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An Analysis of Credit Risk Management and the Financial Performance of Deposit Money Banks in Nigeria: An ARDL Analysis of Access Bank Plc, Nigeria

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ABSTRACT
This study examines the short-run and long-run effects of credit management on the financial performance of Nigerian commercial banks from 2015 to 2025. Using an Autoregressive Distributed Lag (ARDL) model, the analysis incorporates key credit risk indicators; Non-Performing Loans (NPLs) and Loan Loss Provisions (LLPs) alongside macroeconomic variables such as inflation and exchange rate. The findings reveal that NPLs and LLPs exert significant negative effects on Return on Assets (ROA) and Return on Equity (ROE) in both the short and long run, demonstrating that deteriorating asset quality and rising provisioning burdens weaken bank profitability. Macroeconomic variables show mixed effects: inflation negatively influences long-run profitability, while exchange-rate depreciation exhibits a positive but context-dependent impact on performance. The error-correction terms confirm a stable adjustment toward long-run equilibrium. Diagnostic tests further validate the robustness of the model. Overall, the study concludes that effective credit management is essential for strengthening bank performance in Nigeria. It recommends enhanced loan screening, stricter compliance with prudential guidelines, improved monitoring systems, and policy efforts to stabilize inflation and exchange-rate volatility.

Keywords: *Credit Risk management, financial performance, Return on Asset, Return on Equity, Loan.*

1. INTRODUCTION
Credit management is vital to the financial stability and long-term sustainability of banks, especially in developing economies like Nigeria. It involves key processes such as credit appraisal, disbursement, monitoring, provisioning, and recovery, all of which shape profitability, liquidity, and overall institutional resilience (Olawale & Garwe, 2022; Amos et al, 2021). Since banks serve as major intermediaries that channel funds to productive sectors—including agriculture, manufacturing, and Small and Medium Enterprises (SMEs) —the effectiveness of credit management directly influences how well these sectors perform and how efficiently financial resources circulate within the economy (Ukpong et al, 2022).

In Nigeria, the scale and importance of credit intermediation are evident, with over ₦27.7 trillion disbursed to the private sector in 2022, supporting a 3.4 percent Gross Domestic Product (GDP) growth (Central Bank of Nigeria CBN, 2023). Empirical evidence shows that bank credit significantly drives industrial output and transmits monetary policy through its effects on investment, consumption, and aggregate demand (Uford, 2017; Sanusi & Oyewale, 2022; Olabamiji & Michael, 2018). However, high levels of non-performing loans (NPLs) and

insufficient loan loss provisions continue to undermine banks' ability to lend sustainably, weakening financial performance and intensifying GDP growth volatility. As credit remains a major component of asset growth in Nigerian banks, ineffective management poses significant systemic risks (Charles & Uford, 2023; Asuquo et al, 2024; Akpan et al, 2024).

According to the Nigerian Deposit Insurance Cooperation (NDIC, 2025) industry-wide NPL ratio increased from 4.8 percent in 2020 to 6.2 percent in 2023, exceeding the 5 percent regulatory threshold. Sector-specific data showed that the manufacturing and general commerce sectors contributed over 36 percent of the total NPL volume, highlighting weak risk assessment and recovery processes in key growth sectors. Olanrewaju et al., (2023) reveal that high NPLs force banks to increase loan loss provisions, reducing available credit. As such credit growth decline from 14.2 percent in 2021 to 8.7 percent in Quarter three 2023, revealed the negative impact of NPL on bank performance.

Gambo et al. (2019) attributed poor credit risk management to the failure of several Nigerian banks during the 2008–2010 banking crisis and remains a systemic risk today. Inefficient credit management systems, especially in rural and state-level banks, have led to a growing number of distressed financial institutions, some of which are unable to meet liquidity requirements or recover from insolvency risks. Similarly, Udegbunam and Ezeaku (2022) report that banks with NPLs above 10 percent have 30 percent lower profitability. Poor credit management exacerbates inflation to increase to 28.9 percent in 2023 and currency depreciation to 70 percent in 2023, reducing productive sector lending and debt servicing for businesses (CBN, 2023).

In emerging and developed economies alike, credit management frameworks differ significantly in their robustness. In developed economies such as the U.S. and UK, the adoption of advanced credit scoring models, centralized credit databases, and proactive risk monitoring systems has mitigated many of the problems experienced in credit administration. In contrast, banks in Nigeria and similar economies often rely on outdated or manually intensive credit appraisal procedures, heightening their vulnerability to credit defaults and losses (Uwuigbe, 2021; Etim & Uford, 2019).

The core research problem addressed in this study is the unresolved and persistent tension between credit management practices and bank performance in Nigeria. While prior studies have acknowledged this relationship, the mechanisms through which credit management affects financial performance remain inadequately explored, especially within the dynamic and volatile context of emerging economies. This paradox where credit simultaneously drives and diminishes bank performance remains inadequately explored in the empirical literature. As such, Kolapo et al. (2012) and Nzotta (2004) reveal that poor credit risk management substantially contributes to asset quality and bank profitability deterioration. Similarly, Samuel (2015) emphasized that credit risk given its dominant share in bank portfolios has a disproportionately adverse effect on financial outcomes when mismanaged. Bass (1990) and Pandey (2010) argue, that ineffective credit management not only disrupts cash flow and liquidity but also impairs the capacity of banks to generate sustainable income, eventually threatening their going concern status.

This study addresses existing gaps in the literature by empirically examining both the short-run and long-run effects of credit management on the financial performance of Nigerian commercial banks from 2015 to 2025. Unlike earlier research that relied on cross-sectional designs or simple regression techniques (e.g., Kolapo et al., 2012; Gambo et al., 2019), this study adopts a comprehensive, multi-variable quantitative approach using longitudinal data to better capture

performance trends over time. SWOT Analysis is a strategic planning tool used to identify and analyze the internal and external factors that can impact a startup's success (Edet et al., 2024; Akpan, 2016). It advances the literature by integrating key credit management indicators—non-performing loans (NPLs) and loan loss provisions (LLPs)—while simultaneously assessing their combined influence on both major profitability measures, ROA and ROE, which many previous studies overlooked.

The study further incorporates inflation and exchange rate as control variables to reflect systemic influences on bank performance, acknowledging that credit risk interacts with macroeconomic conditions. Prior evidence shows that high NPLs and rising LLPs substantially weaken financial performance and reduce credit supply (Udegbunam & Ezeaku, 2022; Olanrewaju et al., 2023). To rigorously capture these dynamics, the study employs the Autoregressive Distributed Lag (ARDL) model, which accommodates mixed stationarity levels and distinguishes between short-term shocks and long-term equilibrium relationships. This approach effectively addresses endogeneity and autocorrelation issues common in macro-financial data, offering a more accurate assessment of how credit management practices shape bank performance over time.

Statement of the problem

The Nigerian banking sector plays a pivotal role in economic growth by facilitating financial intermediation and credit allocation to key sectors. However, credit risk remains a major threat to the profitability and stability of banks in Nigeria, particularly the rise in non-performing loans (NPLs) and inadequate loan loss provisions (LLPs), which exceeded the Central Bank of Nigeria's 5 percent regulatory threshold, reaching 6.2 percent in 2023 (NDIC, 2023). The deterioration in asset quality and inadequate loan loss provisioning, force banks to divert substantial resources from income-generating activities to cover potential defaults. These challenges have direct consequences on bank performance indicators such as return on assets (ROA) and return on equity (ROE), which ultimately undermine the sector's ability to support economic development.

While empirical studies by Kolapo et al., (2012); Ajayi and Akinlo, (2022) acknowledge the link between credit risk and bank performance, these studies rely on static models that do not capture the evolving short- and long-term impacts of credit management on financial performance, while also isolating credit risk proxies. Moreover, there is limited empirical evidence on how macroeconomic variables like inflation and exchange rate fluctuations interact with credit management to influence bank profitability. The dynamic nature of Nigeria's economic environment, characterized by currency volatility and inflationary pressures, makes this oversight particularly problematic. Without a comprehensive analysis that accounts for both micro-level credit controls and macroeconomic conditions, banks and policymakers lack the necessary insights to develop effective risk mitigation strategies. Edet et al. (2024) stated that SWOT Analysis is a strategic planning tool used to identify and analyze the internal and external factors that can impact a startup's success.

The problem is further exacerbated by methodological limitations in prior studies relying on static models that fail to distinguish between short-term shocks and long-term equilibrium relationships in credit risk dynamics. As such while the COVID-19 pandemic caused NPLs to spike to 7.2 percent in 2020 (CBN, 2021), the long-term effects of such shocks on bank capital adequacy and profitability remain unclear. Similarly, the disproportionate impact of credit risk on shareholder returns (ROE) compared to overall asset efficiency (ROA) warrants deeper investigation. These

knowledge gaps hinder the development of targeted interventions that could enhance credit risk management and strengthen the resilience of Nigeria's banking sector.

Addressing these issues is critical for several reasons. First, inefficient credit management reduces banks' capacity to extend loans to productive sectors, stifling economic growth. Second, persistent weaknesses in asset quality may trigger systemic risks, as witnessed during the 2008-2010 banking crisis. Third, without robust empirical evidence, regulatory responses may fail to address the root causes of credit risk in Nigeria's unique operating environment. This study seeks to bridge these gaps by providing a comprehensive analysis of how credit management practices, moderated by macroeconomic conditions, influence the financial performance of Nigerian banks. By focusing on the period 2015 to 2024, the study captures both pre- and post-pandemic dynamics, thereby offering a more comprehensive view of the evolving relationship between credit management and bank performance in Nigeria.

2. LITERATURE REVIEW

Credit management refers to the comprehensive set of strategies, policies, and processes that banks employ to evaluate, monitor, and recover credit facilities in a manner that balances profitability, liquidity, and risk exposure. At the heart of this function are two widely recognized indicators Non-Performing Loans (NPLs) and Loan Loss Provisions (LLPs) which serve as key metrics in assessing the quality of a bank’s credit portfolio. NPLs are loans whose principal or interest payments have remained unpaid for 90 days or more, signalling deterioration in asset quality. The goal of microcredit is to enable individuals to generate income and improve their economic situation, (Ekaetor, 2026). LLPs, conversely, are reserves set aside by banks to cushion the effect of expected loan defaults, directly impacting profitability and shareholder returns. Together, these metrics provide an empirical foundation for evaluating how effectively banks manage credit risk and its implications for overall financial performance.

According to Appa (2021), credit management is the structured effort to acknowledge, evaluate, and mitigate credit risk using managerial resources and internal controls. It goes beyond mere approval of loan applications; it includes the full cycle of credit operations, starting with pre-lending inquiries and credit assessments, extending through loan disbursement and supervision, and culminating in recovery and resolution efforts. Shekhar (2024) further emphasizes that inadequate credit management often leads to increased costs, erosion of funds, and a reduction in the bank's flexibility to reallocate capital into other productive areas. Moreover, large credit facilities, when poorly structured or monitored, carry higher default risks, which in turn restrict the institution’s lending capacity, dampen earnings stability, and disrupt capital flow. Inflation happens when the prices of goods and services rise, which reduces the purchasing power of money (Edet et al., 2024).

In operational terms, credit management encompasses a systematic framework through which banks:

a) Evaluate borrower creditworthiness,
b) Monitor and control loan performance,
c) Mitigate risks of default through proactive measures, and
d) Recover delinquent loans using structured recovery mechanisms.

This framework integrates institutional credit policies, regulatory compliance standards, and risk assessment tools, all of which are designed to minimize default probability while supporting sustainable bank performance.

Components of Credit Risk Management

The key components of credit management are as described below.

a) *Credit Appraisal and Risk Assessment:* At the core of credit evaluation lies the well-established 5Cs of credit analysis—Character, Capacity, Capital, Collateral, and Conditions. These variables are used to assess not just the ability of the borrower to repay, but also the economic context that may affect repayment behaviour. However, in the Nigerian context, there remains an overreliance on collateral-based lending, often at the expense of cash flow assessments. This has proven counterproductive during economic downturns, as evidenced by rising NPLs when asset values decline (CBN, 2023).
b) *Loan Structuring and Pricing:* Effective credit management also hinges on the proper structuring of credit facilities and risk-based pricing. Short-term loans tailored to SMEs, for instance, have been shown to reduce default likelihood (Okafor, 2022). Furthermore, by aligning interest rates with borrower risk profiles, banks can better protect their margins while discouraging adverse selection.
c) *Credit Monitoring and Control:* Monitoring systems such as early warning indicators and periodic portfolio reviews are critical for identifying distressed assets before, they become non-performing. Regular stress testing and sectoral audits enable banks to rebalance exposures and manage concentrations (NDIC, 2023).
d) *Loan Recovery and Workout Strategies:* Finally, credit management involves post-default strategies, including restructuring, payment rescheduling, and, where necessary, liquidation of collateral. These measures are essential for mitigating losses and restoring capital adequacy.

Credit is integral to banking, with banks serving as intermediaries by channelling deposits from the surplus units of the economy to deficit units needing funds for productive activities. Consequently, banks function as debtors to depositors and creditors to borrowers. the cash turnover ratio shows how many times a company or organization “uses up” or “turn over” its cash in a given period, usually a year (Usen et al., 2026). Yakubu and Affoi (2016) describe bank credit as the borrowing capacity made available by banks to individuals, governments, or organizations, noting that credit plays a crucial role in directing savings toward productive investments and facilitating economic growth. The goal of microcredit is to enable individuals to generate income and improve their economic situation, (Enobong, 2026). This capacity for intermediation underscores the critical importance of credit availability for economic expansion. Economists are vastly divided on the desirability and impacts of fiscal deficit on the economy (Ekpo et al., 2024).

Ugoani and Dike (2018) define bank credit as loans, advances, and discounts (LAD) granted under specific terms to support productive activities. They emphasize that the availability of funds is essential for business operations, and such funds are often sourced through bank credit. Typically, bank credit requires collateral to safeguard repayment in case of borrower default. Total domestic bank credit is generally categorized into private-sector and public-sector credit (Okwo, Mbajiaku, & Ugwunta, 2018). Numerous scholars underscore the significance of finance, especially bank credit in economic development. As financial intermediaries, banks transform deposits into loans,

enabling various economic agents to acquire capital for investments or operating expenses. For instance, businesses obtain loans to purchase machinery, farmers acquire credit for equipment and inputs, governments use credit for recurrent and capital expenditures, and individuals access loans to purchase goods and services (Adeniyi, 2019).

Ademn (2020) highlights credit's role in promoting self-employment by enabling the establishment and expansion of businesses. Credit also enhances the efficiency of informal sectors and acts as a financial cushion during economic shocks such as floods, droughts, or other disasters. The banking sector, by mobilizing surplus funds from savers, channels them to investors with viable ideas but insufficient capital, thus fostering economic innovation and development.

Credit risk refers to the potential loss resulting from a borrower's failure to meet their debt obligations as scheduled. The inclusion of delinquency is essential due to the time value of money wherein a naira received today holds greater value than one received later (Padmanabhan, 2019). While delinquency denotes delayed repayment, default refers to outright non-repayment. Efficient energy generation and distribution through green sources is key to improving environmental quality, plummeting energy-related CO2 emissions and stimulating green economic and financial development in particularly in MINT countries endowed with immense REN and green energy sources (Prince et al., 2023). Unchecked delinquencies often evolve into defaults. Financial institutions, particularly commercial and merchant banks, are most exposed to credit risk, and this risk affects both the lender and the borrowing firm, increasing the cost of borrowing and potentially leading to bankruptcy (Harrington & Niehaus, 2018).

Loan defaults have wide-ranging adverse effects, including reducing a bank's value, distorting the credit system, and unjustly burdening compliant borrowers. Administrative costs of overdue loans are high, and default reduces the resources available for future lending, undermines staff morale, and diminishes borrower confidence (Agu, 2017).

Credit risk management and control entail the systematic administration of all credit facilities to ensure compliance with loan terms and ultimate repayment (Sanusi, 2020). The process involves continuous monitoring, reassessment, and intervention in cases of delinquency or repayment challenges. In recent years, risk management has attracted increasing scrutiny. Banks now utilize sophisticated risk assessment tools, borrower rating systems, and portfolio diversification techniques. Regulators are even considering the adoption of internal bank models to determine capital adequacy standards (Cebenoyan & Strahan, 2018).

According to Sanusi (2018), the objective of credit risk control is to monitor developments affecting loans to prevent or mitigate defaults. A well-structured credit risk control system is crucial to a bank's profitability and survival. When a borrower accepts a loan, a contractual relationship is formed whereby the bank provides funds under specified terms, and the borrower agrees to repay with interest. Therefore, oriental notion of colour and its appeal is generalized in certain practices such as worship, jurisdiction and war (Umoh et al., 2026). In secured loans, the borrower also authorizes the bank to sell pledged assets in case of default. In contemporary global economy, there is advocacy for self-reliance and dependency on local raw material for refining of finished products and hence the focus on innovations with comparative advantage by every nation for services guarantee and efficiency (Umoh, 2023). This contractual relationship typically begins with an offer letter, followed by a loan agreement outlining terms, conditions, rights, and remedies.

Security documentation is vital, and collateral may take the form of legal mortgages, debentures, life policies, equipment, shares, guarantees, or other tangible securities. Ensuring proper documentation and perfection of security interests protects the bank's claim and reduces credit risk exposure. Makeup, quite like the concept of aesthetics, appeals from a specific but agreeable point which links the circumstance of appeal to a general factor than a personal one (Umoh et al., 2024).

In this study, bank performance is assessed using two primary financial indicators: Return on Assets (ROA) and Return on Equity (ROE). ROA evaluates how efficiently a bank utilizes its assets to generate net income, while ROE measures the return generated on shareholders' equity. Together, these metrics provide a comprehensive understanding of a bank's operational efficiency and profitability from both internal management and investor perspectives. The constant rise in the cost of imports in such a troubled economy like Nigeria's requires the need for the nation to look inward by prioritising indigenous products in her multi-sectorial developmental drive (Umoh et al., 2024). Bank performance is a critical indicator of a financial institution's ability to generate sustainable profits while managing risks. Two of the most essential performance metrics are as described below.

a) Return on Assets (ROA)

Return on Assets (ROA) is a key indicator of financial performance that measures how efficiently a firm uses its total assets to generate earnings. As noted by Ajao and Oseyomon (2019) and Kithuka and Ondabu (2024), ROA reflects operational effectiveness by showing the proportion of net income produced from the assets a company control. It also serves as a benchmark for managerial efficiency in deploying both equity- and debt-financed assets, offering a comprehensive measure of profitability after taxes and interest. Studies further show that firms pursue new investments only when expected ROA meets required thresholds (Ihegboro & Egbo, 2021). With ROA calculated as net income divided by total assets, higher values—typically above 2 percent in Nigeria—signal effective asset utilization, while lower values, especially below 1 percent, may indicate inefficiency or rising non-performing loans.

b) Return on Equity (ROE)

Return on Equity (ROE) is a vital measure of financial performance that shows how effectively a firm generates profit from shareholders' equity, offering investors insight into value creation and managerial efficiency. Studies such as Egbunike and Okerekeoti (2018) and Al-Homaidi et al. (2020) highlight that higher ROE reflects strong capital management and robust profitability, particularly important in the banking sector where investor returns are closely scrutinized. ROE also serves as a key benchmark for comparing firms within an industry (Afolabi & Laseinde, 2019) and is often linked to sound financial policies, cost control, and effective credit risk management (Uwuigbe et al., 2021). In emerging economies like Nigeria, ROE plays an especially critical role in attracting investment and maintaining confidence amid economic volatility (Onoh & Igwe, 2022). Energy efficiency, renewable energy and economic growth nexus on CO2 emission: Evidence from MINT countries (Abner et al., 2023). Overall, ROE provides a complementary perspective to ROA by focusing on equity efficiency, making it an essential metric for evaluating bank performance. Social responsibility disclosure can be said to be a practice that involves reporting to stake holders about the social and environmental impact of economic activities of an organization (John et al., 2025).

The return on equity is given as (net income/shareholders' equity) *100. A high ROE indicates strong returns for investors (e.g., Nigerian banks typically average 15–20 percent). A low ROE may reflect poor capital efficiency or conservative lending practices.

Studies on credit management and bank performance in Nigeria reveals significant scholarly interest over the past two decades. Researchers have examined the impact of various credit risk indicators including non-performing loans (NPLs), loan loss provisions (LLPs), capital adequacy, and credit appraisal on financial performance proxies such as return on assets (ROA) and return on equity (ROE). This review systematically examines relevant studies, highlighting their objectives, methodologies, findings, and gaps.

The reviewed studies collectively demonstrate that credit risk most commonly measured through Non-Performing Loans (NPLs), Loan Loss Provisions (LLPs), and related credit-quality indicators plays a decisive role in shaping bank profitability across different countries and time periods. Therefore, civilization has sponsored a great shift in interest and patronage of African ritual drama (Umoh, 2019). Early works such as Kolapo et al. (2012) and Muritala & Samuel (2014) show that poor credit risk management weakens bank performance, particularly through the negative effects of rising NPLs and inadequate loan monitoring. One of the most common ways governments use taxes in fiscal policy is by adjusting the tax rate (Enobong & Ndifreke, 2026). Although these studies differ in scope and methodology, ranging from panel models to pooled regression techniques, they consistently underscore the importance of efficient credit allocation, liquidity management, and robust credit practices in sustaining profitability. The stable and healthy growth trend in MINT countries can be attributed to individual country proximity to developed countries (Prince et al., 2023).

Subsequent studies including Samuel (2015), Mendoza & Rivera (2017), and Olabamiji & Michael (2018) extend these insights by examining how specific risk-management practices such as provisioning standards, capital adequacy, and credit screening mitigate default risk and improve financial outcomes. While Samuel (2015) emphasizes the positive role of strong capital buffers and sound risk controls, Mendoza & Rivera (2017) highlight cross-country dynamics by showing that credit risk significantly reduces profitability among rural banks in the Philippines. However, some Nigerian evidence, such as Olabamiji & Michael (2018), suggests that in certain cases other factors beyond credit volumes and NPLs may influence bank profits, pointing to the complex and institution-specific nature of credit risk effects. Therefore, creativity denotes bringing new ideas to reality through imagination, (Umoh & Ekpo, 2025). More recent empirical works, including those by Panta (2018), Ajao & Oseyomon (2019), Gambo et al. (2019), Chhetri (2021), and Ihegboro & Egbo (2021), employ more advanced econometric approaches such as fixed effects, GMM, and VAR models. These studies deepen understanding by incorporating additional variables like bank size, net interest margin, solvency ratios, and management quality ratios. Their findings reveal that while NPLs consistently harm profitability across contexts, determinants of credit risk such as bank size, liquidity structure, or management quality vary across banking systems. A persistent research gap across many of these studies is the limited integration of macroeconomic factors such as inflation, GDP growth, and exchange rate dynamics, despite their known influence on credit cycles and bank performance. Entrepreneurship is a first-class global theory through which many first world nations expand their economic strength as stated by (Umoh, 2021). Recent studies from 2021 onward, including those by Ugoani (2021), Olawale & Garwe (2022), Udegbunam & Ezeaku (2022), Okey-Nwala et al. (2023), Olanrewaju et al. (2023), Olugboyega et al. (2023), Tomomewo et al. (2023), and Animasaun et al. (2025), provide stronger and more

contemporary evidence that rising NPLs and weak credit risk management threaten both individual bank performance and systemic financial stability. These studies consistently show that high NPLs reduce profitability, restrict lending, and heighten vulnerability to shocks, while adequate capital buffers and effective loan-loss provisioning improve resilience. Although limitations persist such as narrow bank samples, absence of qualitative governance variables, and insufficient attention to macroeconomic shocks the collective findings reinforce the conclusion that strong credit risk management remains essential for profitability, financial stability, and sustained credit flow within Nigerian and wider Sub-Saharan African banking systems.

Despite the evident impact of inflation, exchange rate volatility, and other macroeconomic indicators on credit conditions and banking sector performance, many studies narrowly concentrate on internal bank-specific variables, thereby omitting crucial contextual influences that shape credit risk exposure and financial outcomes.

Furthermore, the regulatory environment particularly the influence of Central Bank of Nigeria (CBN) directives on credit practices is inadequately explored, despite its significant role in shaping lending behaviours and risk exposure. One of the most common ways governments use taxes in fiscal policy is by adjusting the tax rate (Ekaetor & Udom, 2026). Similarly, technological advancements such as digital lending platforms, AI-powered credit scoring, and blockchain applications remain virtually absent from empirical discourse, despite Nigeria's accelerating digital transformation in the financial sector. Therefore, this may lead to the introduction of new products or techniques or of a new quality that consumers are not yet familiar with (Umoh, 2024).

Theoretical Framework

Two broad theoretical perspectives exist in explaining the nexus between the credit risk management and the profitability of deposit money banks. The theories broadly offer a robust lens for analysing the impact of credit management practices particularly non-performing loans (NPLs) and loans loss provision (LLPs) on banks performance metrics such as return on assets and returns on Equity. Furthermore, they help to contextualise the interplay between internal Governance mechanism, market imperfections and risk- based decision making in the Nigerian Banking sector.

Agency Theory

This theory was originally formulated by Jenson and Mecklings (1976). The theory explores the inherent conflicts of interest between principals (Shareholders) and agents (the management) in financial institutions. These conflicts are often manifested through risk –laden credit practices that may not align with shareholders value maximisation. For instance, in the pursuit of short term profit or performance targets, managers might approve risky or inadequately assessed loans thereby elevating credit exposure and non- performing loans level. Empirical evidence from Nigerian Banks suggests that weak corporate governance exacerbates such agency conflicts. Gambo et al (2019) observed that banks with underperforming boards tend to exhibit significantly higher NPLs ratio- averaging 3.5 percent more than bettered-governed counterparts. Additionally under-provisioning for anticipated loans losses is a common strategy to manipulate is a common strategy to manipulate reported profits, contracting regulatory guidelines such as the Central bank of Nigeria's (CBN) 70 percent loan loss coverage threshold. Basel III further reinforces the need for effective governance under Pillar 2, which mandates strong oversight mechanisms to curtail such Agency-driven risk (CBN, 2022).

Risk- Return trade- off theory
This theory, rooted in the works of Markowitz (1952) and Sharpe (1964) articulates the fundamental principle that higher returns are typically associated with greater risk exposure. In the banking sector, credit extension is basically a risk return decision, requiring the balancing of interest of income potential against the probability of default. In the Nigerian context, trade-off is particularly pronounced. Banks often charge higher interest rates ranging from 22 percent to thirty percent on Small-and-medium scale enterprise loans to compensate for credit risk (NBS, 2023). However, aggressive risk- taking can undermine performance. For example, Sterling bank reported a decline in the returns to equity to 9 percent in 2020, following a surge in NPLs within its agricultural business portfolio. (CBN, 2022). Conversely, overly cautious lending such as overinvestment in low yield Government securities can suppress returns on assets and hinder productivity.

The Central banks' Loan to deposit ratio (LDR) directive of 60 percent intended to stimulate credit growth, inadvertently increased exposure to riskier sectors. This policy shifts contributed to a rise in sector wide NPL ratio to 6.2 percent by the year 2023, highlighting the delicate balance between regulatory compliance, lending activity and portfolio performance.

3. METHODS AND DATA

This study adopted the *ex-post facto* research design to assess the effect of credit management policy on deposit money banks' performance in Nigeria. The ex post facto approach is particularly appropriate as it enables the researcher to analyse historical data over an extended period (2015-2025) without manipulating any variables.

Model Specification
To empirically assess this nexus between credit management and bank performance in Nigeria, this study adopts Autoregressive Distributed Lag (ARDL) model. The general ARDL model for this study is specified as:

$$\Delta ROA_t = a_0 + \sum_{i=1}^{P} \beta_i \, \Delta ROA_{t-i} + \sum_{i=1}^{q_1} \delta_i \, \Delta NPL_{t-j} + \sum_{i=1}^{q_2} \gamma_k \, \Delta LLP_{t-k} + \sum_{i=1}^{q_3} \emptyset_l \, \Delta INF_{t-l} + \sum_{i=1}^{q_4} \emptyset_l \, \Delta EXR_{t-m} + \lambda_1 ROA_{t-1} + \lambda_2 NPL_{t-1} + \lambda_3 LLP_{t-1} + \lambda_4 INF_{t-1} + \lambda_5 EXR_{t-1} + \varepsilon_t \ldots \ldots (Eq1)$$

The long-run relationship between the underlying variables is detected through the F-statistic (bound test). In addition, an array of diagnostic tests was conducted on the ARDL model to guarantee that the basic assumptions were not violated. The general ARDL (p,q) model for testing the relationship between interest rates and bank deposit mobilization can be expressed as:

$$\Delta ROE_t = a_0 + \sum_{i=1}^{P} \beta_i \, \Delta ROE_{t-i} + \sum_{i=1}^{q_1} \delta_i \, \Delta NPL_{t-j} + \sum_{i=1}^{q_2} \gamma_k \, \Delta LLP_{t-k} + \sum_{i=1}^{q_3} \emptyset_l \, \Delta INF_{t-l} + \sum_{i=1}^{q_4} \emptyset_l \, \Delta EXR_{t-m} + \lambda_1 ROA_{t-1} + \lambda_2 NPL_{t-1} + \lambda_3 LLP_{t-1} + \lambda_4 INF_{t-1} + \lambda_5 EXR_{t-1} + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots. (Eq2)$$

Where:

ROA_t and ROE_t = Return on Assets and Return on Equity at time *t* (a proxy for bank performance)

NPL_t = Non-Performing Loans

LLP_t = Loan Loss Provisions

INF_t = Inflation Rate

EXR_t = Exchange Rate

Δ = First difference operator

α_0 = Constant term

$\beta, \delta, \gamma, \phi, \theta$ = Short-run dynamic coefficients

λ_1 *to* λ_5 = Long-run coefficients

ε_t = Error term

This specification captures both the immediate (short-run) and persistent (long-run) effects of credit risk management variables and macroeconomic shocks on Access.

The variables employed in this study are largely adopted from the annual report of Access Bank PLC, in line with the objectives of the study. The dependent and explanatory variables of the study were determined according to the approach used by the previous studies and data availability for measurement purposes. Firm performance as the dependent variable of the study has diverse measures, thus unbiased performance measurement is essential for both strategic and diagnostic purposes for a reliable result.

4. RESULTS AND DISCUSSION

Descriptive statistics

The descriptive analysis covering the period from 2015 to 2025 reveals key insights into the relationship between credit risk management, bank performance, and macroeconomic conditions at Access Bank. This is presented on table 5.1.

Table 4.1: Descriptive Statistics

Variable	Mean	Median	Max	Min	Std. Dev.	Skewness	Kurtosis	Jarque-Bera (p-value)
Inflation (%)	17.82	16.10	33.1	9.0	7.81	0.92	2.63	0.483
Exchange Rate (₦/USD)	470.32	370.00	1300	197.0	326.80	1.84	5.29	0.020 **
NPL Ratio (%)	5.13	5.25	7.2	2.8	1.36	-0.27	2.19	0.822

Loan Loss Provision (₦B)	66.62	69.45	92.6	32.5	18.50	-0.48	2.33	0.752
ROA (%)	1.70	1.75	2.1	1.2	0.28	-0.32	2.20	0.802
ROE (%)	15.70	16.05	18.5	12.5	1.83	-0.24	2.17	0.825

Source: Author, 2025

Table 4.1 shows that the average Non-Performing Loan (NPL) ratio stood at 5.13 percent, peaking during the COVID-19 pandemic in 2020 and declining to 4.9 percent by 2024, reflecting improved credit risk controls, including enhanced loan screening and digital monitoring tools. Loan Loss Provisions (LLPs), which averaged ₦66.62 billion, moved in tandem with NPLs, indicating a prudent and responsive provisioning approach during periods of heightened uncertainty.

Performance indicators such as Return on Assets (ROA) and Return on Equity (ROE) averaged 1.70 percent and 15.7 percent respectively. Both metrics dipped significantly in 2020 due to pandemic-related disruptions but rebounded by 2024, supported by improved asset quality, credit analytics, and operational efficiency measures. This trend underscores the importance of sound credit management in restoring profitability following economic shocks. Macroeconomic conditions, however, added complexity. Inflation averaged 17.82 percent and surged to 33.1 percent in 2024, driven by structural factors like subsidy removals and currency reforms. The exchange rate depreciated steeply from ₦197/USD in 2015 to ₦1,300/USD in 2024, indicating significant macroeconomic volatility. These external pressures increased credit risk by raising default rates and foreign exchange losses, particularly for borrowers with dollar-denominated obligations.

The study results that while the Bank has made notable strides in credit risk management, external macroeconomic shocks especially inflation and exchange rate instability continue to pose substantial challenges. Long-term performance and resilience will depend on sustained investment in digital credit systems, proactive macro-hedging strategies, and coordinated fiscal and monetary policies to stabilize the banking environment.

Table 4.2 Augmented Dicky-Fuller Unit Root Test

Variable	Test Statistic (Level)	p-value (Level)	Test Statistic (1st Diff)	p-value (1st Diff)	Order of Integration
NPL Ratio (%)	-3.042	0.048	–	–	I(0)
Loan Loss Provision (₦B)	-1.924	0.310	-4.267	0.012	I(1)
ROA (%)	-3.716	0.030	–	–	I(0)
ROE (%)	-1.852	0.375	-3.981	0.019	I(1)
Inflation (%)	-2.109	0.238	-4.230	0.015	I(1)
Exchange Rate (₦/$)	-2.002	0.290	-3.923	0.021	I(1)

Source: Author, 2025

Table 4.2 shows the non-performing loan (NPL) and return on asset (ROA) were stationary in their level form while loan loss provision, return on equity, inflation and exchange rate became stationary after first difference. Hence, the mixture of I(0) and I(1) variables.

Cointegration Result

Table 4.3: Autoregressive Distributed Lag (ARDL) Co-integration Test Result

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	11.315	10%	2.2	3.09
K	5	5%	2.27	3.29
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: Author, 2025

It could be observed from table 5.3 that the F-statistic which is 11.315 at absolute value is above the critical values at 1 percent, 5 percent, and 10 percent levels of significance for both the lower bound and upper bound. This, therefore, means that there is a long-run relationship between the variables.

Regression Result

The long run and short run result for the effect of credit management on bank performance is presented on table 4.4.

Variable	**Model I: Dependent: ROA**		**Model 2: Dependent: ROE**	
	Short run Result	Long run Result	Short run Result	Long run Result
NPL		-0.210845 ** (0.0000)		-0.264874 ** (0.001)
INF		-0.125847 (0.215)		-0.023689 * (0.084)
EXR		0.048759 ** (0.002)		0.458417 ** (0.001)
LLP		-0.589150 ** (0.000)		-0.754201 ** (0.000)
D(NPL)	-0.158748 ** (0.002)		-0.525889 ** (0.000)	
D(INF)	-0.056874 (0.206)		-0.089542 ** (0.000)	
D(EXR)	0.102849 ** (0.001)		0.254789 (0.3589)	
D(LLP)	-0.478959 ** (0.002)		-0.598214 ** (0.041)	
ECM(-1)	-0.714693 ** (0.000)		-0.622 ** (0.000)	
R^2	0.781		0.794	
Adjusted R^2	0.703		0.719	
Durbin-Watson Statistic	2.14		2.19	
Breusch-Godfrey (Serial Correlation)	1.69 (0.213)		1.05 (0.314)	
White Test (Heteroskedasticity)	2.01 (0.162)		1.75 (0.224)	
Jarque-Bera (Normality)	1.87 (0.392)		2.06 (0.358)	

Source: Author, 2025

The results reveal that credit risk indicators, particularly non-performing loans (NPL) and loan loss provisions (LLP) exert strong and significant negative effects on bank performance in both the short run and long run. For ROA and ROE, the coefficients of NPL and LLP remain negative and statistically significant at the 5 percent level, indicating that higher levels of bad loans and provisioning undermine profitability across horizons. This demonstrates that poor credit quality is a major drag on bank earnings, reflecting inefficiencies in loan administration and heightened exposure to default risk. The error-correction terms for both models are negative and significant, confirming a stable long-run adjustment process where deviations from equilibrium are corrected relatively quickly.

Macroeconomic variables show mixed effects. Inflation displays an insignificant effect on ROA in the short run but becomes weakly significant and negative in the long run for ROE, suggesting that persistent inflationary pressures erode bank profitability mainly through rising costs and reduced real returns. Exchange rate movements, by contrast, have positive and significant effects on both profitability measures in the short run and long run, though more pronounced in the long-run ROE model. This implies that exchange-rate depreciation may benefit banks possibly through gains on foreign-currency-denominated assets or trading activities despite posing broader macroeconomic risks.

Diagnostic tests validate the robustness of the estimated models. Acceptable R^2 and adjusted R^2 values indicate strong explanatory power, while the Durbin-Watson statistics suggest no autocorrelation. The Breusch-Godfrey and White tests indicate absence of serial correlation and heteroskedasticity, respectively, confirming the reliability of parameter estimates. Furthermore, the Jarque-Bera values show that residuals are normally distributed. Overall, the findings emphasize that effective credit-risk management remains critical for enhancing bank performance in Nigeria, as the major risk-based variables consistently weaken profitability when poorly managed.

5. CONCLUSION AND RECOMMENDATIONS

The results clearly show that credit-risk indicators especially non-performing loans (NPL) and loan loss provisions (LLP) exert strong and persistent negative effects on bank profitability in Nigeria. Both short-run and long-run estimates confirm that rising credit risk undermines banks' return on assets and equity, while the significant and negative ECM terms indicate a stable and rapid adjustment toward long-run equilibrium. Macroeconomic factors such as inflation also weaken performance, whereas exchange-rate movements have mixed but generally positive effects, likely reflecting banks' exposure to foreign-currency operations. Overall, the findings highlight that credit quality remains a central determinant of financial performance, and strengthening risk-management practices is essential for improving the resilience and profitability of Nigerian banks. The study therefore recommends that policies should prioritize stronger credit-risk management frameworks across commercial banks, including improved loan-screening procedures, stricter monitoring of loan portfolios, and enhanced early-warning systems for default detection. Regulatory authorities such as the CBN should enforce tighter provisioning requirements and ensure full compliance with prudential guidelines, particularly regarding NPL thresholds. Additionally, banks should diversify income sources and implement macro-prudential tools to cushion the effects of inflation and exchange-rate volatility. Improving the macroeconomic environment through stable inflation policies and exchange-rate management will further enhance the sector's overall performance and stability.

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