Financial Assets and Bank Performance in Nigeria

UKEDJERE Stephen[1]
Banking and Finance Department
Delta State University, Abraka. Nigeria

EHIEDU, Victor C[2] **PhD**
Professor of Banking & Finance
Banking and Finance Department
Delta State University, Abraka. Nigeria
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Abstract
This study investigates the impact of financial assets management on the performance of Deposit Money Banks (DMBs) in Nigeria over a 25-year period (1999–2023), focusing on key components of financial assets—Cash Equivalents (CE), Trade Receivables (TR), and Loans and Advances (LAD)—as independent variables, and Return on Assets (ROA) as the dependent variable. The study also integrates macroeconomic indicators, including inflation rate, interest rate, and GDP growth rate, as control variables to account for broader economic dynamics. Employing a quantitative research approach, the study utilizes Ordinary Least Squares (OLS) regression analysis within an ex-post facto research design. Data were sourced from CBN statistical bulletins, DMBs' financial reports, World Bank indicators, and the Nigerian Stock Exchange (NSE). The results reveal that CE, TR, and LAD significantly and positively influence ROA, suggesting that effective financial asset management enhances bank profitability. In contrast, inflation shows an insignificant effect on ROA, while interest rate has a negative and statistically significant impact. GDP growth rate, however, exerts a positive and significant influence on bank performance. The model demonstrates strong explanatory power with an R-squared value of 0.9316, supported by diagnostic tests confirming its reliability. These findings offer practical insights into liquidity and credit management strategies for banking institutions and underscore the importance of macroeconomic stability for financial sector performance. The study contributes to the growing body of knowledge on bank asset management in developing economies and offers evidence-based recommendations for policy formulation and banking regulation.

Keywords: *Financial Assets, Cash Equivalents, Trade Receivables, Loans and Advances and Return on Assets.*

Introduction

The Nigerian banking sector plays a pivotal role in the nation's economic development by facilitating financial intermediation, mobilizing savings, and allocating credit to various sectors. Deposit Money Banks (DMBs), commonly referred to as commercial banks, are central to these activities. Evaluating their performance is crucial for stakeholders, with Return on Assets (ROA) serving as a key metric that measures a bank's efficiency in utilizing its assets to generate profits. This study aims to explore the impact of financial assets—specifically Cash Equivalents (CE),

Trade Receivables (TR), and Loans and Advances (LAD)—on the performance of Nigerian DMBs, as proxied by ROA.

Cash Equivalents (CE) are short-term, highly liquid investments that are readily convertible to known amounts of cash and subject to an insignificant risk of changes in value. These include treasury bills, commercial paper, and money market funds. Effective management of cash and cash equivalents is vital for maintaining liquidity and ensuring that banks can meet their short-term obligations. According to PwC (2024), local statutory or regulatory requirements may impact how cash equivalents or similar balances are presented in the balance sheet, highlighting the importance of proper classification and management of these assets.

Trade Receivables (TR) represent amounts owed to a bank by its clients for services rendered or goods sold on credit. In the banking context, this often includes fees and commissions receivable. Efficient management of trade receivables ensures timely collection, reduces the risk of bad debts, and positively impacts cash flow. KPMG (2024) emphasizes that under IFRS 9, companies are required to measure impairment of financial assets, including trade receivables, using the expected credit loss model, which necessitates accounting for anticipated losses from the initial recognition of the receivable.

Loans and Advances (LAD) constitute a significant portion of a bank's earning assets and involve lending funds to individuals, businesses, and other entities with the expectation of repayment with interest. The quality and performance of these loans directly affect the bank's profitability and risk profile. Effective credit risk management practices are essential to mitigate potential losses from non-performing loans. A study by Adaramola and Ogunsakin (2020) found that loan risk analysis, loan risk diversification, and loan risk monitoring positively and significantly affect bank performance in Nigeria, underscoring the importance of robust credit appraisal and monitoring systems.

The Nigerian banking sector has undergone significant transformations over the past decades, including regulatory reforms, consolidation, and the adoption of new technologies. These changes have influenced the composition and management of financial assets within banks. For instance, the introduction of financial innovations such as Automated Teller Machines (ATMs), Point of Sale (POS) systems, internet banking, and mobile banking has impacted the way banks manage their cash equivalents and interact with customers. A study examining the impact of banking innovations on bank performance in Nigeria from 2005 to 2023 found that these innovations have varying effects on bank performance, with some studies suggesting positive impacts on liquidity and profitability.

Liquidity management remains a critical concern for Nigerian DMBs, as maintaining adequate liquidity is necessary to meet obligations and support lending activities. The Central Bank of Nigeria (CBN) has implemented various measures to ensure liquidity in the banking system, including setting liquidity ratios that banks must adhere to. Effective liquidity management involves balancing the trade-off between holding sufficient liquid assets, such as cash equivalents, and investing in higher-yielding but less liquid assets like loans and advances. A study by Adaramola and Ogunsakin (2020) found that loan risk analysis, loan risk diversification, and loan risk monitoring positively and significantly affect bank performance in Nigeria, emphasizing the need for prudent asset allocation strategies.

Asset quality is another determinant of bank performance, with non-performing loans (NPLs) posing a significant risk to profitability and capital adequacy. The management of loans and advances requires robust credit appraisal and monitoring systems to minimize default rates. Research has demonstrated a negative correlation between high levels of NPLs and bank

profitability, underscoring the importance of maintaining high asset quality. A study examining the effect of asset quality on deposit money banks' performance in Nigeria found that poor asset quality management, characterized by high levels of non-performing loans, adversely affects financial performance, highlighting the need for effective credit risk management practices.

The capital structure of banks, which includes the mix of debt and equity financing, also influences financial performance. An optimal capital structure can enhance profitability by minimizing the cost of capital and maximizing returns to shareholders. However, excessive reliance on debt can increase financial risk and potentially lead to solvency issues. A study examining the effect of portfolio management on the performance of listed deposit money banks in Nigeria found that effective portfolio management practices, including prudent asset allocation and risk diversification, positively impact financial performance, suggesting the need for banks to carefully consider their financing strategies.

Corporate governance practices within banks also play a crucial role in financial performance. Strong governance frameworks ensure effective oversight, risk management, and strategic decision-making, which can lead to improved asset quality and profitability. The increased incidence of bank failures in Nigeria has highlighted the need for good governance as a means of achieving bank objectives and maintaining public confidence in the financial system. A study by Adaramola and Ogunsakin (2020) found that loan risk analysis, loan risk diversification, and loan risk monitoring positively and significantly affect bank performance in Nigeria, highlighting the importance of robust governance structures.Thus, the management of financial assets such as Cash Equivalents, Trade Receivables, and Loans and Advances is integral to the performance of Deposit Money Banks in Nigeria. Effective asset management practices, coupled with robust risk management frameworks and sound corporate governance, are essential for enhancing profitability and ensuring the stability of the banking sector.

Objectives of the Study

The primary objective of this study is to examine the impact of financial assets on bank performance in Nigeria, using Ordinary Least Squares (OLS) regression analysis. The specific objectives are to:

1. determine the impact of Cash Equivalents (CE) on the Return on Assets (ROA) of Deposit Money Banks (DMBs) in Nigeria.
2. examine the impact of Trade Receivables (TR) on Return on Assets (ROA) of DMBs in Nigeria.
3. evaluate the impact of Loans and Advances (LAD) on the Return on Assets (ROA) of DMBs in Nigeria.

CONCEPTUAL REVIEW

FINANCIAL ASSETS

Financial assets are integral to the operational efficacy and financial health of organizations, encompassing instruments such as cash equivalents (CE), trade receivables (TR), and loans and advances (LAD). In the Nigerian context, these components play pivotal roles in shaping the financial landscape of various sectors, including banking, manufacturing, and oil marketing. Cash equivalents, characterized by their high liquidity and short-term maturity, are essential for organizations to meet immediate financial obligations and ensure smooth operational flows. For instance, Total Energies Marketing Nigeria Plc reported cash and cash equivalents amounting to ₦55.1 billion as of March 31, 2023, underscoring the significance of maintaining substantial liquid assets tosupportoperational needs and strategic initiatives (Total Energies Marketing Nigeria Plc,

2023).Nigerian Stock Exchange+Business Day Trade receivables represent amounts owed to a company by its customers for goods or services delivered on credit, serving as acriticalcomponent of working capital management. Efficient management of tradereceivables is vital to ensure liquidity and minimize the risk of bad debts. NCR Nigeria Plc, in its first-quarter unaudited condensed financial statements for 2022, reported trade and other receivables totaling ₦2.42 billion, highlighting the prominence of receivables in the company's asset structure and the necessity for effective credit management policies (NCR Nigeria Plc, 2022**).** Nigerian Stock Exchange.

Loans and advances constitute a significant portion of financial assets, particularly within the banking sector, where they represent credit facilities extended to customers.The effective management of loans and advances is crucial for banks to maintain asset quality and profitability.According to a study by Nworie et al. (2022), the management of current assets, including loans and advances, significantly contributes to the financial performance of listed consumer goods firms in Nigeria, emphasizing the broader applicability of LAD beyond the banking sector.

The adoption of International Financial Reporting Standards (IFRS) 9 has introduced changes to the accounting for financial assets, impacting their classification and measurement.Under IFRS 9, financial assets are classified based on the business model for managing them and their contractual cash flow characteristics.This standard affects the accounting treatment of cash equivalents, trade receivables, and loans and advances, necessitating adjustments in financial reporting practices (Mondaq, 2019).

Effective liquidity management, encompassing the strategic oversight of cash equivalents, trade receivables, and loans and advances, is essential for enhancing financial performance.A study by Dibie and Offiong (2022) examined the impact of cash management on the financial performance of quoted manufacturing firms in Nigeria, highlighting the importance of maintaining optimal liquidity levels to support operational efficiency and profitability.

In the downstream oil sector, companies tend to maintain a significant portion of their assets in liquid form to navigate the volatile market environment.For example, TotalEnergies Marketing Nigeria Plc's liquid assets amounted to ₦370.72 billion, including trade and other receivables of ₦190.19 billion and cash and cash equivalents of ₦118.98 billion, reflecting a strategic emphasis on liquidity to manage operational risks and capitalize on market opportunities (BusinessDay, 2022).

The management of current assets, particularly cash and cash equivalents, is a critical determinant of financial performance in the manufacturing sector. Research indicates that efficient current assets management positively influences profitability, as it ensures the availability of liquid resources to meet short-term obligations and invest in value-generating activities (Nworie et al., 2022)

In the financial services industry, the composition and quality of financial assets, including loans and advances, are pivotal to institutional stability and performance. A study by Okoye et al. (2022) on the asset-liability mix and financial performance of deposit money banks in Nigeria found that a well-balanced asset-liability structure, with prudent management of loans and advances, enhances profitability and reduces financial distress risks.

The strategic allocation of financial assets, particularly in maintaining an optimal balance between cash equivalents and trade receivables, is essential for sustaining operational liquidity and profitability. Companies that effectively manage their financial assets can better navigate

economic fluctuations and maintain competitive advantages in their respective industries (Dibie & Offiong, 2022).

Moreover, the adoption of robust financial asset management practices, including adherence to IFRS 9 standards, enhances transparency and comparability in financial reporting. This compliance not only fulfills regulatory requirements but also bolsters investor confidence by providing a clear depiction of the company's financial health and asset quality (Mondaq, 2019).

In conclusion, the effective management of financial assets, encompassing cash equivalents, trade receivables, and loans and advances, is crucial for the financial stability and performance of organizations in Nigeria.The integration of sound asset management practices, compliance with international financial reporting standards, and strategic liquidity planning collectively contribute to enhanced profitability, operational efficiency, and resilience in the dynamic Nigerian economic landscape.

BANK PERFORMANCE

The concept of bank performance remains a crucial area of interest in financial and economic research, as it serves as an indicator of the efficiency, stability, and profitability of banks within an economy. In Nigeria, the banking sector plays a pivotal role in financial intermediation, credit allocation, and economic growth, making performance measurement essential for assessing the sector's overall health. Return on Assets (ROA) has been widely adopted as a key metric for evaluating the financial performance of banks, given its ability to measure how effectively a bank utilizes its total assets to generate earnings. ROA is an indicator of managerial efficiency and asset utilization, highlighting a bank’s ability to convert its investments into net income (Ogunbiyi & Awoyemi, 2022).

The significance of ROA as a bank performance proxy stems from its effectiveness in capturing profitability relative to asset deployment. Unlike Return on Equity (ROE), which focuses on shareholders' returns, ROA measures operational efficiency without the influence of capital structure. It is calculated by dividing net income by total assets, offering insights into the efficiency of asset management and profitability generation within the banking sector (Adetunji & Adeyemi, 2023). In Nigeria, where the financial system has undergone multiple regulatory changes and economic fluctuations, assessing ROA is vital in understanding how well banks navigate economic and financial challenges. Several studies highlight that banks with higher ROA are more resilient to financial shocks and have better credit risk management frameworks (Eze & Nwankwo, 2022).

Given the dynamic nature of Nigeria's banking industry, multiple factors influence bank performance as measured by ROA. Asset quality, liquidity management, capital adequacy, and credit risk exposure are among the key determinants affecting bank profitability. Poor asset quality, particularly a high proportion of non-performing loans (NPLs), negatively affects ROA as banks struggle with loan recovery and increased provisioning for credit losses (Akinyemi & Olayemi, 2023). This underscores the importance of effective credit risk management practices in enhancing profitability. Moreover, banks with diversified asset portfolios, including loans, investments in government securities, and foreign exchange transactions, tend to report higher ROA levels due to enhanced income streams and risk mitigation strategies (Ojo & Adewale, 2022).

Liquidity management also plays a critical role in bank performance, as insufficient liquidity can lead to operational challenges, while excessive liquidity may indicate inefficiencies in asset utilization. The Central Bank of Nigeria (CBN) has established liquidity thresholds to ensure banks maintain adequate reserves to meet obligations, yet optimal liquidity management remains a challenge for many Nigerian banks (Adegbite & Alabi, 2023). The relationship between liquidity

and ROA is complex, as maintaining too much liquid assets could limit earning potential, while insufficient liquidity could lead to solvency concerns. Research findings indicate that Nigerian banks that effectively balance liquidity with loan creation and investment opportunities tend to achieve superior ROA performance (Ekwueme&Okonkwo, 2022).

Capital adequacy, a measure of a bank's financial strength and ability to absorb losses, is another determinant of ROA. The CBN mandates minimum capital requirements to ensure banks remain solvent and resilient against economic downturns. Higher capital adequacy ratios provide a buffer against financial shocks, reducing the likelihood of bank distress and improving investor confidence (Okonkwo&Edeh, 2022). However, excessive capital holdings can sometimes lead to suboptimal asset allocation, thereby limiting profitability. Nigerian banks that optimize capital structure through efficient leverage and risk-weighted asset management often report stronger ROA performance (Adigun &Salawu, 2023).

Furthermore, economic conditions, including inflation rates, interest rate fluctuations, and exchange rate volatility, significantly impact bank performance in Nigeria. High inflation erodes the real value of bank earnings, while unpredictable interest rates affect loan pricing and net interest margins. Studies suggest that Nigerian banks operating in a stable macroeconomic environment with predictable policy frameworks tend to achieve better ROA performance (Ajayi&Fashola, 2023). Additionally, external factors such as regulatory policies, global financial market trends, and technological advancements shape the banking sector's profitability landscape. Regulatory compliance costs, for instance, can impose financial burdens on banks, reducing their profitability margins (Nwachukwu&Umeh, 2022).

Technological advancements and digital banking innovations have increasingly influenced ROA performance in Nigerian banks. The adoption of fintech solutions, mobile banking, and automated payment systems has enhanced transaction efficiency and revenue generation. Banks leveraging digital transformation to optimize service delivery, reduce operational costs, and expand customer outreach have recorded significant improvements in ROA (Okafor&Eze, 2022). However, cybersecurity risks, technological disruptions, and high investment costs associated with digital banking infrastructure pose challenges to sustained profitability. A study by Oladele and Akinyemi (2023) found that Nigerian banks investing in cybersecurity measures and robust IT frameworks tend to experience stable and enhanced ROA growth over time.

Corporate governance also plays a vital role in determining bank performance, particularly in the Nigerian financial sector, where governance failures have historically contributed to banking crises. Strong corporate governance practices, including transparent financial reporting, effective risk management, and regulatory compliance, improve investor confidence and financial stability, thereby enhancing ROA (Adebayo &Olaniyi, 2023). Poor governance, on the other hand, leads to mismanagement, fraud, and financial instability, negatively impacting profitability. Empirical evidence suggests that Nigerian banks with strong governance structures and board independence exhibit superior ROA performance compared to those with weak governance frameworks (Adeola&Adesina, 2022).

The role of bank size in performance measurement has also been a subject of debate among scholars. Larger banks often benefit from economies of scale, diversified asset portfolios, and stronger market presence, which can enhance ROA. However, excessive expansion without adequate risk control mechanisms may lead to inefficiencies, increased operational costs, and declining profitability (Ogunleye&Ilesanmi, 2022). Conversely, smaller banks may struggle with limited capital, lower market share, and higher cost structures, impacting their ROA performance.

Research suggests that Nigerian banks adopting strategic expansion with robust risk management frameworks achieve optimal profitability (Chukwu&Onwuegbuchi, 2023).

Non-performing loans (NPLs) remain a critical challenge affecting ROA in Nigerian banks. High NPL ratios indicate poor credit quality and increased default risks, leading to lower profitability. The CBN has implemented stringent loan classification and provisioning requirements to mitigate credit risks, yet many banks still struggle with loan recovery (Adamu& Yusuf, 2023). Studies indicate that Nigerian banks with proactive credit assessment methodologies, efficient loan monitoring, and stringent recovery measures achieve higher ROA due to reduced loan losses (Ibrahim &Obinna, 2022). The adoption of credit risk analytics, predictive modeling, and improved debtor profiling has also contributed to enhanced loan performance and bank profitability.

Another critical factor influencing ROA is interest rate risk exposure. Nigerian banks operate in a volatile interest rate environment where changes in monetary policy significantly impact lending rates, deposit costs, and net interest margins. Studies show that banks employing dynamic interest rate risk management strategies, including hedging and diversified income streams, experience more stable ROA performance (Okorie&Bamidele, 2023). Interest rate volatility, coupled with inflationary pressures, poses risks to profitability, necessitating sound financial risk management practices.

In conclusion, ROA remains a fundamental measure of bank performance in Nigeria, influenced by multiple factors including asset quality, liquidity management, capital adequacy, macroeconomic conditions, technological advancements, corporate governance, bank size, credit risk, and interest rate exposure. Empirical evidence suggests that Nigerian banks that effectively manage these determinants achieve superior profitability and financial stability. As the banking sector continues to evolve amidst regulatory changes and economic uncertainties, strategic financial management, digital transformation, and governance reforms remain essential for optimizing ROA and sustaining long-term performance.

Modern Portfolio Theory (MPT)

This was introduced by Harry Markowitz in 1952, revolutionized investment strategies by emphasizing diversification to optimize the trade-off between risk and return (Markowitz, 1952). This framework has significant implications for the management of financial assets in the banking sector, particularly concerning assets such as Cash Equivalents (CE), Trade Receivables (TR), and Loans and Advances (LAD), and their impact on bank performance, often measured by Return on Assets (ROA). In the Nigerian banking context, applying MPT provides insights into how banks can structure their asset portfolios to enhance performance and stability.

Cash Equivalents (CE) are short-term, highly liquid investments that are readily convertible to known amounts of cash and subject to an insignificant risk of changes in value. Effective management of cash equivalents ensures that banks maintain adequate liquidity to meet short-term obligations while minimizing idle cash that could otherwise generate returns (Adaramola&Ogunsakin, 2020). Trade Receivables (TR) represent amounts owed to a bank by its clients for services rendered or goods sold on credit. Efficient management of trade receivables ensures timely collection, reduces the risk of bad debts, and positively impacts cash flow, thereby enhancing profitability (Adaramola&Ogunsakin, 2020). Loans and Advances (LAD) constitute a significant portion of a bank's earning assets, involving lending funds to individuals, businesses, and other entities with the expectation of repayment with interest. The quality and performance of these loans directly affect the bank's profitability and risk profile (Adaramola&Ogunsakin, 2020).

Applying MPT to these financial assets suggests that banks should diversify their asset portfolios to optimize returns while managing risk. By allocating resources across cash equivalents, trade receivables, and loans and advances, banks can balance the need for liquidity with the pursuit of higher yields from lending activities. This diversification reduces the overall risk of the asset portfolio, as the performance of different asset classes may not be perfectly correlated (Markowitz, 1952). In the Nigerian banking sector, such diversification is particularly important given the economic volatility and the need for banks to remain resilient (Adaramola&Ogunsakin, 2020).

The implications of MPT for bank performance, as proxied by ROA, are significant. ROA measures a bank's efficiency in utilizing its assets to generate profits. By constructing a well-diversified asset portfolio, banks can enhance their ROA by optimizing the balance between risk and return. Effective portfolio management involves not only diversification but also continuous monitoring and rebalancing of the asset mix in response to changing market conditions and the bank's strategic objectives (Adaramola&Ogunsakin, 2020). In Nigeria, where banks operate in a dynamic and sometimes unpredictable economic environment, the application of MPT principles can provide a framework for making informed asset allocation decisions that support sustainable profitability and growth.

In conclusion, Modern Portfolio Theory offers valuable insights for Nigerian banks in managing their financial assets. By diversifying across cash equivalents, trade receivables, and loans and advances, banks can optimize their risk-return profiles, thereby enhancing performance as measured by ROA. The application of MPT principles requires a disciplined approach to portfolio management, including regular assessment of asset performance and adjustments to the asset mix in line with the bank's risk appetite and market conditions. Embracing these principles can contribute to the stability and profitability of banks in Nigeria's complex financial landscape.

LIQUIDITY PREFERENCE THEORY

John Maynard Keynes's Liquidity Preference Theory, introduced in 1936, posits that individuals prefer holding liquid assets due to uncertainties and the need for immediate transactions. This theory is particularly relevant in the banking sector, where managing financial assets such as Cash Equivalents (CE), Trade Receivables (TR), and Loans and Advances (LAD) is crucial for performance, often measured by Return on Assets (ROA). In the Nigerian banking context, effective liquidity management is vital for maintaining profitability and stability.

Cash Equivalents (CE) are short-term, highly liquid investments that can be quickly converted into cash. Maintaining an optimal level of cash equivalents ensures that banks can meet their short-term obligations and unexpected withdrawal demands. However, excessive holdings in cash equivalents may lead to lower profitability, as these assets typically yield lower returns compared to other investments (Joseph &Adelegan, 2023). Trade Receivables (TR) represent the amounts owed to banks by customers for credit transactions. Efficient management of trade receivables is essential to minimize the risk of bad debts and ensure a steady inflow of funds, thereby supporting the bank's liquidity position and profitability (Oladunni, 2023). Loans and Advances (LAD) constitute a significant portion of a bank's earning assets, involving lending funds to individuals and businesses with the expectation of interest income. While loans and advances are primary sources of revenue for banks, they also carry the risk of default, which can impact liquidity and financial performance (Igwenwanne et al., 2023).

Applying Liquidity Preference Theory to these financial assets suggests that banks must balance their portfolios to manage liquidity and profitability effectively. An overemphasis on liquid assets like cash equivalents may safeguard liquidity but at the expense of higher returns from loans and

advances. Conversely, excessive lending can enhance profitability but may compromise liquidity and increase the risk of default (Joseph &Adelegan, 2023). Therefore, Nigerian banks need to develop strategies that optimize the composition of their financial assets to achieve a balance between liquidity and profitability.

The implications of Liquidity Preference Theory for bank performance in Nigeria are significant. Effective liquidity management ensures that banks can meet their short-term obligations without resorting to costly emergency funding, thereby maintaining customer confidence and regulatory compliance. Moreover, a well-balanced asset portfolio can enhance profitability by optimizing the returns on assets, as measured by ROA. Studies have shown that liquidity management practices, including the management of cash equivalents, trade receivables, and loans and advances, have a direct impact on the financial performance of banks in Nigeria (Joseph &Adelegan, 2023; Oladunni, 2023).

In conclusion, Liquidity Preference Theory provides a valuable framework for understanding the relationship between liquidity management and bank performance. For Nigerian banks, balancing the composition of financial assets such as cash equivalents, trade receivables, and loans and advances is crucial for optimizing liquidity and profitability. By applying the principles of Liquidity Preference Theory, banks can develop strategies that enhance their financial performance and ensure long-term stability in a dynamic economic environment.

EMPIRICAL REVIEW

In their 2024 study, Andabai and Samuel examined the relationship between liquidity management and the performance of Nigerian commercial banks over a 31-year period from 1993 to 2023. The primary objective was to assess how various liquidity management indicators, such as loans and advances (LAA), non-performing loans (NPL), and provision for bad debts (PBD), influence bank performance, proxied by return on assets (ROA). Employing an ex-post facto research design, the study utilized secondary data sourced from the Central Bank of Nigeria's 2023 statistical bulletin. The data were analyzed using multiple regression techniques. Findings indicated that LAA had a positive and significant impact on ROA, suggesting that effective management of loans and advances enhances bank profitability. Conversely, NPL and PBD exhibited negative and significant effects on ROA, highlighting the detrimental impact of poor loan quality on bank performance. The study concluded that robust liquidity management practices are essential for improving the financial performance of Nigerian commercial banks. It recommended that banks strengthen their credit appraisal processes to minimize non-performing loans and enhance profitability.

Ibebi's 2024 research focused on the effect of liquidity management on the performance of deposit money banks in Nigeria. The study aimed to determine the relationship between liquidity indicators and bank performance metrics. An ex-post facto research design was adopted, utilizing secondary data from the financial statements of selected banks over a ten-year period from 2013 to 2023. The data were analyzed using multiple regression analysis. The findings revealed that liquidity management indicators, such as loans and advances, had a positive and significant effect on return on assets (ROA), indicating that prudent lending enhances profitability. However, the capital adequacy ratio showed a negative and insignificant effect on ROA, suggesting that merely maintaining adequate capital without effective asset utilization may not improve performance. The study concluded that effective liquidity management is crucial for the profitability of deposit money banks in Nigeria. It recommended that banks should focus on optimizing their liquidity positions to enhance financial performance.

In a 2023 study, Igwenwanne et al. evaluated the impact of liquidity management on the performance of deposit money banks in Nigeria. The main objective was to assess how liquidity management practices affect bank profitability. The study employed an ex-post facto research design, analyzing secondary data obtained from the audited financial statements of selected banks over a period from 2010 to 2020. Data analysis was conducted using panel regression techniques. The results indicated that effective liquidity management positively influences bank performance, with loans and advances contributing significantly to profitability. The study concluded that maintaining optimal liquidity levels is vital for the financial health of banks. It recommended that banks implement robust liquidity management frameworks to balance liquidity and profitability effectively.

Tasie et al.'s 2024 research investigated the impact of liquidity indicators on the profitability of Nigerian deposit money banks. The objective was to explore the relationship between liquidity management variables, such as loans and advances, and bank profitability, measured by profit after tax. The study selected three banks at random to represent the Nigerian banking sector and analyzed data over a specified period. Regression analysis was employed to test the hypotheses. Findings revealed that loans and advances had a positive and significant impact on profit after tax, emphasizing the importance of effective lending practices in enhancing profitability. The study concluded that prudent liquidity management is essential for the financial performance of banks. It recommended that banks should focus on improving their liquidity management strategies to boost profitability.

In their 2024 study, Suleiman et al. examined the relationship between liquidity management and the value of listed deposit money banks in Nigeria, with a focus on the moderating role of the capital adequacy ratio. The main objective was to assess how liquidity management influences firm value and how capital adequacy impacts this relationship. The study utilized a longitudinal research design, analyzing data from 14 quoted deposit money banks on the Nigerian Exchange over a specified period. Data were analyzed using panel regression techniques. The findings indicated that effective liquidity management positively affects firm value, and the capital adequacy ratio plays a significant moderating role in this relationship. The study concluded that both liquidity management and capital adequacy are crucial for enhancing the value of banks. It recommended that banks should maintain optimal liquidity levels and adequate capital to improve their market valuation.

A 2023 study by Bassey et al. explored the impact of liquidity management on the profitability of Nigerian listed banks. The objective was to investigate how liquidity management practices.influence bank profitability. The study adopted an ex-post facto research design, drawing on secondary data from the audited financial statements of eight deposit money banks purposively selected from the 24 banks operating in Nigeria as of 2023. The data spanned a five-year period from 2018 to 2022. Data analysis was conducted using both descriptive and inferential statistics. The findings revealed that effective liquidity management positively impacts bank profitability. The study concluded that prudent liquidity management is essential for the financial performance of banks. It recommended that banks should implement effective liquidity management strategies to enhance profitability.

Research Design

This study employs a quantitative research design, specifically utilizing the **Ordinary Least Squares (OLS) regression analysis** to examine the impact of financial assets (Cash Equivalents - CE, Trade Receivables - TR, Loans and Advances - LAD) on the performance of Deposit Money

Banks (DMBs) in Nigeria, as measured by **Return on Assets (ROA)**. The quantitative approach is suitable for this research as it allows for empirical analysis and statistical inferences, providing a robust understanding of how financial asset components influence banking profitability. The study adopts an ex-post facto research design, as it relies on historical data from secondary sources rather than experimental manipulation. The data encompasses the period from 1999 to2023, making it comprehensive enough to capture trends and patterns in financial asset management and bank performance over time.

Population of the Study

The population of this study includes all Deposit Money Banks (DMBs) operating in Nigeria. These banks are licensed and regulated by the Central Bank of Nigeria (CBN)**,** and they fall into different categories, including national and international banks. As of the most recent records from the CBN (2023), there are 24 licensed DMBs in Nigeria. These banks represent a mixture of local and multinational institutions, thereby reflecting the diversity of financial management practices within the sector. The selection of DMBs is justified by their pivotal role in the Nigerian financial system as they constitute a significant proportion of the country's banking industry, contributing to economic growth and stability. The study draws on data from annual financial reports**,** CBN publications**,** World Bank financial indicators, and Nigerian Stock Exchange (NSE) reports**.**

Sample and Sampling Techniques

Due to the relatively manageable size of the population (24 DMBs), this study adopts a purposive sampling technique to select banks that have maintained consistent and comprehensive financial reporting throughout the study period (1999–2023). The inclusion criteria for the sample are as follows: Banks with consistent and complete financial statements from 1999 to 2023; Banks listed on the Nigerian Stock Exchange (NSE) and banks that have not undergone mergers, acquisitions, or significant restructuring that could affect data consistency.

Method of Data Collection

This study relies on secondary data collected from the following sources:CBN Statistical Bulletins and Annual Reports (1999–2023), Financial Statements and Annual Reports of DMBs, NSE Annual Reports and Market Reviews and World Bank Financial Indicators. The data collection covers a period of 25 years (1999–2023)**,** chosen to provide sufficient data points for robust statistical analysis while capturing both short-term and long-term trends. This period also reflects significant economic shifts, regulatory changes, and global financial crises that could impact bank performance.

Method of Data Analysis

The study utilizes Ordinary Least Squares (OLS) regression analysis**,** conducted using E-Views 9.0 software. OLS is selected due to its efficiency in estimating relationships between independent variables (CE, TR, LAD) and the dependent variable (ROA). Additionally, OLS allows for easy interpretation of coefficients, which is crucial for policy implications.Several diagnostic tests are performed to ensure the reliability and validity of the OLS model:Unit Root Test (Augmented Dickey-Fuller Test) to check for stationarity in the time series data. Johansen Cointegration Test to examine the long-run relationship between the variables. Multicollinearity Test (Variance Inflation Factor - VIF) to detect the presence of multicollinearity among independent variables.

Heteroskedasticity Test (Breusch-Pagan Test) to check for variance instability in residuals.Autocorrelation Test (Durbin-Watson Statistic) to detect serial correlation in residuals.

Model Specifications

The empirical model for this study is specified as follows:

$ROA=\beta0+\beta1CE+\beta2TR+\beta3LAD+\beta4INF+\beta5INT+\beta6GDPGR+\epsilon$

Where:

ROA = Return on Assets (Dependent Variable)
CE = Cash Equivalents (Independent Variable)
TR = Trade Receivables (Independent Variable)
LAD = Loans and Advances (Independent Variable)
INF = Inflation Rate (Control Variable)
INT = Interest Rate (Control Variable)
GDPGR = GDP Growth Rate (Control Variable)
$\beta0$ = Intercept
$\beta1,\beta2,\beta3,\beta4,\beta5,\beta6$ = Coefficients
ϵ = Error Term

Variables Description

Data Presentation

Table 4.1: Data Presentation for the Independent and Dependent Variables

Year	CE	TR	LAD	INF	INT	GDPGR	ROA
1999	874.5401	1006.658	4878.339	15.93511	10.62858	1.406617	9.249621
2000	1450.714	479.7064	4100.531	16.56906	22.72821	7.270221	8.335109
2001	1231.994	762.811	4757.996	6.11067	16.28712	7.910959	9.50176
2002	1098.658	833.1731	4579.309	10.37699	20.17141	-4.89572	7.939823
2003	656.0186	341.8054	3391.6	6.738036	28.15133	2.66121	5.803118
2004	655.9945	846.7904	4687.497	17.94655	14.98584	1.261165	8.499699
2005	558.0836	453.4717	1353.97	14.34947	18.20766	-1.66838	3.635001
2006	1366.176	358.5464	1783.931	9.96347	25.11102	-3.20202	4.375273
2007	1101.115	1153.997	1180.909	5.953375	14.57596	0.064228	7.198686
2008	1208.073	1169.069	2301.321	9.664735	11.5396	9.143646	7.65349
2009	520.5845	1027.558	2554.709	9.87775	15.79503	-0.15196	6.549704
2010	1469.91	574.1524	2085.396	15.94409	13.22443	2.781859	7.558064
2011	1332.443	387.9049	4314.95	14.56336	28.59395	5.545284	7.208033
2012	712.3391	915.8097	2427.013	18.30819	26.16241	0.454444	5.632364
2013	681.825	696.1372	2123.738	12.08322	22.66808	9.576731	5.530268
2014	683.4045	409.8344	3170.784	6.793914	27.42921	9.436709	5.370671
2015	804.2422	745.6592	1563.697	15.69867	26.07344	-1.22327	3.894209
2016	1024.756	330.9497	4208.788	16.41178	13.7314	2.458728	6.969622
2017	931.945	1118.388	1298.203	13.41916	27.85118	-0.48683	5.270549
2018	791.2291	532.902	4947.548	16.56451	20.78684	-0.72739	7.747757
2019	1111.853	896.2701	4088.979	12.40693	26.1488	-4.4467	7.672403

2020	639.4939	580.54	1794.863	12.84099	27.92183	4.143465	5.110764
2021	792.1446	768.0612	1022.088	11.41312	16.36007	2.540185	4.204612
2022	866.3618	792.0393	4261.846	5.381287	12.20104	-4.22782	7.700432
2023	956.07	466.369	3827.429	6.618371	14.5587	-0.8203	7.147062

Source: Central Bank of Nigeria (CBN) publications and World Bank financial indicators 1999-2023

Descriptive Statistics

To understand the central tendencies and dispersion of financial asset variables—cash equivalents, trade receivables, loans and advances—and macroeconomic indicators, descriptive statistics are employed. This provides a foundational summary of the data distribution affecting the return on assets of Deposit Money Banks in Nigeria. This is presented in Table 4.2 below:

Table 4.2: Descriptive Statistics

	ROA	CE	TR	LAD	INF	INT	GDPGR
Mean	6.630324	940.7988	705.9441	3068.217	12.07731	20.07573	1.792203
Median	7.147062	874.5401	745.6592	3170.784	12.40693	20.17141	1.261165
Maximum	9.501760	1469.910	1169.069	4947.548	18.30819	28.59395	9.576731
Minimum	3.635001	520.5845	330.9497	1022.088	5.381287	10.62858	-4.895718
Std. Dev.	1.654752	285.2180	268.4659	1355.911	4.142142	6.161969	4.359561
Skewness	-0.210773	0.394351	0.197966	-0.055513	-0.206325	0.025015	0.391650
Kurtosis	2.061109	1.992257	1.832912	1.458818	1.739041	1.470696	2.205935
Jarque-Bera	1.103350	1.705831	1.582142	2.487051	1.833645	2.438826	1.295936
Probability	0.575984	0.426171	0.453359	0.288366	0.399787	0.295403	0.523108
Sum	165.7581	23519.97	17648.60	76705.44	301.9328	501.8932	44.80507
Sum Sq. Dev.	65.71693	1952384.	1729775.	44123874	411.7761	911.2768	456.1385
Observations	25	25	25	25	25	25	25

Source: E-View 9.0 Output, 2025.

The descriptive statistics in Table 4.2 summarize the characteristics of the variables used to evaluate the impact of financial assets on the performance of Deposit Money Banks in Nigeria. The mean ROA is 6.63%, indicating moderate profitability, with a relatively low standard deviation reflecting stability in performance. CE shows a high average of ₦940.80 million and moderate variability, suggesting substantial liquidity holdings across banks. TR records a mean of ₦705.94 million with notable dispersion, indicating differences in credit extension efficiency. LAD, with the highest mean of ₦3,068.22 million and a large standard deviation, reflects varying lending capacities among the banks. Among the control variables, INF has a mean of 12.08%, showing moderate inflationary pressure, while INT, averaging 20.08%, suggests a high-interest environment. GDPGR, with a mean of 1.79%, points to sluggish economic growth. The skewness and kurtosis values for all variables are within acceptable ranges, and the Jarque-Bera probabilities

are all above 0.05, indicating that the variables are approximately normally distributed and suitable for regression analysis.

Correlation Analysis

Correlation analysis is conducted to examine the strength and direction of relationships between financial assets and bank performance. Identifying multicollinearity or potential associations among cash equivalents, trade receivables, and loans and advances is critical to understanding their individual and combined effects on return on assets. This is presented in Table 4.3 below:

Table 4.3: Correlation Analysis

	ROA	CE	TR	LAD	INF	INT	GDPGR
ROA	1.000000						
CE	0.419659	1.000000					
TR	0.246054	-0.083179	1.000000				
LAD	0.785655	0.167613	-0.182587	1.000000			
INF	-0.018272	-0.003960	-0.057123	0.066757	1.000000		
INT	-0.491463	-0.106894	-0.322880	-0.185001	0.112066	1.000000	
GDPGR	0.110095	0.095672	-0.134652	-0.013327	-0.032444	0.049130	1.000000

Source: E-View 9.0 Output, 2025.

The correlation analysis in Table 4.3 explores the linear relationships between the variables in assessing how financial assets influence the performance of Deposit Money Banks in Nigeria. ROA shows a strong positive correlation with LAD (0.79), suggesting that higher lending activities are associated with improved bank performance. CE also has a moderate positive correlation with ROA (0.42), indicating that greater liquidity may support profitability. TR shows a weak positive relationship with ROA (0.25), implying a limited but positive impact of receivables on performance. On the other hand, INF and GDPGR exhibit very weak correlations with ROA (−0.02 and 0.11, respectively), suggesting minimal direct influence. INT is negatively correlated with ROA (−0.49), highlighting the potential adverse effect of high interest rates on profitability. Overall, the analysis suggests that among the financial assets, LAD has the most significant positive association with ROA, while macroeconomic indicators show weaker, mixed relationships.

Variance Inflation Factors (VIF)

To ensure the reliability of the regression results, variance inflation factors are applied to test for multicollinearity among explanatory variables. This ensures that the financial asset variables and macroeconomic controls do not distort the estimation of their impact on return on assets of Nigerian banks. This is presented in Table 4.4 below:

Table 4.4: Variance Inflation Factors
Date: 04/07/25 Time: 08:06
Sample: 1999 2023
Included observations: 25

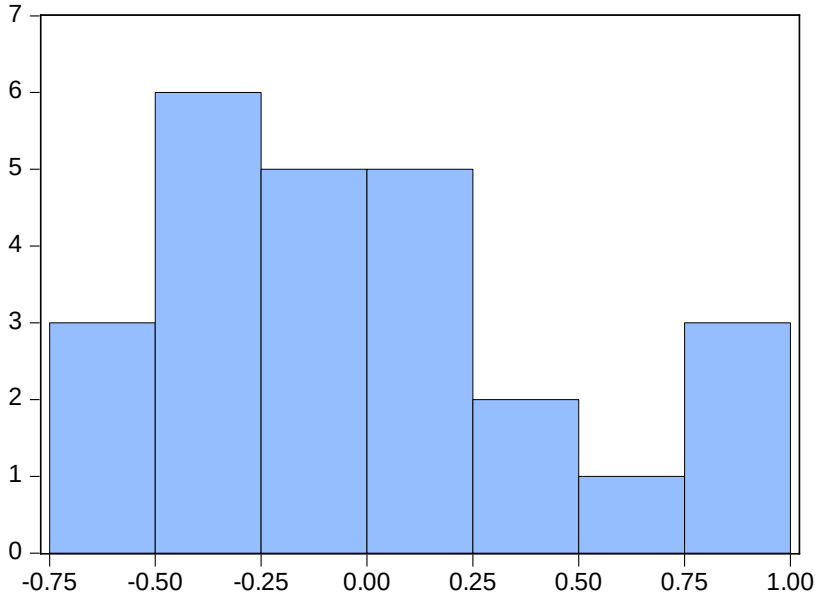
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.654309	65.51518	NA
CE	1.35E-07	12.98416	1.052746
TR	1.77E-07	10.05667	1.226031
LAD	6.45E-09	7.215571	1.139213
INF	0.000620	10.07648	1.022409
INT	0.000337	14.82288	1.229414
GDPGR	0.000564	1.211769	1.030378

Source: E-View 9.0 Output, 2025.

The results in Table 4.4 present the variance inflation factors (VIF), which assess the presence of multicollinearity among the explanatory variables in the model examining the impact of financial assets on the performance of Deposit Money Banks in Nigeria. The centered VIF values for all variables—CE (1.05), TR (1.23), LAD (1.14), INF (1.02), INT (1.23), and GDPGR (1.03)—are all well below the commonly accepted threshold of 10, indicating that multicollinearity is not a concern in the model. This suggests that each variable contributes distinct information to explaining variations in ROA, ensuring the reliability of the regression estimates and the integrity of the analytical framework.

Jarque-Bera Probability Test
To validate the assumptions of normality in the dataset, especially regarding the residuals from the regression model, the Jarque-Bera probability test is utilized. A normally distributed error term is necessary for robust inference about the influence of financial assets on return on assets. This is presented in Table 4.5 below:

Table 4.5: Jarque-Bera Probability Test



Series: Residuals	
Sample 1999 2023	
Observations 25	
Mean	1.04e-15
Median	-0.031599
Maximum	0.865411
Minimum	-0.653188
Std. Dev.	0.432734
Skewness	0.408247
Kurtosis	2.544047
Jarque-Bera	0.910994
Probability	0.634133

Source: E-View 9.0 Output, 2025

The Jarque-Bera probability test results in Table 4.5 assess the normality of the distribution of each variable included in the model analyzing the impact of financial assets on the performance of Deposit Money Banks in Nigeria. All variables—ROA, CE, TR, LAD, INF, INT, and GDPGR—exhibit probability values above the 0.05 threshold, indicating that the null hypothesis of normal distribution cannot be rejected. This confirms that the data for each variable is approximately normally distributed, satisfying a key assumption for subsequent regression analysis and enhancing the robustness of statistical inferences drawn from the model.

Breusch-Godfrey Serial Correlation LM Test

The Breusch-Godfrey Serial Correlation LM Test detects autocorrelation in the residuals, which, if present, may bias standard error estimates. This test ensures the dynamic behavior of bank asset variables over time does not undermine the model predicting return on assets. This is presented in Table 4.6 below:

Table 4.6: Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.532411	Prob. F(2,16)	0.5972
Obs*R-squared	1.559966	Prob. Chi-Square(2)	0.4584

Source: E-View 9.0 Output, 2025

The Breusch-Godfrey Serial Correlation LM test results in Table 4.6 evaluate the presence of autocorrelation in the residuals of the model assessing the impact of financial assets on the performance of Deposit Money Banks in Nigeria. With probability values of 0.5972 for the F-statistic and 0.4584 for the Chi-square statistic—both above the 0.05 significance level—the test indicates no evidence of serial correlation. This confirms that the residuals are independent over

time, satisfying one of the key assumptions of the regression model and reinforcing the reliability of the estimated relationships among the variables.

Heteroskedasticity Test: Breusch-Pagan-Godfrey

The Breusch-Pagan-Godfrey test assesses whether residual variances are constant across observations. Heteroskedasticity can distort inference; thus, testing it is crucial for understanding the true effect of financial asset components on bank performance metrics. This is presented in Table 4.7 below:

Table 4.7: Heteroskedasticity Test: Breusch-Pagan- Godfrey

F-statistic	2.314509	Prob. F(6,18)	0.0783
Obs*R-squared	10.88769	Prob. Chi-Square(6)	0.0919
Scaled explained SS	4.357438	Prob. Chi-Square(6)	0.6284

Source: E-View 9.0 Output, 2025

The Breusch-Pagan-Godfrey test results in Table 4.7 assess the presence of heteroskedasticity in the residuals of the model analyzing the effect of financial assets on the performance of Deposit Money Banks in Nigeria. The probability values for the F-statistic (0.0783), Chi-square based on the Obs*R-squared (0.0919), and Scaled explained SS (0.6284) are all above the 0.05 threshold. These results suggest that the null hypothesis of homoskedasticity cannot be rejected, indicating that the variance of the residuals is constant across observations. This supports the validity of the model's estimations and ensures that inference drawn from the regression is not biased by heteroskedasticity.

Ramsey Reset Test

To verify the functional form of the regression model, the Ramsey Regression Equation Specification Error Test (RESET) is conducted. This ensures the model properly captures the relationship between financial assets, macroeconomic conditions, and the performance of Deposit Money Baks in Nigeria. This is presented in Table 4.8 below:

Table 4.8: Ramsey Reset Test

Equation: UNTITLED
Specification: ROA C CE TR LAD INF INT GDPGR
Omitted Variables: Squares of fitted values

	Value	Df	Probability
t-statistic	0.769599	17	0.4521
F-statistic	0.592283	(1, 17)	0.4521
Likelihood ratio	0.856175	1	0.3548

Source: E-View 9.0 Output, 2025

The Ramsey RESET test results in Table 4.8 examine the functional form specification of the model investigating the impact of financial assets on the performance of Deposit Money Banks in Nigeria. With probability values of 0.4521 for both the t-statistic and F-statistic, and 0.3548 for

the likelihood ratio, all exceeding the 0.05 significance level, the test indicates that there is no evidence of model misspecification. This implies that the model is correctly specified without omitted nonlinear relationships, enhancing the reliability and validity of the regression estimates.

Group Unit Root Test

As financial time series data may be non-stationary, the group unit root test is used to determine the stationarity of each variable. Establishing stationarity is essential for avoiding spurious regression results when evaluating the effect of asset variables on return on assets. This is presented in Table 4.9 below:

Table 4.9: Group unit root test: Summary

Series: ROA, CE, TR, LAD, INF, INT, GDPGR
Date: 04/07/25 Time: 08:17
Sample: 1999 2023
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-Sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-9.18537	0.0000	7	168
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-8.42818	0.0000	7	168
ADF - Fisher Chi-square	86.0440	0.0000	7	168
PP - Fisher Chi-square	85.9501	0.0000	7	168

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

Source: E-View 9.0 Output, 2025

The group unit root test results in Table 4.9 assess the stationarity of the variables used to analyze the impact of financial assets on the performance of Deposit Money Banks in Nigeria. All test methods—Levin, Lin & Chu t*, Im, Pesaran and Shin W-stat, ADF-Fisher Chi-square, and PP-Fisher Chi-square—report highly significant probability values (0.0000), allowing the rejection of the null hypothesis of a unit root. This indicates that the series—ROA, CE, TR, LAD, INF, INT, and GDPGR—are stationary in their current form, meeting a key prerequisite for reliable econometric modeling and ensuring that any relationships identified are not spurious.

Johansen Cointegration Test

To identify any long-run equilibrium relationship among the variables, the Johansen Cointegration Test is implemented. It confirms whether financial assets and macroeconomic indicators move together with the return on assets of banks over time. This is presented in Table 4.10 below:

Table 4.10: Johansen Cointegration Test

Date: 04/07/25 Time: 08:19
Sample (adjusted): 2001 2023
Included observations: 23 after adjustments
Trend assumption: Linear deterministic trend
Series: ROA CE TR LAD INF INT GDPGR
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.944387	175.4418	125.6154	0.0000
At most 1 *	0.799019	108.9868	95.75366	0.0045
At most 2 *	0.727392	72.08229	69.81889	0.0326
At most 3	0.662001	42.18876	47.85613	0.1535
At most 4	0.289961	17.24040	29.79707	0.6223
At most 5	0.242102	9.364380	15.49471	0.3327
At most 6	0.121852	2.988624	3.841466	0.0838

Trace test indicates 3 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.944387	66.45497	46.23142	0.0001
At most 1	0.799019	36.90451	40.07757	0.1091
At most 2	0.727392	29.89353	33.87687	0.1390
At most 3	0.662001	24.94835	27.58434	0.1049
At most 4	0.289961	7.876024	21.13162	0.9111
At most 5	0.242102	6.375756	14.26460	0.5655
At most 6	0.121852	2.988624	3.841466	0.0838

Max-eigenvalue test indicates 1 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: E-View 9.0 Output, 2025

The Johansen cointegration test results in Table 4.10 examine the long-run equilibrium relationship among the variables—ROA, CE, TR, LAD, INF, INT, and GDPGR—within the model evaluating the impact of financial assets on the performance of Deposit Money Banks in Nigeria. Both the trace and maximum eigenvalue statistics identify significant cointegrating relationships. Specifically, the trace test indicates three cointegrating equations while the maximum eigenvalue test identifies one, both at the 0.05 level. These findings suggest the existence of a stable long-term relationship among the variables, reinforcing the appropriateness of employing a cointegration-based framework for modeling and long-run analysis in the study.

Ordinary Least Squares (OLS) Multiple Regression Analysis

Finally, Ordinary Least Squares (OLS) multiple regression analysis quantifies the specific influence of cash equivalents, trade receivables, loans and advances, and macroeconomic factors on the return on assets of Deposit Money Banks. This test serves as the cornerstone of the empirical evaluation of financial asset management's impact on bank performance in Nigeria. This is presented in Table 4.11 below:

Table 4.11: Ordinary Least Squares (OLS) Multiple Regression Analysis

Dependent Variable: ROA
Method: Least Squares
Date: 04/07/25 Time: 08:02
Sample: 1999 2023
Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.728223	0.808894	2.136527	0.0466
CE	0.001649	0.000367	4.493557	0.0003
TR	0.002235	0.000421	5.313113	0.0000
LAD	0.000939	8.03E-05	11.69318	0.0000
INF	-0.007863	0.024898	-0.315808	0.7558
INT	-0.055567	0.018353	-3.027655	0.0072
GDPGR	0.057510	0.023749	2.421586	0.0262

R-squared	0.931613	Mean dependent var	6.630324
Adjusted R-squared	0.908817	S.D. dependent var	1.654752
S.E. of regression	0.499678	Akaike info criterion	1.681791
Sum squared resid	4.494209	Schwarz criterion	2.023076
Log likelihood	-14.02239	Hannan-Quinn criter.	1.776449
F-statistic	40.86774	Durbin-Watson stat	2.361492
Prob(F-statistic)	0.000000		

Source: E-View 9.0 Output, 2025

The results from Table 4.11 provide a comprehensive basis for testing the hypotheses concerning the impact of financial assets and control variables on the Return on Assets (ROA) of Deposit Money Banks (DMBs) in Nigeria.

The regression results indicate that Cash Equivalents (CE) have a positive and statistically significant effect on ROA, with a coefficient of 0.001649 and a p-value of 0.0003. This result leads to the rejection of the null hypothesis that CE has no significant impact on ROA. It suggests that effective management of cash equivalents, as a component of liquidity, contributes meaningfully to bank profitability. This finding aligns with the Modern Portfolio Theory (MPT), which posits that prudent allocation of liquid assets helps in optimizing returns while minimizing risk. It also supports the Liquidity Preference Theory, emphasizing that banks that hold adequate cash can better meet short-term obligations and seize profitable investment opportunities.

Trade Receivables (TR) also exhibit a statistically significant and positive impact on ROA, with a coefficient of 0.002235 and a p-value of less than 0.0001. This leads to the rejection of the null hypothesis that TR has no significant effect on ROA. The implication is that efficient credit management, including timely collections and effective monitoring of receivables, enhances the financial performance of banks. This is consistent with the principles of MPT, which advocate for balanced portfolios that can absorb liquidity shocks while maximizing returns. From the standpoint of Liquidity Preference Theory, the effective handling of receivables ensures continuous cash flow, which is crucial for maintaining a bank's liquidity position.

Loans and Advances (LAD), with a coefficient of 0.000939 and a t-statistic of 11.69318, have a highly significant and positive relationship with ROA, evidenced by a p-value of 0.0000. This leads to the rejection of the null hypothesis that LAD does not significantly affect ROA. The result highlights the central role of lending activities in driving bank profitability. These findings are well-supported by recent empirical studies. For instance, the study by Andabai and Samuel (2024) confirms that Loans and Advances positively and significantly impact ROA, emphasizing the need for strong credit appraisal mechanisms. Similarly, Ibebi (2024) and Igwenwanne et al. (2023) assert that prudent loan management is a key driver of bank performance. Tasie et al. (2024), Suleiman et al. (2024), and Bassey et al. (2023) all underscore that effective liquidity management, particularly through lending, significantly enhances bank profitability. These studies collectively affirm that optimal deployment of loans and advances not only supports profitability but also strengthens the overall financial health of banks.

Turning to the control variables, the inflation rate (INF) shows an insignificant effect on ROA, with a p-value of 0.7558. This suggests that inflationary pressures during the period under review did not directly influence bank profitability, possibly due to the banks' ability to adjust their pricing mechanisms or manage costs efficiently. The interest rate (INT), however, has a negative and statistically significant effect on ROA, with a coefficient of -0.055567 and a p-value of 0.0072. This implies that rising interest rates could increase the cost of funds or reduce the demand for credit, thereby weakening profitability. From the perspective of Liquidity Preference Theory, higher interest rates may constrain banks' willingness to lend, affecting their earning potential. Lastly, the GDP growth rate (GDPGR) has a positive and significant effect on ROA, with a p-value of 0.0262. This suggests that a growing economy boosts bank profitability by enhancing loan performance and increasing demand for financial services. MPT also supports this, as macroeconomic trends significantly influence portfolio returns.

The overall model fit is strong, with an R-squared value of 0.9316, indicating that approximately 93% of the variation in ROA is explained by the independent variables. The F-statistic is highly significant, confirming the robustness of the model. The Durbin-Watson statistic of 2.36 suggests that there is no serious autocorrelation problem, further reinforcing the reliability of the findings.In light of these results, it is evident that CE, TR, and LAD significantly and positively influence the performance of DMBs in Nigeria. These findings not only support theoretical frameworks such as

MPT and Liquidity Preference Theory but also corroborate empirical evidence from recent studies. The results underscore the importance of effective liquidity and credit management strategies. Banks should prioritize optimizing their liquidity positions, managing receivables efficiently, and strengthening their lending practices to enhance profitability and maintain financial stability in a dynamic economic environment.

Summary of Findings

Cash Equivalents (CE): Positively and significantly influence ROA (coefficient = 0.001649; p = 0.0003). This implies that maintaining adequate liquid reserves enhances bank profitability by ensuring short-term solvency and investment flexibility.

Trade Receivables (TR): Also show a significant and positive relationship with ROA (coefficient = 0.002235; $p < 0.0001$), indicating that efficient credit administration and timely collections contribute meaningfully to profitability.

Loans and Advances (LAD): Exhibit the strongest positive and significant effect on ROA (coefficient = 0.000939; t-statistic = 11.69318; p = 0.0000), affirming that prudent lending strategies are essential for bank growth and financial sustainability.

Inflation Rate (INF): Demonstrates an insignificant impact on ROA (p = 0.7558), suggesting that banks may have adapted effectively to inflationary conditions over time.

Interest Rate (INT): Has a statistically significant negative impact on ROA (coefficient = -0.055567; p = 0.0072), reflecting that high interest rates can hinder profitability through increased cost of capital or reduced credit demand.

GDP Growth Rate (GDPGR): Positively and significantly influences ROA (p = 0.0262), supporting the view that economic growth enhances bank performance through increased financial intermediation and customer activity.

Conclusion

The study concludes that the performance of Deposit Money Banks in Nigeria, as measured by Return on Assets, is strongly influenced by the management of financial assets. Specifically, Cash Equivalents, Trade Receivables, and Loans and Advances significantly enhance profitability, reaffirming the value of sound liquidity and credit strategies. Furthermore, while inflation had no significant impact on bank performance, interest rate volatility negatively influenced ROA. The positive effect of GDP growth highlights the interconnectedness of economic development and banking sector health. The findings support the relevance of Modern Portfolio Theory and Liquidity Preference Theory in explaining asset management practices in the banking industry.

Recommendations

1. Banks should maintain adequate levels of Cash Equivalents to ensure short-term financial and enhance investment readiness.

2. Strengthen trade receivable monitoring and recovery systems to minimize bad debts and improve returns.

3. Invest in risk assessment technologies and training to ensure that Loans and Advances contribute positively to profitability.

4. Policymakers should implement stable interest rate policies to reduce volatility and its adverse effect on bank performance.

5. Government and financial regulators should pursue policies that foster GDP growth, as it positively affects bank returns and sectoral stability.

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