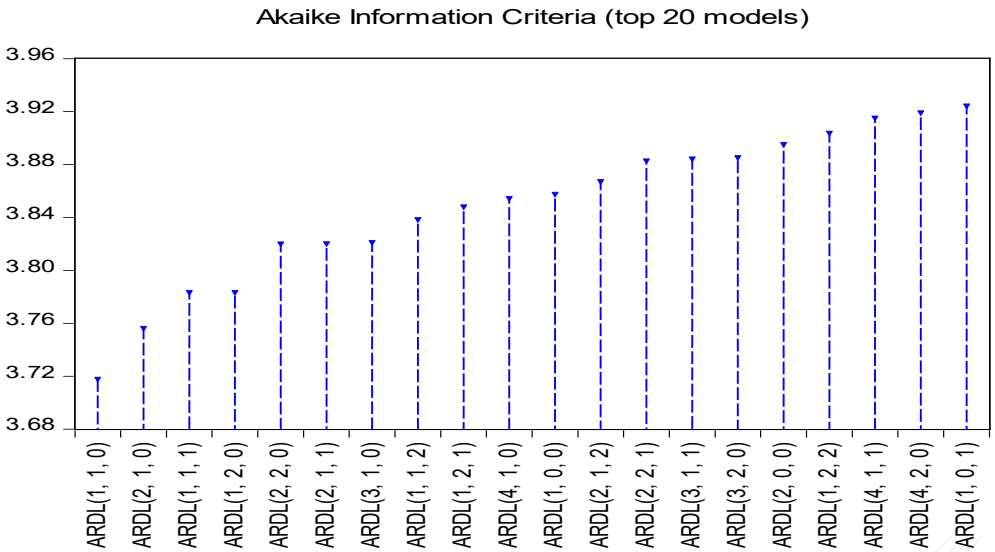
Table 4.5 Augmented Dickey-Fuller (ADF) Unit Root Test

Variables	Max. Lag	ADF Statistic	Probability	Remarks
LnROA	8	-4.412087	0.0014	@1(0)
LnNPLTL	8	-5.442689	0.0001	@1(1)
LnALR	7	-4.036502	0.0042	@1(1)

Source: Authors' computation with E-view 10

Table 4.5 above reveals the summary of stationarity test for both level and first difference data. The results indicate that NPLTL and ALR are integrated at order one, while ROA is integrated at level.

4. 5: Model Selection



Authors' computation output using E-view 10.

Figure 2: Model Selection based on AIC

Figure 2 above depicts ARDL model selection based on Akaike Information Criterion (AIC). Information criteria select models that minimize their values. From figure 2 above, the best model, according to AIC, is an ARDL (1, 1, 0). This implies that a model that includes lagged value of the dependent variables as an additional regressor is the best description of researchers' data.

The researchers therefore proceed to estimating the models with ARDL, aimed at proffering dynamic solution to the static problem of time series. This is shown in table 4.6 below.

4.6: Model Estimation and Results

Having satisfied with all previous tests, the researchers confidently proceeded to estimating the relationship between performance of DMBs (ROA) and credit risk variables (NPLTL and ALR) in Nigeria with ARDL framework.

Table 4.6: ARDL Estimation Results

Method: ARDL				
Selected Model: ARDL(1, 1, 0)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNROA(-1)	0.214011	0.173039	1.236780	0.2261
LNNPLTL	1.408388	0.531274	2.650963	0.0129
LNNPLTL(-1)	-1.350420	0.532009	-2.538343	0.0168
LNALR	0.039246	0.147302	0.266433	0.7918
R-squared	0.241239	Mean dependent var		0.287618
Adjusted R-squared	0.162747	S.D. dependent var		1.541801
S.E. of regression	1.410772	Akaike info criterion		3.639364
Sum squared resid	57.71807	Schwarz criterion		3.820759
Log likelihood	-56.04951	Hannan-Quinn criter.		3.700398
Durbin-Watson stat	1.883684			

Authors' computation output using E-view 10.

Table 4.6 above reveals that ROA has p-value of 0.2261 suggesting that ROA is not autoregressive. It is statistically confirmed evidence suggesting that ROA in the past cannot predict future events in the DMBs in Nigeria. It conspicuously revealed that NPLTL has coefficient of 1.408388 with p-value of 0.0129, suggesting NPLTL has positive and significant relationship with ROA at 5% significant level, but NPLTL at lag 1 has coefficient of -1.350420 and p-value of 0.0168, indicating NPLTL negatively and significantly impacted ROA afterwards. ALR insignificantly impact ROA. The adjusted R-square is 0.162747 suggesting that the estimated ARDL (1, 1, 0) model is moderately fitted, with the explanatory variable jointly accounting for 16.2% of total variation of ROA. Durbin-Watson Statistics (Dw) is 1.883684 telling the researchers not to bother about autocorrelation. The researchers can boldly say that the model did a good job to describe the relationship between credit risk variables and DMBs in Nigeria.

4.7: Test of long run Relationships between Credit risk variables and DMBs.

Table 4.7: ARDL Bound Cointegration Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	7.819866	10%	2.17	3.19
K	2	5%	2.72	3.83
		2.5%	3.22	4.5
		1%	3.88	5.3

Authors' computation output using E-view 10.

Table 4.7 above depicts ARDL Bound cointegration Test examining if there is long run relationship in the model. From the bound test, it can be seen that the F-Statistics is 7.819866 which is greater than all the critical values at 1(0) and 1(1) bounds at 1% to 10%. These reject the null hypothesis of no levels of relationship. With this result the researchers have enough evidence to pronounce a long run relationship between DMBs performance proxied by Return on Asset (ROA) and Credit risk variables in Nigeria

4.8: Short run and long run impact of Credit risk Variables on Bank Performance

Table 4.8: Cointegrating and Long run Form

Conditional Error Correction Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNROA(-1)*	-0.785989	0.163692	-4.801632	0.0000
LNNPLTL(-1)	0.057968	0.222177	0.260909	0.7960
LNALR**	0.039246	0.162498	0.241517	0.8109
D(LNNPLTL)	1.408388	0.514165	2.739177	0.0104
Levels Equation				
Case 1: No Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNNPLTL	0.073752	0.233940	0.315259	0.7548
LNALR	0.049932	0.185412	0.269305	0.7896

EC = LNROA - (0.0738*LNNPLTL + 0.0499*LNALR)	

Authors' computation output using E-view 10.

Table 7 below reveals that NPLTL has positive and significant relationship with performance in the short run and not in the long run.

4.9: Correction Short Run Error Test

Table 4.9: ARDL Error Correction Regression

ARDL Error Correction Regression				
Dependent Variable: D(LNROA)				
Selected Model: ARDL(1, 1, 0)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNNPLTL)	1.408388	0.482261	2.920383	0.0067
CointEq(-1)*	-0.785989	0.156955	-5.007744	0.0000
R-squared	0.508101	Mean dependent var		-0.002332
Adjusted R-squared	0.492234	S.D. dependent var		1.914887
S.E. of regression	1.364505	Akaike info criterion		3.518152
Sum squared resid	57.71807	Schwarz criterion		3.608849
Log likelihood	-56.04951	Hannan-Quinn criter.		3.548669
Durbin-Watson stat	1.883684			

Authors' computation output using E-view 10.

As shown in the output in table 4.9 below, error correction equation, CointEq(-1) has expected negative sign of -0.785989 and p-value of 0.0000 indicating the model is statistically significant and correctly signed. It can also be seen that 78.5% of errors from the equilibrium can be corrected in the next period, and speed of adjustment is 78.5%.

4.10. Residual Diagnostic and Stability Tests

This study used Serial correlation test, Heteroscedasticity test and Recursive Estimates of the CUSUM (Cumulative Sum Control) Test for diagnostic and stability test.

Table 4.10: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.238926	Prob. F(2,27)	0.7891
Obs*R-squared	0.573885	Prob. Chi-Square(2)	0.7506

Table 4.11: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.288111	Prob. F(4,28)	0.8832
Obs*R-squared	1.304545	Prob. Chi-Square(4)	0.8606

The results in tables 4.10 and 4.11 revealed of both Serial correlation and Heteroskedasticity tests showed that F-statistic and Obs*R-squared p-values are greater than the 5% level of significance, suggesting absence of serial correlation and no Heteroskedasticity in the model.

4.10. Stability Tests

This study used Recursive Estimates of the CUSUM (Cumulative Sum Control) Test for stability test.

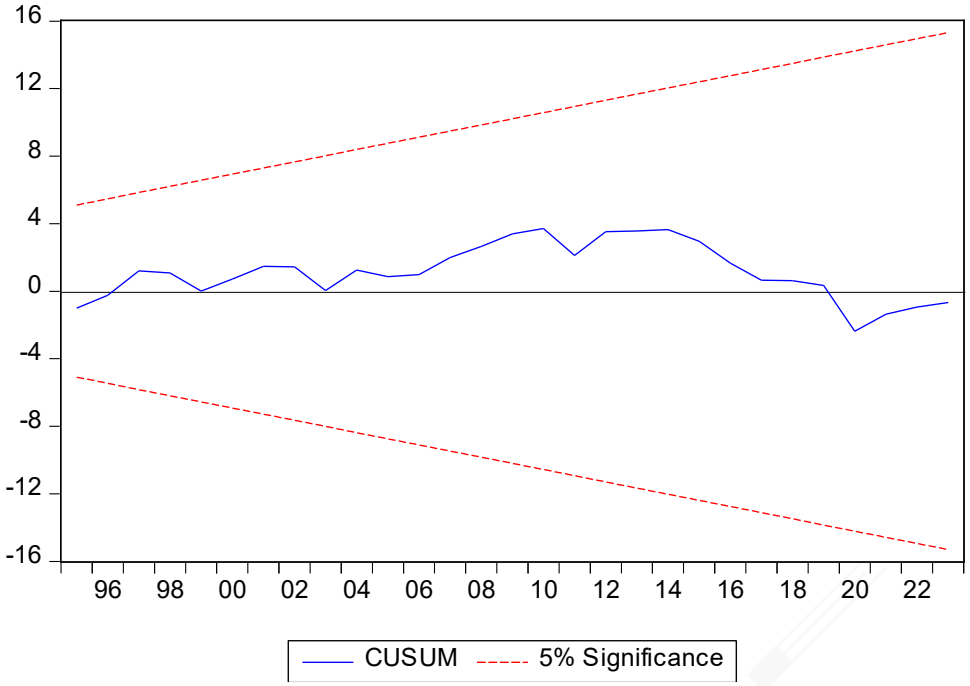


Figure 3: Recursive Estimates of the CUSUM (Cumulative Sum Control) Test

Recursive Estimates of the CUSUM in figure 3 above showed that the blue line falls between the two red lines showing the 5% significance level boundaries. This confirmed that the model is stable.

4.11 Discussion of findings

The findings of this study indicate a positive and significant relationship between credit risk with performance of deposit money bank in the short run, but has a negative and significant relationship after one year. The shows that credit risk has a significant relationship with the performance of deposit money bank. These results corroborate the findings of Animasaun et al (2025), Oladele and Akinwumi (2024), Afolabi et al (2023), Ejem et al (2023), Omorkunwa and Ogbeide (2020), and Ogbulu and Gbalam (2016) and contradict the findings of Ugwu and Agada (2024) and Saminu and Ernest (2024). However, the finding affirms that lending portfolio contributes materially to the deposit money banks' achievement and fulfilment of the objective of profitability by providing a higher return than other financial assets (Nwankwo, 1991). This is also confirmed in the correlation matrix, where there is a positive and significant correlation between credit risk and performance indicators, suggesting that banks with higher credit ratios tend to achieve better profitability. To achieve that, credit extended to the customers of the DMBs must be monitored and ensure prompt redemption of such loan. Therefore, this study confirmed that lending portfolio is important to the growth, liquidity and profitability of the banks. According Nawankwo (1991), it helps materially to achieving and fulfilling the banks' objective of profitability by producing the highest return of all the items of the balance sheet. Again, helps banks to satisfy the legal and regulatory obligations of the monetary authority in their transmission mechanism. Also, create and maintain good relationship between banks and the depositors. Finally, it is a vehicle that helps to satisfy the credit needs of the society and the credit market. Analysis of the data suggests that banks effectively manage credit risk by identifying and exploiting profitable lending opportunities experience enhanced financial performance, as measured by return on assets (ROA). This aligns with the

assertions of Altman and Saunders (1998) and Hull (2018), who argue that risk, when properly managed, is a dual-edged phenomenon offering both threats and opportunities.

These findings corroborate Net Income View (Theory) suggested by David Durand, that firms should borrow as much as possible in order to take full advantage of the lower cost of debt. The assumption is that the cost of debt and equity remain constant as borrowing is increased. On this basis, it would be best to borrow as much as possible in order to minimize the WACC (overall cost of capital) (Ejem, 2026; Bose, 2010; Banerjee, 2010). It also corroborates Modern Portfolio Theory (MPT) proposed by Markowitz (1952), that financial institutions can optimize returns by strategically diversifying their investment portfolios to balance risk and reward. In the context of banking, MPT implies that credit portfolios should not only aim to minimize risk but also exploit upside potential from calculated lending decisions. By diversifying loans across sectors, borrower types, and geographies, banks can reduce the probability of total loss while capitalizing on profitable opportunities (Altman & Saunders, 1998). MPT is relevant to this study because it provides a theoretical explanation for how banks can structure their credit portfolios to achieve optimal performance outcomes. Banks that recognize and strategically manage credit risk upside are essentially applying the principles of portfolio diversification and risk-return optimization advocated by MPT.

5. Conclusion and Recommendations

This study concludes that credit risk, often viewed solely as a threat, contains substantial upside potential that can positively influence the performance of deposit money banks in Nigeria. Banks that strategically manage credit risk through effective appraisal, monitoring, and portfolio diversification can achieve superior financial outcomes while minimizing losses. The research highlights that the relationship between credit risk and bank performance is not linear; rather, it depends on managerial capacity, institutional policies, and responsiveness to macroeconomic conditions. Overall, leveraging the upside potential of credit risk offers Nigerian banks a pathway to improved profitability and sustainable competitive advantage.

Based on the findings of this study, the following recommendations are proposed:

i. Deposit money banks should adopt a dynamic credit risk management practice; flexible risk management frameworks that allow them to exploit profitable lending opportunities while controlling potential losses.

ii. Deposit money banks should enhance credit appraisal systems where rigorous assessment of borrowers' creditworthiness and continuous monitoring of loan performance can maximize upside potential.

iii. Deposit money banks should diversify lending portfolios by spreading credit exposure across sectors and borrower profiles, banks can reduce risk concentration and enhance returns.

iv. Deposit money banks should have regular training and capacity building, where bank staff should be trained in modern risk assessment and management techniques to ensure effective identification and utilization of upside opportunities.

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