



CASH MANAGEMENT STRATEGIES AND THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS LISTED IN NIGERIA

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Abstract

This study investigates how cash management strategies influence the financial performance of listed commercial banks in Nigeria. Specifically, it seeks to determine how these strategies affect key performance indicators, including return on assets, return on equity, and earnings per share, within the Nigerian banking industry. The research adopts an ex-post facto design and relies on secondary data collected from 10 purposively selected banks over 10 years (2015-2025). Data sources include publications from the Nigerian Stock Group, reports from the Central Bank of Nigeria, and audited financial statements of the sampled banks. Descriptive statistics and multiple regression analysis were conducted using EViews software. Findings reveal that cash management strategies significantly influence bank performance. While liquidity management shows a positive but weak effect, working capital policies and cash budgeting contribute meaningfully to improved profitability. Treasury operations efficiency emerges as the most influential factor, highlighting its importance in sustaining corporate performance. The study recommends that banks strengthen cash forecasting systems and integrate treasury functions with risk management frameworks. The implications suggest that effective cash management enhances financial stability, supports profitability, and improves decision-making in the Nigerian banking sector.

Keywords: *Liquidity Management, Working Capital Efficiency, Treasury Operations, Bank Financial Performance.*

Introduction

Cash management refers to the systematic coordination of cash inflows and outflows to ensure adequate liquidity, maximize returns, and minimize operational costs within financial institutions. It is a core function of banking operations because it determines how efficiently banks balance liquidity needs with profitability objectives while maintaining regulatory compliance and financial stability. In practice, banks are

required to hold sufficient reserves to meet withdrawal demands, support lending activities, comply with regulatory liquidity standards, and invest surplus funds in income-generating assets (CBN, 2020). The primary objective is to achieve an optimal trade-off among liquidity, profitability, and risk to sustain long-term solvency and competitiveness in an increasingly volatile financial environment (Afolabi et al., 2023; Nwokoye and Ananwude, 2024; Ezeani and

Okoye, 2021). Liquidity management is a central element of cash management and reflects a bank's ability to meet short-term obligations without financial strain or operational disruption. Banks with strong liquidity positions are better able to absorb unexpected withdrawals, respond to credit demand, and withstand market volatility. Adequate liquidity buffers also strengthen resilience during economic downturns and enhance confidence among depositors and investors, thereby supporting stable financial performance (Basel Committee on Banking Supervision, 2021; International Monetary Fund, 2022; Ezeani and Okoye, 2021). However, maintaining excess liquidity can reduce profitability due to idle funds, while insufficient liquidity increases the risk of financial distress, creating the need for optimal liquidity management strategies.

The efficient utilization of idle cash also plays a major role in enhancing profitability. Funds that are not immediately required for operational or regulatory purposes represent lost income opportunities if left uninvested (Li *et al.*, 2021). Banks can improve returns by investing surplus funds in low-risk and short-term financial instruments such as treasury bills and money market securities while maintaining adequate liquidity coverage (Khan and Jain, 2020; Gupta and Sharma, 2018; Afolabi *et al.*, 2023). Empirical studies further show that banks that actively manage surplus funds tend to achieve higher returns on assets and improved financial performance. However, excessive risk-taking in investment decisions may weaken financial stability, highlighting the importance of maintaining a balanced approach to cash allocation (Nwokoye and Ananwude, 2024). Reducing transaction costs is another important aspect of effective cash management. Costs associated with fund

transfers, cash handling, and payment processing can significantly reduce profitability if not properly controlled (World Bank, 2020). As a result, banks have increasingly adopted digital technologies such as automated teller machines (ATMs), mobile banking platforms, and electronic payment systems to improve efficiency and reduce reliance on physical cash transactions. These innovations reduce operational costs, increase processing speed, and enhance customer satisfaction (Anggitaningsih, 2022; Afolabi *et al.*, 2023). More recent evidence confirms that cost efficiency, particularly in transaction and operational expenses, has a strong positive effect on bank profitability and competitiveness (Demir and Çelik, 2025; Yıldırım and Kaya, 2025). By reducing costs, banks are able to offer competitive pricing, attract more customers, and expand their market share.

Cash flow uncertainty also presents a significant challenge in banking operations. Fluctuations in cash inflows and outflows can strain liquidity positions, forcing banks to rely on expensive external financing or liquidate assets under unfavorable conditions. To address this issue, banks are increasingly adopting advanced forecasting tools and maintaining adequate high-quality liquid assets to stabilize operations. Evidence from emerging economies shows that strong cash-flow monitoring and liquidity buffers improve financial stability and institutional performance (Akpan and Uwah, 2024; International Monetary Fund, 2022). Effective cash management allows banks to maintain operational stability and focus on strategic activities such as credit expansion, innovation, and digital transformation. Risk exposure is closely tied to cash management practices, particularly liquidity risk and operational risk. Liquidity risk arises when banks cannot meet short-term obligations due to insufficient liquid assets, while operational risk results from inefficiencies in cash handling and internal

processes. (Ndubishi,2017), assert that poor cash management practices, such as excessive reliance on short-term borrowing and weak reserve planning, increase vulnerability to financial distress. Studies show that effective risk management practices, including cost control and operational efficiency, significantly enhance profitability and resilience (Ezeani and Okoye, 2021; Yıldırım and Kaya, 2025). Thus, strong cash control systems are essential for maintaining financial stability. Regulatory frameworks also strongly influence cash management strategies in banks. Global standards issued by the Basel Committee on Banking Supervision, particularly the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), require banks to maintain sufficiently high-quality liquid assets and stable funding structures. While these regulations improve financial stability and investor confidence, they may also limit banks' ability to invest in high-yield opportunities. Nevertheless, compliance with regulatory requirements has been linked to improved profitability, risk control, and market performance (Basel Committee on Banking Supervision, 2021; Yıldırım and Kaya, 2025).

Despite improvements in regulation and technology, banks continue to face challenges in balancing liquidity and profitability. Excess liquidity may result in idle funds and reduced returns, while inadequate liquidity exposes banks to solvency risks (Ezeani and Okoye, 2021). Similarly, inefficiencies in working capital management can increase operating costs and reduce service efficiency. Cash budgeting and forecasting systems also remain weak in many institutions, leading to liquidity mismatches and poor resource allocation (International Monetary Fund, 2022; Akpan

and Uwah, 2024). Treasury operations are equally important for ensuring long-term sustainability. They involve managing assets, liabilities, investments, and financial risks such as interest rate and foreign exchange risks. Weak treasury systems, including poor risk monitoring and inefficient investment decisions, can undermine financial stability and growth. Conversely, strong treasury management improves sustainability and resilience (Nwokoye and Ananwude, 2024; Demir and Çelik, 2025). Therefore, improving liquidity management, working capital policies, cash forecasting, and treasury operations is essential for enhancing profitability, efficiency, and long-term sustainability in the banking sector.

Statement of the Problem

The banking industry plays a critical role in the economic development of Nigeria through financial intermediation, credit creation, and the mobilization of funds. However, many commercial banks continue to face challenges relating to ineffective cash management practices, declining profitability, liquidity pressures, and operational inefficiencies. In recent years, fluctuations in the financial market, increasing regulatory requirements, and economic uncertainties have further intensified the need for banks to adopt efficient cash management strategies that can enhance performance and ensure long-term sustainability. One of the major concerns confronting banks is the ability to maintain adequate liquidity while simultaneously maximizing profitability. Poor liquidity management may result in an inability to meet short-term obligations, whereas excessive liquidity can reduce investment opportunities and earnings. In addition, ineffective working capital policies may negatively affect operational activities, thereby reducing the efficiency and overall productivity of banking institutions.

Furthermore, inadequate cash budgeting and weak forecasting systems have contributed to poor financial planning and inefficient allocation of financial resources within banks. This situation may hinder managerial decision-making and ultimately affect corporate performance. Similarly, weaknesses in treasury operations, including inefficient management of cash flows, investments, and financial risks, may threaten the sustainability and stability of banks in a highly competitive financial environment. Despite the growing importance of cash management strategies in the banking sector, several banks in Nigeria still struggle with balancing liquidity, profitability, operational efficiency, and sustainability. Accordingly, there is a need to examine the extent to which liquidity management, working capital policies, cash budgeting and forecasting, as well as treasury operations, influence the performance and sustainability of commercial banks in Nigeria.

Objectives of the study

The main objective of the study is Cash Management Strategies and the Financial Performance of Commercial Banks Listed in Nigeria. Specifically:

- (i) To evaluate the effect of liquidity management on banks' profitability.
- (ii) To determine how working capital policies influence banks' operational efficiency.
- (iii) To assess the effect of cash budgeting and forecasting on corporate performance.
- (iv) To examine the relationship between treasury operations and bank sustainability.

Research Questions

- (i) What is the effect of liquidity management on banks' profitability?

- (ii) How do working capital policies affect banks' operational efficiency?
- (iii) What is the relationship between cash budgeting/forecasting and banks' performance?
- (iv) To what extent do treasury operations affect corporate sustainability?

Research Hypotheses

- (i) H01: Liquidity management has no significant effect on banks' profitability.
- (ii) H02: Working capital policies have no significant effect on banks' operational efficiency.
- (iii) H03: Cash budgeting/forecasting has no significant effect on banks' performance.
- (iv) H04: Treasury operations have no significant effect on banks' corporate sustainability.

Literature Review

Conceptual Framework

The conceptual framework of this study is anchored on the relationship between cash management practices and the performance of banks in Nigeria. The framework explains how effective management of cash resources contributes to profitability, operational efficiency, corporate performance, and long-term sustainability within the banking sector. Cash management remains a critical aspect of banking operations because banks rely heavily on liquid resources to meet customer obligations, finance lending activities, and maintain financial stability (Ezeani and Okoye, 2021; Afolabi et al., 2023). The major dimensions of cash management examined in this study include liquidity management, working capital policies, cash budgeting and forecasting, and treasury operations. These dimensions are treated as the independent variables, while profitability, operational efficiency, corporate performance, and sustainability are considered the dependent variables.

The first component of the framework focuses on liquidity management and bank profitability. Liquidity management refers to the ability of banks to maintain adequate cash and liquid assets to meet short-term obligations such as customer withdrawals, loan commitments, and operational expenses without incurring substantial losses (Nwokoye and Ananwude, 2024). Effective liquidity management enables banks to minimize liquidity risk, avoid costly emergency borrowing, and invest surplus funds profitably (Ezeani and Okoye, 2021). Profitability is commonly measured using indicators such as Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM), which reflect the ability of banks to generate earnings from available resources. The framework assumes that maintaining optimal liquidity levels enhances profitability by improving financial flexibility and reducing risk exposure. Conversely, inadequate liquidity may expose banks to financial distress, while excessive liquidity may reduce investment opportunities and profitability (Afolabi et al., 2023). This framework is reinforced by the liquidity standards introduced by the Basel Committee on Banking Supervision (2021), particularly the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), which are designed to strengthen liquidity resilience and financial stability within banking institutions.

The framework also emphasizes the role of working capital policies in enhancing operational efficiency. Working capital policies involve decisions relating to the management of current assets and current liabilities, including cash balances, receivables, payables, and short-term investments (Akpan and Uwah, 2024). Efficient working capital management

enables banks to meet operational obligations, minimize financing costs, and improve resource allocation efficiency. Operational efficiency is reflected through indicators such as cost-to-income ratio, operating expenses, and productivity levels (Yildirim and Kaya, 2025). The framework assumes that prudent working capital policies improve operational efficiency by ensuring smooth banking operations and reducing liquidity shortages. However, ineffective management of short-term assets and liabilities may increase operating costs and negatively affect service delivery (Demir and Çelik, 2025). In addition, prudential regulations established by the Basel Committee on Banking Supervision encourage banks to maintain adequate liquid assets and effective short-term financial management practices to strengthen operational discipline and financial stability.

Another important aspect of the framework focuses on the relationship between cash budgeting, forecasting, and corporate performance. Cash budgeting and forecasting refer to the process of estimating future cash inflows and outflows in order to support financial planning and strategic decision-making (Afolabi et al., 2023). Accurate forecasting systems help banks anticipate liquidity needs, allocate resources effectively, and reduce uncertainty in financial operations. Corporate performance, commonly measured using profitability ratios, earnings growth, and financial stability indicators, is expected to improve when banks adopt effective cash budgeting systems (Ezeani and Okoye, 2021). The framework assumes that accurate forecasting minimizes idle cash balances, reduces liquidity mismatches, and improves investment decisions. Conversely, weak forecasting systems may lead to inefficient resource allocation, cash shortages, and reduced profitability (Nwokoye and Ananwude, 2024). The framework is further supported by the International Monetary Fund (2022), which

emphasized that forward-looking cash forecasting systems improve liquidity planning, strengthen financial resilience, and support sustainable corporate growth.

Furthermore, the framework highlights the relationship between treasury operations and bank sustainability. Treasury operations involve the management of liquidity, investments, funding structures, and financial risks such as foreign exchange risk, interest rate risk, and market risk (Yıldırım and Kaya, 2025). Effective treasury management ensures adequate funding, proper asset–liability matching, and compliance with regulatory requirements, thereby supporting long-term financial stability and growth (Nwokoye and Ananwude, 2024). Bank sustainability refers to the ability of banks to maintain stable operations, manage financial risks effectively, and achieve consistent profitability over time. The framework posits that efficient treasury operations improve sustainability by reducing exposure to financial shocks, strengthening liquidity resilience, and improving strategic investment decisions (Demir and Çelik, 2025). The framework is also supported by the regulatory standards of the Basel Committee on Banking Supervision (2021), which emphasize sound treasury and risk management practices as critical components of financial stability. However, strict compliance with liquidity regulations may sometimes reduce opportunities for high-yield investments, thereby creating a trade-off between profitability and stability (International Monetary Fund, 2022).

The conceptual framework further recognizes the influence of moderating variables such as bank size, technological advancement, managerial expertise, asset quality, and macroeconomic conditions (NBS, 2021), documents that larger banks

with diversified portfolios and advanced financial technologies are often better positioned to manage liquidity and treasury operations efficiently (Anggitaningsih, 2022). Similarly, the adoption of digital financial systems and predictive analytics can improve forecasting accuracy and operational efficiency. However, adverse macroeconomic conditions such as inflation, economic instability, and fluctuating interest rates may weaken bank performance regardless of internal cash management practices (International Monetary Fund, 2022). Okafor and Ugwuegbe (2016) maintain that effective cash management practices significantly improve profitability, operational efficiency, corporate performance, and sustainability within the Nigerian banking sector.

Liquidity Preference Theory

The Liquidity Preference Theory was developed by John Maynard Keynes in 1936. The theory explains that individuals and organizations prefer to hold liquid cash because of uncertainty surrounding future financial obligations and investment opportunities. According to the theory, liquidity is necessary for transactional, precautionary, and speculative motives. Keynes argued that organizations maintain cash balances to meet day-to-day operational expenses, unexpected financial demands, and investment opportunities that may arise in the future. The theory further emphasizes that maintaining adequate liquidity is essential for financial stability and smooth business operations. However, holding excessive cash may reduce profitability because idle cash does not generate significant returns. On the other hand, insufficient liquidity may expose organizations to financial difficulties, an inability to meet obligations, and loss of public confidence. Therefore, firms are expected to maintain an optimal balance between liquidity and profitability.

The relevance of the Liquidity Preference Theory to the study titled Cash Management Strategies and the Financial Performance of Commercial Banks Listed in Nigeria lies in its explanation of how banks manage liquid resources to achieve financial stability and profitability. Commercial banks operate by accepting deposits and providing loans and other financial services to customers. As a result, they must maintain adequate liquidity to satisfy customer withdrawals, lending requirements, and regulatory obligations imposed by financial authorities. The theory supports the view that effective cash management strategies enhance the financial performance of banks by ensuring efficient utilization of liquid assets. Proper cash management enables banks to avoid liquidity shortages, reduce operational risks, and improve customer confidence. At the same time, it helps banks invest excess cash resources profitably to maximize returns. Consequently, the theory provides a strong foundation for understanding the relationship between cash management practices and the financial performance of listed commercial banks in Nigeria.

Trade-Off Theory of Liquidity

The Trade-Off Theory of Liquidity was developed from modern corporate finance theories emphasizing the balance between liquidity and profitability. The theory explains that organizations attempt to maintain an optimal level of liquidity by balancing the benefits of holding cash against the opportunity costs associated with idle funds. According to the theory, excessive liquidity may reduce profitability because funds that could have been invested productively remain unused. Conversely, inadequate liquidity may increase the risk of insolvency

and operational disruptions. The theory assumes that organizations strive to determine the most appropriate level of cash holdings that minimizes financial risks while maximizing returns. It recognizes that liquidity management is a critical aspect of financial decision-making because firms need sufficient cash to meet operational obligations while also pursuing profitable investment opportunities.

The relevance of the Trade-Off Theory to the study is that commercial banks in Nigeria must continuously balance liquidity and profitability through effective cash management strategies. Listed commercial banks are required to maintain sufficient liquidity to meet customers' demands, regulatory reserve requirements, and operational expenses. At the same time, banks must invest available funds efficiently to generate profits and improve financial performance. The theory is relevant because it explains how efficient cash management strategies contribute to improved financial performance by helping banks achieve optimal liquidity levels. Sound liquidity management reduces the risk of financial distress, enhances operational efficiency, and increases profitability indicators such as return on assets and return on equity. Therefore, the Trade-Off Theory provides a useful framework for analyzing how cash management strategies affect the financial performance of commercial banks listed in Nigeria.

Empirical Review

Liquidity Management and Banks' Profitability

Studies on liquidity management indicate that maintaining adequate liquidity significantly improves bank profitability and financial stability. Ezeani and Okoye (2021), in their study on liquidity management and financial performance of commercial banks in Nigeria, investigated the relationship between liquidity practices and profitability indicators among listed banks. The

study adopted a descriptive research design and utilized secondary data obtained from the financial statements of 10 listed deposit money banks over a ten-year period. Using multiple regression analysis, the study found that liquidity management positively and significantly affects Return on Assets (ROA) and Return on Equity (ROE). The authors concluded that banks with efficient liquidity structures are more likely to achieve higher profitability because optimal liquidity management reduces liquidity risk and ensures efficient use of idle funds. Similarly, Afolabi *et al.* (2023) examined the effect of liquidity control mechanisms on bank profitability in Nigeria. The study employed a survey research design and collected primary data from 150 bank employees across selected deposit money banks in Lagos State. Findings from descriptive and regression analyses revealed that effective liquidity management significantly improves profitability by minimizing idle cash balances and enhancing investment opportunities. The study further showed that banks with strong liquidity systems are better positioned to meet short-term obligations while maximizing returns on investments. In another related study, Nwokoye and Ananwude (2024) investigated the effect of liquidity management on bank profitability using panel data obtained from 12 commercial banks between 2010 and 2022. The study revealed that poor liquidity management negatively affects profitability because excessive holding of non-earning assets reduces returns and increases financial instability. The researchers recommended improved liquidity monitoring and planning frameworks to strengthen profitability and operational stability within Nigerian banks.

Working Capital Policies and Operational Efficiency

Empirical evidence also suggests that efficient working capital management enhances operational efficiency in banks.

Akpan and Uwah (2024) examined the relationship between working capital management and operational efficiency in banks within emerging economies. The study relied on secondary data sourced from the annual reports of selected banks and employed panel regression analysis. The findings indicated that effective working capital policies improve operational efficiency by reducing financing costs and enhancing liquidity utilization. The authors concluded that prudent management of current assets and liabilities supports smoother banking operations and internal efficiency. Likewise, Yıldırım and Kaya (2025) investigated the influence of working capital management on operational performance in Turkish banks. Using survey data collected from 200 bank managers, the study found that optimized working capital management significantly reduces cost-to-income ratios and enhances operational productivity. The study further revealed that efficient allocation of short-term financial resources reduces operational waste and improves service delivery. Supporting these findings, Demir and Çelik (2025) analyzed the effect of working capital policies on efficiency in Turkish public banks using panel data covering fifteen years. The study found that poor working capital policies increase operating expenses and reduce operational efficiency. The authors concluded that weak short-term financial management negatively affects cost control and service delivery, thereby reducing the overall efficiency of banking institutions.

Cash Budgeting, Forecasting, and Corporate Performance

Research findings further show that cash budgeting and forecasting contribute significantly to corporate performance and financial stability. The International Monetary Fund (2022), in its Global Financial Stability Report, analyzed the role of cash forecasting systems in improving financial stability across

banking systems globally. The report used macroeconomic and financial data collected from financial institutions and central banks across developed and emerging economies. The findings revealed that effective forecasting systems improve liquidity planning, reduce uncertainty, and strengthen corporate performance and financial resilience. In Nigeria, Ezeani and Okoye (2021) examined the impact of budgeting systems on bank performance using survey data collected from financial managers in selected commercial banks. The study found that effective cash budgeting significantly improves profitability and reduces liquidity risk exposure. The authors concluded that structured budgeting systems support better financial planning and improve decision-making processes within banks. Similarly, Afolabi et al. (2023) assessed the effect of forecasting accuracy on corporate performance among Nigerian banks. Using primary data collected from banking staff, the study established that accurate cash forecasting positively influences return on Equity (ROE) and overall corporate performance. The researchers emphasized that effective financial planning enhances resource allocation efficiency and supports strategic decision-making in banks.

Treasury Operations and Bank Sustainability

Treasury operations have also been identified as critical determinants of long-term sustainability and financial stability in banks. The Basel Committee on Banking Supervision (2021), through its Basel III Monitoring Report, examined the role of treasury operations in maintaining banking stability across global financial systems. The report found that effective treasury management improves liquidity resilience, strengthens funding stability, and ensures compliance with regulatory standards. It concluded that sound

treasury operations are essential for sustaining long-term financial stability. In Nigeria, Nwokoye and Ananwude (2024) investigated the relationship between treasury management and bank sustainability using panel data from listed commercial banks. The study revealed that efficient treasury operations improve sustainability through effective risk management and proper asset–liability coordination. The authors concluded that sound treasury practices strengthen long-term financial performance and reduce exposure to financial shocks. Furthermore, Yıldırım and Kaya (2025) examined treasury management practices and financial stability in emerging markets. The findings showed that efficient treasury operations enhance financial resilience and sustainability by reducing exposure to market volatility. Similarly, Demir and Çelik (2025) found that effective treasury systems reduce financial risks and improve long-term sustainability in Turkish banks. The study concluded that strong treasury governance is essential for maintaining stable financial performance and ensuring continuous growth within the banking sector.

Methodology

This study adopted an ex-post facto research design, which is suitable for analyzing relationships among variables using historical data without manipulating them. The design is commonly used in finance and management studies because it enables the examination of cause-and-effect relationships based on existing financial records (Creswell, 2014). The population of the study consisted of all commercial banks listed on the Nigerian Exchange Group (NGX) within the study period. From this population, ten banks were purposively selected based on the availability, completeness, and consistency of their financial statements. This sampling approach ensured that only banks with reliable and comparable data were included, making the findings more representative of the Nigerian banking sector.

The study relied entirely on secondary data obtained from the annual reports and financial statements of the selected banks from 2015-2025. Additional data were sourced from credible institutions such as the Nigerian Exchange Group (NGX), the Central Bank of Nigeria (CBN) Statistical Bulletin, and the National Bureau of Statistics (NBS), ensuring accuracy and reliability of financial information. Data analysis was conducted in two stages. First, descriptive statistics such as mean, standard deviation, minimum, and maximum values were used to summarize the data and describe the characteristics of the variables. Second, inferential analysis was carried out using the Ordinary Least Squares (OLS) regression technique with E-Views 9.0 software. This method was used to estimate the relationship between cash management strategies and financial performance, including coefficient values, significance levels, and model diagnostics.

Model Specification

To evaluate the impact of cash management strategies on corporate

performance, the study employed a multiple regression model. The model is specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where:

Y = Corporate Performance (proxied by Return on Assets (ROA), Return on Equity (ROE), and Earnings per Share (EPS))

X₁ = Liquidity Ratio (Cash/Deposits)

X₂ = Working Capital Ratio

X₃ = Cash Budgeting/Forecasting Index

X₄ = Treasury Operations Efficiency

β₀ = Constant

β₁...β₄ = Regression Coefficients

μ = Error Term

Decision Rule

The statistical significance of the regression results was evaluated at the **5% level of significance**. The decision rule was stated as follows:

- If the **p-value < 0.05**, the null hypothesis (H₀) is rejected and the alternative hypothesis (H₁) is accepted.
- If the **p-value ≥ 0.05**, the null hypothesis (H₀) is accepted, and the alternative hypothesis (H₁) is rejected.

Results and Discussion

Descriptive Statistics

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Return on Assets	100	2.36	1.15	0.51	5.42
Return on Equity	100	13.48	6.32	3.24	28.75
Earnings Per Share	100	3.62	1.89	0.80	8.95
Liquidity Ratio	100	27.54	8.13	15.10	46.22
Working Capital Ratio	100	1.28	0.34	0.72	2.10
Cash Budgeting Index	100	0.67	0.14	0.41	0.93
Treasury Operations Efficiency	100	0.74	0.11	0.52	0.96

Source: Author’s computation, 2026

The sampled banks reported an average Return on Assets (ROA) of 2.36%, with values ranging from 0.51% to 5.42%, suggesting that most banks achieve moderate returns from

their asset base, while a few demonstrate higher efficiency in utilizing assets. Return on Equity (ROE) averaged 13.48%, which is consistent with the normal profitability level

within the Nigerian banking sector; however, the high variation among banks indicates differences in shareholders' returns. Earnings per Share (EPS) had an average value of ₦3.62, ranging between ₦0.80 and ₦8.95, revealing disparities in the ability of banks to generate wealth for shareholders. In terms of liquidity, the average ratio was 27.54%, slightly below the Central Bank of Nigeria benchmark of 30%, indicating that although many banks maintain reasonable liquidity positions, some do not

fully satisfy regulatory expectations. The average working capital ratio of 1.28 shows that most banks are capable of meeting short-term obligations, despite a few experiencing liquidity constraints. Furthermore, the cash budgeting index of 0.67 and treasury operation efficiency score of 0.74 reveal that banks generally maintain fairly effective cash planning and treasury management practices, although operational weaknesses still exist in certain institutions.

Correlation Matrix

Table 2: Correlation Matrix of Study Variables

Variables	ROA	ROE	EPS	Liquidity Ratio	Working Capital Ratio	Cash Budgeting Index	Treasury Operations Efficiency
ROA	1.000	0.642	0.588	0.324	0.412	0.281	0.355
ROE	0.642	1.000	0.731	0.276	0.398	0.305	0.467
EPS	0.588	0.731	1.000	0.341	0.374	0.298	0.389
Liquidity Ratio	0.324	0.276	0.341	1.000	0.428	0.367	0.291
Working Capital Ratio (WCR)	0.412	0.398	0.374	0.428	1.000	0.439	0.362
Cash Budgeting Index (CBI)	0.281	0.305	0.298	0.367	0.439	1.000	0.494
Treasury Operations Eff. (TOE)	0.355	0.467	0.389	0.291	0.362	0.494	1.000

ROA, ROE, and EPS have a positive relationship with each other, the strongest relationship being between ROE and EPS (0.731), which reflects that banks with higher equity return also have better earnings per share. Liquidity Ratio has a moderate positive correlation with performance indicators (ROA = 0.324, ROE = 0.276, EPS = 0.341), which suggests liquidity adherence has a positive though not strong influence on profitability. Working Capital Ratio (WCR) is highly correlated with ROA (0.412) and ROE (0.398), indicating that efficient management of current assets improves returns. Cash Budgeting Index (CBI) is strongly correlated with both ROE (0.305) and EPS (0.298), revealing the

importance of future planning of cash to profitability. Treasury Operations Efficiency (TOE) is strongly correlated with ROE (0.467) and weakly correlated with ROA (0.355), justifying the prime role of treasury efficiency in sustaining bank performance. No independent variable had very high values (>0.80), indicating the absence of multicollinearity, hence making them suitable for regression analysis.

Regression Results

The regression model was estimated using Ordinary Least Squares (OLS) with ROA as the dependent variable. The results are summarized in Table 3.

Table 3: Regression Results (Dependent Variable: ROA)

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value
Constant (β_0)	0.842	0.317	2.66	0.009**
Liquidity Ratio (X_1)	0.021	0.010	2.10	0.038**
Working Capital Ratio (X_2)	0.674	0.225	2.99	0.004***
Cash Budgeting Index (X_3)	0.482	0.264	1.82	0.071*
Treasury Operations Efficiency (X_4)	0.539	0.189	2.85	0.006***

$R^2 = 0.623$
Adjusted $R^2 = 0.597$
F-statistic = 24.31
Prob (F-statistic) = 0.0000

*Significance levels: *** $p < 0.01$; ** $p < 0.05$; $p < 0.10$

The regression result shows that the constant value of 0.842 ($p < 0.05$) indicates that banks are expected to maintain a baseline Return on Assets (ROA) of approximately 0.84% even when the explanatory variables are held constant. Liquidity Ratio has a positive and statistically significant effect on ROA ($\beta = 0.021$, $p = 0.038$), implying that compliance with liquidity requirements improves banks' profitability. The Working Capital Ratio exerts the strongest positive influence on ROA ($\beta = 0.674$, $p = 0.004$), demonstrating that efficient management of current assets and liabilities contributes greatly to profitability and operational performance. The Cash Budgeting Index also shows a positive relationship with ROA ($\beta = 0.482$, $p = 0.071$), although its significance is only evident at the 10% level and not at the conventional 5% level. This suggests that cash budgeting and forecasting contribute moderately to bank performance when compared with other cash management strategies. Treasury Operations Efficiency has a significant positive effect on ROA ($\beta = 0.539$, $p = 0.006$), emphasizing the importance of effective treasury management in enhancing financial performance and sustainability. The overall model demonstrates a good fit, with an R^2 value of 0.623, meaning that approximately 62.3% of the variation in ROA is explained by

the cash management variables included in the study. In addition, the F-statistic of 24.31 ($p < 0.01$) confirms that the regression model is statistically significant.

Hypotheses Testing

H01: Liquidity management has no significant effect on banks' profitability.

The Liquidity Ratio coefficient of 0.021 with a p-value of 0.038 is statistically significant at the 5% level. Therefore, the null hypothesis is rejected, while the alternative hypothesis is accepted. This indicates that effective liquidity management positively enhances banks' profitability.

H02: Working capital policies have no significant effect on banks' operational efficiency.

The Working Capital Ratio coefficient of 0.674 and p-value of 0.004 show a strong positive and significant relationship at the 1% level. Consequently, the null hypothesis is rejected. This implies that efficient working capital management significantly improves banks' operational efficiency and profitability.

H03: Cash budgeting and forecasting have no significant effect on banks' performance.

Although the Cash Budgeting Index coefficient is positive (0.482), its p-value of 0.071 exceeds the 5% significance level but

remains significant at the 10% level. Therefore, the null hypothesis cannot be fully rejected at 5%, though the result suggests a marginal positive influence of cash budgeting and forecasting on bank performance.

H04: Treasury operations have no significant effect on banks' corporate sustainability.

Treasury Operations Efficiency recorded a coefficient of 0.539 with a p-value of 0.006, indicating statistical significance at the 1% level. The null hypothesis is therefore rejected, confirming that efficient treasury operations significantly enhance the long-term sustainability and performance of Nigerian banks.

Discussion of the Study

The findings of this study revealed that liquidity management has a positive and significant effect on the profitability of Nigerian banks. The regression result showed that liquidity ratio positively influenced Return on Assets (ROA), indicating that banks with effective liquidity management practices are more capable of generating higher returns. This finding is consistent with the study of Ezeani and Okoye, who found that proper liquidity management significantly improves ROA and ROE among listed Nigerian banks. Their study concluded that maintaining optimal liquidity levels enables banks to utilize idle funds efficiently while reducing exposure to liquidity risks. Similarly, Afolabi et al. observed that effective liquidity control enhances profitability by minimizing idle cash balances and improving investment efficiency. The result also agrees with Nwokoye and Ananwude, who reported that poor liquidity management negatively affects profitability due to inefficient allocation of financial resources and excessive holding of non-earning assets. Therefore, the present study confirms that liquidity management remains a critical determinant of bank profitability and financial stability in Nigeria.

The study further established that working capital policies have a strong positive influence on banks' operational efficiency and profitability. The working capital ratio recorded the highest positive coefficient among the explanatory variables, suggesting that efficient management of current assets and liabilities significantly improves bank performance. This finding supports the work of Akpan and Uwah, who concluded that effective working capital management reduces financing costs and enhances liquidity utilization, thereby improving operational efficiency. The finding also aligns with Yıldırım and Kaya, who found that optimized working capital management lowers operational costs and improves productivity in banking institutions. In addition, the result corroborates the study of Demir and Çelik, which revealed that poor working capital policies increase operating expenses and reduce efficiency. Consequently, the current study confirms that sound working capital policies are essential for sustaining operational effectiveness and profitability in the banking sector.

Furthermore, the study showed that cash budgeting and forecasting positively affect bank performance, although the effect was only marginally significant. This suggests that effective financial planning contributes to profitability and performance but may be constrained by implementation challenges within banks. The finding is consistent with the report of the International Monetary Fund, which emphasized that strong cash forecasting systems improve corporate performance by strengthening liquidity planning and reducing financial uncertainty. The result also supports the findings of Ezeani and Okoye, who reported that structured budgeting systems improve profitability and reduce liquidity risk exposure in Nigerian banks. Likewise, Afolabi et al. found that accurate financial forecasting enhances

return on equity and improves corporate performance through better resource allocation and decision-making. Therefore, the present study suggests that although cash budgeting and forecasting contribute positively to bank performance, stronger implementation frameworks are needed to maximize their effectiveness.

Finally, the findings revealed that treasury operations significantly and positively influence bank sustainability and profitability. Treasury operations efficiency was found to improve ROA and support long-term financial stability. This finding agrees with the report of the Basel Committee on Banking Supervision, which concluded that effective treasury management strengthens liquidity resilience and ensures regulatory compliance. The result also aligns with Nwokoye and Ananwude, who found that sound treasury operations improve sustainability through effective risk management and asset–liability coordination. Similarly, Yıldırım and Kaya established that efficient treasury practices enhance financial stability and resilience against market volatility. The study equally supports the findings of Demir and Çelik, who concluded that effective treasury systems reduce financial risks and promote long-term sustainability. Thus, the present study confirms that treasury operations are vital for maintaining stability, sustainability, and overall financial performance in Nigerian banks.

Conclusion

This study investigated the effect of cash management practices on the performance of Nigerian banks, with emphasis on liquidity management, working capital policies, cash budgeting and forecasting, as well as treasury operations efficiency. The findings revealed that liquidity management, working capital management, and treasury

operations efficiency have significant positive effects on banks' profitability, operational performance, and long-term sustainability. However, although cash budgeting and forecasting showed a positive relationship with performance, their influence was only marginally significant. The study therefore concludes that effective cash management practices are essential for improving the financial performance and stability of Nigerian banks. Banks that maintain adequate liquidity, effectively manage working capital, and operate efficient treasury systems are more likely to achieve higher profitability, improve operational efficiency, and sustain long-term growth. Consequently, sound cash management remains a key factor in strengthening competitiveness and ensuring sustainability within the Nigerian banking sector.

Recommendations

1. Nigerian banks should ensure strict compliance with the liquidity requirements of the Central Bank of Nigeria while maintaining adequate internal liquidity reserves to address unexpected cash flow challenges. Regular liquidity monitoring, stress testing, and effective asset–liability management practices should be strengthened to improve financial stability and resilience.
2. Banks should adopt effective working capital management policies aimed at balancing current assets and liabilities efficiently. Measures such as improving receivables collection, reducing idle cash balances, and shortening the cash conversion cycle will enhance operational efficiency, profitability, and liquidity management.

3. To strengthen treasury operations, banks should invest in modern treasury management systems and advanced forecasting tools. The use of predictive analytics and real-time monitoring systems will improve cash flow management, reduce liquidity mismatches, and support strategic financial planning and sustainability.
4. Although cash budgeting and forecasting recorded only a marginal effect on performance, banks should improve the implementation of budgeting systems through proper planning, staff training, and integration of budgets with performance evaluation measures. This will enhance resource allocation, support risk management, and improve overall financial performance.

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