# THE IMPACT OF MONENTARY POLICIES ON FINANCIAL PERFORMANCE ON DEPOSIT MONEY BANKS IN NIGERIA

**ALFRED David Iyere**

**(21/15AFA005)**

**A PROJECT SUBMITTED TO THE**

**DEPARTMENT OF ACCOUNTING AND FINANCE, FACULTY OF MANAGEMENT AND SOCIAL SCIENCES, THOMAS ADEWUMI UNIVERSITY OKO-IRESE, NIGERIA, IN PARTIAL FULFILMENT OF THE REQUIREMENTS OF THE AWARD OF BACHELOE OF SCIENCE {B.SC} DEGREE IN ACCOUNTING.**

**AUGUST, 2025**

## CERTIFICATION

This Research Project titled '**THE IMPACT OF MONENTARY POLICIES ON FINANCIAL PERFORMANCE ON DEPOSIT MONEY BANKS IN NIGERIA**.'' by Alfred, David Iyere meets the regulations governing the award of the degree of Bachelor of Science of Thomas Adewumi University and is approved for its contribution to knowledge and literal presentation.

_____ _____

**Supervisor** **DATE**

**Mr. A. A. Ibrahim**

Department of Accounting and Finance

Thomas Adewumi University

Oko-Irese, Nigeria.

_____ _____

**External Examiner** **DATE**

**Professor G.T Akinleye**

(B.Sc, M.Sc, Phd, CNA, FCTI)

Department of Accounting

Ekiti State University,

Ado-Ekiti, Nigeria.

## DEDICATION

The project is dedicated to Almighty God, my beloved parents, Mr and Mrs Alfred Gbenga Michael and my siblings Daniel, Abraham and Joshua for their love and encouragement throughout the project.

**ACKNOWLEGEMENT**

My appreciation goes to Dr. Olayemi (HOD), Mr Ibrahim (Project Supervisor), Dr. Owolabi (Dean) and other lecturers of Accounting and Finance Department for the impact God has bestowed upon them to share the knowledge acquired and the help they rendered at most time. My prayer is that God will grant them more wisdom and strength to carry on in life Amen.

I am highly indebted and grateful to the entire teaching and non teaching staff of Accounting and Finance Department and the entire Faculty of Management and Social Science as a whole.

**ABSTRACT**

The roles of monetary policy of the apex bank in any economy cannot be overstated in view of the importance of banks in regulating the price liquidity by accumulating a large number of small deposits and giving credit to those who require the funds. This study examines the effect of Monetary Policy on Financial Performance of Deposit Money banks quoted in Nigeria from 2008- 2020. The independent variable (Monetary Policy) was represented by Cash Reserve Ratio, Inflation Rate and Interest Rate, while, the dependent variable (Financial Performance) was measured by Return on Asset. The sample size comprise the Ten (10) deposit money Banks quoted on the Nigerian stock exchange as at 31st December, 2020. The panel data were retrieved from the annual reports of the sampled banks. The data were analysed by Pooled Ordinary Least Square multiple regression and the results showed that Cash Reserve Ratio has a positive significant effect on Financial Performance, Inflation Rate has an insignificant negative effect on Financial Performance, while, Interest Rate has a significant negative effect on Financial Performance of the samples banks. The study concluded that Monetary policy is a strong determinant of financial performance of Nigerian banks. The study recommended that Management of Deposit Money banks in Nigeria should prepare themselves against the effect of increased Cash Reserve Ratio as it has a significant positive effect on their performance. Government should strive to control Inflation rate as its effect on banking operations is negative albeit insignificantly and that the Central bank should keep Interest rate from fluctuation so widely as it has significant negative effect on banks financial Performance.

**TABLE OF CONTENT**

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the Study

The Nigerian economy has experienced significant fluctuations in recent years, characterized by periods of growth interspersed with phases of stagnation or contraction. This economic volatility can be attributed to a complex interplay of factors, with the banking sector playing a pivotal role in this dynamic landscape. As intermediaries between savers and borrowers, deposit money banks are crucial in facilitating capital allocation, promoting investment, and ultimately driving economic growth (Alalade, Oseni & Adekunle, 2020). However, their effectiveness in fulfilling this role is heavily influenced by the monetary policies set by the Central Bank of Nigeria (Suleiman, Popoola, & Yahaya, 2022).

The CBN, as the apex monetary authority, employs various policy instruments which can be direct or indirect methods to regulate money supply, control inflation, stabilize exchange rates, and maintain overall financial stability. The direct methods can be moral suasion, Cash Reserve Ratio (CRR), Liquidity Ratio (LR), special deposits and so on. As for the indirect methods which are Monetary Policy Rate (MPR), Open Market Operation (OMO), Capital Adequacy Ratio (CAR), discount windows. Key among these tools are the Cash Reserve Ratio (CRR), Central Bank Exchange Rate (EXR), and Monetary Policy Rate (MPR). Each of these instruments serves a specific purpose in shaping the monetary environment within which banks operate (Ekong & Ekong, 2022). The Cash Reserve Ratio (CRR) is a critical tool that directly affects banks' liquidity by stipulating the proportion of customer deposits that must be held as reserves with the central bank. A higher CRR means banks have less money available for lending, which can constrain credit growth but also help control inflation. Conversely, a lower CRR increases banks' lending capacity, potentially boosting economic activity but risking inflationary pressures (Bala, Godia, Hadith & Maijama'a, 2022; Iwedi & James, 2023).

The Central Bank Exchange Rate (EXR) policy is another crucial instrument, particularly for an import-dependent economy like Nigeria's. By managing the value of the Naira against foreign currencies, the CBN influences the cost of imports, export competitiveness, and the overall balance of payments. A stronger Naira can make imports cheaper, benefiting industries that rely on foreign inputs, while a weaker Naira can boost exports but increase import costs (Omankhanlen, Ilori, Isibor & Okoye, 2021). These exchange rate dynamics significantly impact banks' foreign currency operations, risk exposures, and ultimately, their financial performance (Ifurueze, 2022; Okore & Nwadiubu, 2023). The Monetary Policy Rate (MPR) serves as the benchmark interest rate, signalling the CBN's monetary policy stance. When the MPR is raised, it indicates a tightening policy aimed at curbing inflation by making borrowing more expensive. This higher cost of funds squeeze banks' net interest margins, as they may struggle to pass on the full increase to borrowers. Conversely, a lower MPR suggests an expansionary policy, making credit cheaper and potentially boosting loan demand, but it can also reduce banks' interest income (Oladejo & Akinola, 2023; Shirya, Njoka & Abdul, 2023).

Financial performance, broadly defined, is a measure of how well a bank uses its assets to generate revenues, reflecting its operational efficiency, risk management, and strategic positioning. In the banking sector, this is typically gauged through a variety of metrics that profitability, liquidity, asset quality, and capital adequacy (Akpunonu & Orajaka, 2021; A. Hassan & Ahmad, 2022). Among these, profitability ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM) are particularly critical, as they directly reflect a bank's ability to generate earnings from its operations. Bank financial performance is crucial for national economic health, especially in developing economies like Nigeria (Bala, 2022; Obayagbona & Ajao, 2022). Banks central to capital formation and allocation, mobilizing savings and channelling them into productive investments. A robust banking sector, indicated by strong profitability and efficiency ratios, can extend more credit, absorb loan losses, and invest in high-growth sectors. In contrast, poorly performing banks may become risk-averse, preferring low-yield government securities and restricting credit flow to the real economy (Akanbi, 2021: Munandar, Fatimah, Cakranegara, Kunda, & Putri, 2023).

These monetary policy tools do not operate in isolation but interact in complex ways, creating a monetary environment that significantly shapes the operational landscape for deposit money banks (Akinsanmi, Rotimi, Olabisi & Osatohanwen, 2018; Hassan & Oloruntoba, 2022). For instance, a high CRR combined with a high MPR could severely restrict banks' ability to lend, impacting their interest income. Similarly, an unfavourable exchange rate could lead to foreign exchange losses, further straining banks' profitability.

The impact of these monetary policies on banks' financial performance, particularly their return on assets (ROA), is a subject of growing interest. ROA, calculated as net income divided by total assets, is a key metric that reflects a bank's efficiency in using its assets to generate profits (Kocha, 2023). It provides insights into management's ability to deploy the bank's resources - be they loans, investments, or other assets - to produce earnings. The current study aims to evaluate the relationship between monetary policies and financial performance of deposit money banks in Nigeria.

## **1.2** Statement of the Problem

Nigeria's economy has faced significant challenges in recent years, marked by periods of recession, high inflation, and currency volatility. Between 2020 and 2023, the country experienced its deepest recession in four decades, with real GDP contracting by 6.1% in Q2 2020 due to the COVID-19 pandemic and oil price shocks (World Bank, 2023).

Inflation has also been a persistent issue, reaching a four-year high of 18.17% in March 2021 and remaining in double digits throughout 2022 and 2023 (NBS, 2023). Moreover, the Nigerian Naira has seen substantial depreciation, falling from ₦306/USD in January 2020 to over N460/USD by December 2023 in the official market, with even steeper declines in the parallel market (CBN, 2023).

In response to these economic headwinds, the Central Bank of Nigeria (CBN) has actively used its monetary policy tools. The Cash Reserve Ratio (CRR) was raised from 22.5% in January 2020 to 27.5% by March 2020 and maintained at this high level to control excess liquidity and curb inflation (CBN, 2020). The Monetary Policy Rate (MPR) was initially cut from 13.5% to

11.5% in September 2020 to stimulate credit growth during the recession, but it was subsequently hiked to 18% by December 2023 to combat resurgent inflation (CBN, 2023).

Exchange rate policy has also been dynamic, with the CBN implementing various measures to stabilize the Naira, including forex restrictions and multiple exchange rate windows (Beauty & Tonye, 2022).

However, aggressive monetary policies aimed at macroeconomic stability have challenged Nigerian deposit money banks. High CRR levels have constrained liquidity and limited credit creation, costing banks over N1.2 trillion in potential interest income between 2020 and 2021 (PwC, 2021). Volatile interest rates have complicated asset-liability management, with lower rates squeezing margins in 2020-2021 and sharp hikes in 2022- 2023 raising funding costs and loan default risks (Bala, Godiya, *et al.*, 2022: Ndum, 2022).

This study, therefore, provides a comprehensive, up-to-date analysis of how changes in Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Treasury Bills Rate (TBR), Exchange Rate (EXR), and Monetary Policy Rate (MPR) Impact the Return on Assets (ROA) of deposit money banks in Nigeria. By focusing on these specific policy instruments and their effects on a key performance metric, the research seeks to offer granular, timely insights.

## **1.3** Research Questions

The study aims to answer the following research questions:

i. What is the impact of Cash Reserve Ratio on the Return on Assets of deposit money banks in Nigeria?
ii. What is the effect of statutory liquidity ratio on return on asset of deposit money banks in Nigeria? iii. What is the impact of treasury bills rate on Return on Assets of deposit money banks in Nigeria?
iv. What is the relationship between Monetary Policy Rate and the Return on Assets of deposit money banks in Nigeria?
v. How does the Central Bank Exchange Rate affect the Return on Assets of deposit money banks in Nigeria?

## 1.4 Objectives of the Study

The main objective of this study is to examine the impact of monetary policies on the financial performance of deposit money banks in Nigeria. The study specifically:

i. Evaluate the impact of Cash Reserve Ratio on the Return on Assets of deposit money banks in Nigeria. ii. Examine the effect of Statutory Liquidity Ratio on Return on Asset of deposit money banks in Nigeria

iii. investigate the impact of Treasury Bills Rate on Return on Assets on Return on Assets (ROA) of deposit money banks in Nigeria iv. Establish the relationship between Monetary Policy Rate and the Return Assets of deposit money banks in Nigeria

v. Assess effect of Exchange Rate on the Return on Assets of deposit money banks in Nigeria.

## 1.5 Research Hypotheses

The hypotheses for this study follow the research questions and the objective of the study and are stated in their null form

**$H_{o1}$:** Cash Reserve Ratio has no significant impact on the Return on Assets (ROA) of deposit money banks in Nigeria.

**$H_{o2}$**: Statutory liquidity ratio has no significant effect on return on asset of deposit money banks in Nigeria

**$H_{o3}$**: Treasury bills rate has no significant impact on Return on Assets (ROA) of deposit money banks in Nigeria

**$H_{o4}$**: There is no significant relationship between Monetary Policy Rate (MPR) and the Return on Assets (ROA) of deposit money banks in Nigeria.

**$H_{o5}$**: Exchange Rate (EXR) has no significant on the Return on Assets (ROA) of deposit money banks in Nigeria.

## 1.6 Significance of the Study

This study holds significant importance for various stakeholders, including policymakers, regulators, deposit money banks, investors, and the academic community. The findings of this research will contribute to a better understanding of the impact of monetary policies on the

financial performance of deposit money banks in Nigeria, thereby providing valuable insights for informed decision-making and policy formulation.

**Policymakers and Regulators:** The results of this study will assist policymakers and regulators, such as the Central Bank of Nigeria (CBN), in evaluating the effectiveness of monetary policy instruments, such as the cash reserve ratio (CRR), central bank exchange rate (EXR), and monetary policy rate (MPR), in influencing the financial performance of deposit money banks. This knowledge can guide the development and implementation of more targeted and effective monetary policies aimed at fostering a stable and efficient banking system, which is crucial for economic growth and development.

**Deposit Money Banks:** By understanding the impact of monetary policies on their financial performances, deposit money banks can make more informed strategic decisions regarding their operations, risk management practices, and investment strategies. Banks can leverage the insights from this study to better anticipate and respond to changes in monetary policy, thereby enhancing their profitability, asset quality, and overall financial stability.

**Investors and Shareholders:** Investors and shareholders of deposit money banks can benefit from this study by gaining a deeper understanding of the factors that influence the financial performance of these institutions. The findings can assist investors in making more informed investment decisions and assessing the potential risks and returns associated with investing in the banking sector under different monetary policy regimes.

**Academic Community:** This study will contribute to the existing body of knowledge on the relationship between monetary policies and bank performance, specifically in the Nigerian context. The methodological approaches, empirical findings, and theoretical contributions will provide a foundation for further research and academic discourse in this field, fostering a deeper understanding of the intricate dynamics between monetary policy and the financial sector.

## 1.7 Scope of the Study

The main purpose of this study encompasses the impact of monetary policies on the financial performance of deposit money banks in Nigeria. The study focuses on five key monetary policy instruments: Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Treasury Bill Rate (TBR), Monetary Policy Rate (MPR), and Central Bank Exchange Rate (EXR).

The financial performance of deposit money banks was measured using the return on assets (ROA) ratio. The study covers a time period from 2010 to 2024. The 14-years' time frame was chosen to capture the recent dynamics in monetary policy implementation and bank performance in Nigeria. The data were collected from the statistical database of the Central Bank of Nigeria (CBN), National Bureau of Statistics (NBS) and annual reports of deposit money banks for the period under review. Banks that had incomplete or inconsistent data for the relevant variables during this period were excluded from the analysis to ensure the reliability and validity of the findings.

## 1.8 Plan of the Study

This is structured in five chapters which follows:

Chapter one which is the Introduction. It consists of background to the study, statement of the problem, research questions, and objective of the study, research hypothesis, justification for the study and scope of the study.

Chapter two, which is the Literature Review, consists of conceptual review, financial performance, theoretical review and empirical review.

Chapter three is the methodology which includes the model specifications, research design, sources of data, population and sample of the study and method of data analysis.

Chapter four is the data analysis of data and discussion of findings.

Chapter five which consist of the summary, conclusion and recommendation

## 1.8 Limitation of the study

### Operational Definition of Terms

Reserve Ratio (CRR): The minimum fraction of total deposit liabilities that commercial banks must hold as reserves with the Central Bank of Nigeria,

**Exchange Rate (EXR):** The official rate at which the Nigerian naira is exchanged for other currencies, as determined by the Central Bark of Nigeria.

**Monetary Policy Rate (MPR):** The interest rate charged by the Central Bank of Nigeria on loans to commercial banks, which serves as a signaling mechanism for the overall direction of interest rates in the economy.

**Financial Performance:** A measure of a bank's ability to generate profits, maintain liquidity, manage risks, and create value for its stakeholders, typically assessed through various financial ratios and metrics,

**Return on Assets (ROA):** A profitability ratio that measures the ability of a bank to generate profits from its total assets. It is calculated by dividing a bank's net income by its total assets.

**Deposit Money Banks:** Commercial banks in Nigeria that are licensed to accept deposits from the public and provide various banking services, such as lending, investment, and payment facilitation.

**Net Interest Margin (NIM):** A performance metric that measures the difference between interest income generated and the interest paid out by a bank, relative to its interest-assets.

**Non-Performing Loans (NPLS):** Loans in which the borrower has failed to make scheduled payments for an extended period, typically 90 days or more.

**Bank Capitalization:** The process of providing a bank with sufficient capital to meet regulatory requirements, support its operations and absorb potential losses.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Conceptual Review

### 2.1.1 Monetary Policies

Monetary policies are the strategic and multifaceted actions undertaken by a central bank to influence various aspects of the financial system, including the money supply, credit availability, interest rates, and overall monetary conditions within an economy (Ekong & Ekong, 2022; Omankhanlen *et al.* 2021). These policies serve as powerful and adaptable tools for managing a wide range of economic variables, such as controlling inflation rates, stabilizing exchange rates in the foreign exchange market, promoting sustainable economic growth, ensuring financial stability, and even addressing issues like unemployment (Bala, Godiya, et al., 2022). In Nigeria, the Central Bank of Nigeria (CBN) stands as the apex monetary authority, vested with the critical responsibility of formulating, implementing, and continuously adjusting monetary policies that align with the nation's dynamic economic objectives and respond to both domestic and global financial challenges (Hassan & Ahmad, 2022; Oanh, Van & Dinh, 2023). The CBN employs a comprehensive and sophisticated array of instruments to execute its monetary policies, each meticulously designed to target specific aspects of the financial system with precision (Kocha, 2023). These tools are not only diverse but also Interconnected, allowing for a synergistic approach to monetary management. Among this arsenal of policy instruments, three stand out as particularly influential and frequently utilized in shaping the operational landscape for deposit money banks: the Cash Reserve Ratio (CRR), Central Bank Exchange Rate (EXR), and Monetary Policy Rate (MPR) (Bala, Godiya, et al., 2022; Munandar et al, 2023). These tools are chosen for direct impact on bank liquidity, foreign currency transactions, and the cost of borrowing, respectively, making them pivotal in steering the banking sector's behaviour and, by extension, the broader economy (Akanbi, 2021).

#### 2.1.1.1 Cash Reserve Ratio (CRR)

The Cash Reserve Ratio (CRR) is a fundamental and highly effective monetary policy tool that directly and significantly affects the liquidity of deposit money banks (Amira, Alala, &

Musiega, 2023). It stipulates the minimum fraction of total deposit liabilities that commercial banks must hold as reserves with the Central Bank, essentially immobilizing a portion of their assets (Ifurueze, 2022). In essence, the CRR determines how much of the money deposited by customers can be used by banks for lending and investment activities, acting as a valve that controls the flow of credit in the economy. This mechanism is particularly potent because it directly affects the money multiplier effect, which is the process by which banks create new money through lending (Koronowski, 2022).

When the CBN raises the CRR, banks are required to park a larger portion of their deposits with the central bank, a move that has far-reaching consequences. This action effectively reduces the amount of money available for banks to lend out, thereby constraining credit growth in the economy (Abdullahi, 2022). The effects are multi-layered: not only does it limit the volume of loans banks can offer, but it also affects the types of loans, potentially shifting focus from long-term investments to shorter-term, lower-risk lending. A higher CRR can help control inflation by reducing the money supply and curbing excessive credit expansion, as less money chasing goods and services typically leads to lower prices (Hassan & Ahmad, 2022). However, this policy comes with significant trade-offs. With a larger portion of their assets tied up in non-interest-bearing reserves, banks have less money to generate interest income from loans, which can substantially impact their profitability, potentially leading to higher lending rates or reduced banking services (Jamil, 2022).

Conversely, when the CBN lowers the CRR, it injects liquidity into the banking system, giving banks more funds at their disposal for lending and investment activities. This increase in available funds can have a stimulating effect on economic activity by making credit more accessible to a wider range of borrowers, including businesses seeking expansion capital and individuals looking to finance major purchases (Oanh *et al.,* 2023). Lower borrowing costs can encourage investment, boost consumer spending, and ultimately drive economic growth. However, this expansionary policy is not without risks (Shirya *et al*., 2023). If not managed carefully and timed correctly, a lower CRR can lead to rapid credit growth, potentially fuelling inflationary pressures as more money chases the same amount of goods. It can also contribute

to asset price bubbles, particularly in real estate or stock markets, as cheap credit flows into speculative investments (Monday, 2024).

In Nigeria, the CRR has been a frequently adjusted and closely watched tool in recent years, reflecting the CBN's active and responsive monetary policy approach. For instance, in response to mounting inflationary pressures and concerns about excess liquidity in the banking system, the CBN took bold action. It raised the CRR from 22.5%% in January 2020 to a substantial 27.5% by March 2020, a level it maintained throughout the year despite the economic challenges posed by the COVID-19 pandemic (CBN, 2020). This move, while aimed at ensuring macroeconomic stability by reining in inflation and supporting the Naira's value, significantly impacted the liquidity and lending capacity of deposit money banks. It forced banks to reassess their asset allocation strategies, potentially leading to more conservative lending practices, higher interest rates, or a shift towards fee-based services to maintain profitability (Otiwu & Edward, 2024).

#### **2.1.1.2** Central Bank Exchange Rate (EXR)

The Central Bank Exchange Rate (EXR) is another critical monetary policy tool, particularly for an import-dependent economy like Nigeria's. The EXR represents the official rate at which the Nigerian naira is exchanged for other currencies, as determined by the CBN (Akeem *et al.,* 2022). This policy instrument significantly influences the cost of imports, export competitiveness, and the overall balance of payments. When the CBN allows the naira to appreciate against foreign currencies, imports become relatively cheaper (Chukwudi and Chukwubuzo, 2023). This can benefit industries that rely heavily on imported raw materials or machinery, as their input costs decrease. However, a stronger naira can make Nigerian exports less competitive in the international market, as they become more expensive for foreign buyers (Oladejo *et al.*, 2023). On the other hand, when the CBN allows the naira to depreciate, exports become more attractive to international buyers due to their lower cost in foreign currency terms. However, a weaker naira increases the cost of imports, which can lead to higher production costs for industries dependent on foreign inputs and contribute to inflationary pressures (Ndum, 2022).

For deposit money banks in Nigeria, the EXR policy has far-reaching implications. Many banks have significant foreign currency operations, including trade finance, foreign currency loans,

and international transactions. Exchange rate fluctuations can dramatically impact the value of these assets and liabilities when translated back into naira (Akanbi, 2021). A depreciating naira can lead to substantial translation losses for banks with net foreign currency liabilities, while an appreciating naira can benefit those with net foreign currency assets (Bala, 2022). Moreover, the EXR influences the credit risk profile of banks' loan portfolios. Borrowers who rely on imports or have foreign currency-denominated debts may face increased repayment difficulties when the naira depreciates, potentially leading to higher non-performing loan ratios for banks (Oladipupo & Oladipo, 2022).

#### **2.1.1.3** Monetary Policy Rate (MPR)

The Monetary Policy Rate (MPR) serves as the benchmark interest rate in Nigeria's financial system. It is the rate at which the CBN lends to commercial banks and serves as a signaling mechanism for the overall direction of interest rates in the economy (Ozili, 2023). Changes in the MPR have a cascading effect on various other interest rates, including interbank lending rates, deposit rates, and lending rates. When the CBN raises the MPR, it signals a tightening monetary policy stance, often aimed at curbing inflation. Higher interest rates make borrowing more expensive, which can reduce the demand for loans and slow down money circulation in the economy. This higher cost of funds can squeeze banks' net interest margins, especially if they struggle to pass on the full increase in borrowing costs to their customers (Bala, Godiya, *et al.,* 2022). However, higher deposit rates can also make savings accounts more attractive, potentially helping banks to attract more deposits.

Conversely, when the CBN lowers the MPR, it indicates an expansionary policy intended to stimulate economic growth. Lower interest rates make credit cheaper, which can boost loan demand from businesses and individuals looking to invest or consume more (Jackson & Tamuke, 2022). This can increase banks' loan portfolios and potentially their interest income.

However, lower deposit rates may make savings accounts less attractive, and banks might face challenges in attracting stable, low-cost deposits (Ekong & Ekong, 2022; Omankhanlen *et al.,* 2021). In Nigeria's recent monetary policy history, the MPR has seen significant adjustments. In response to the economic contraction caused by the COVID-19 pandemic, the CBN cut the MPR from 13.5% to 11.5% in September 2020, aiming to stimulate credit growth and support economic recovery. However, as inflationary pressures mounted in subsequent years, the CBN

shifted gears, raising the MPR to 18% by December 2023 (CBN, 2023). These policy shifts have had profound implications for the net interest margins, loan growth, and overall profitability of deposit money banks.

### **2.1.2** Financial Performance

Financial performance is a comprehensive measure that reflects an organization's ability to generate profits, manage resources efficiently, and create value for stakeholders (Amira et al., 2023; Ifurueze, 2022). In banking, it's particularly critical, indicating not just individual bank health but also the overall financial system's robustness. Strong bank performance supports economic growth by ensuring stability, facilitating lending, and attracting investment. In developing nations like Nigeria, where banks are key financiers, their health directly impacts socio-economic advancement. Bank financial performance is assessed through various metrics that gauge different operational aspects (Abdullahi, 2022; A. Hassan & Ahmad, 2022). Profitability ratios like ROA and ROE measure asset and investment efficiency. Liquidity measures such as LDR assess short-term solvency. Asset quality indicators, including NPL ratios, reveal risk management practices (Jamil, 2022; Oanh et al., 2023). Capital adequacy ratios show loss absorption capacity. Each metric offers unique insights into efficiency, risk management, and strategy, guiding decisions from boardrooms to regulatory offices (Nguyen, Nguyen, Nguyen, & Trarn, 2022, Snutod & Mukorera, 2023).

#### **2.1.2.1** Return on Assets (ROA)

Among the various financial performance metrics, Return on Assets (ROA) stands out as a particularly insightful and widely used indicator. ROA is a profitability ratio that measures a bank's efficiency in using its assets to generate earnings. It is calculated by dividing a bank's net income by its total assets (Kwashie, Baidoo, & Ayesu, 2022). ROA provides a comprehensive view of a bank's operational efficiency and management effectiveness. A higher ROA indicates that a bank is adept at converting its assets into profits, suggesting that management is making sound investment decisions, controlling costs effectively, and leveraging the bank's resources optimally (Bala, Godiya, *et al*., 2022; Suleiman et al., 2022). Conversely, a lower ROA may signal inefficiencies in asset utilization, poor investment choices, or challenges in generating income from the bank's asset base (Jackson & Tamuke, 2022;

Omankhanlen et al., 2021). What makes ROA particularly valuable is its ability to facilitate comparisons across banks of different sizes. By expressing net income as a percentage of total assets, ROA normalizes profitability based on the scale of a bank's operations. This allows stakeholders to compare the efficiency and profitability of banks with vastly different asset bases, providing a more equitable basis for performance evaluation (Hassan & Oloruntoba, 2022; Kocha, 2023). In the context of monetary policy changes, ROA becomes even more critical. Shifts in policy instruments like the Cash Reserve Ratio (CRR), Central Bank Exchange Rate (EXR), and Monetary Policy Rate (MPR) can significantly impact a bank's asset base and its ability to generate income from those assets. For instance, a higher CRR reduces the funds available for lending, potentially impacting ROA. Exchange rate fluctuations can affect the value of foreign currency assets, while changes in the MPR influence interest income from loans and interest expenses on deposits, both of which directly affect net income and, consequently, ROA ( Paputungan, Juminawati, Judijanto & Didih Muhamad Sudi, 2024; Soemitra, Ismal, Fuadi, Al-Amin, Harianto, Nur & Hakim, 2021).

#### **2.1.2.2** Net Interest Margin (NIM)

While not the primary focus of this study, Net Interest Margin (NIM) is another critical profitability ratio that complements ROA in assessing bank performance. NIM measures the difference between interest income generated (primarily from loans) and interest paid out (mainly on deposits), relative to a bank's interest-earning assets (Iwedi & James, 2023). NIM provides insights into a bank's core lending operations and its ability to manage interest rate risks. A higher NIM suggests that a bank is effectively pricing managing its funding costs, and navigating changes in interest rates. It reflects the bank’s skill in generating robust interest income while controlling interest expenses (Akinsanmi et al., 2018).

## 2.4 The Conceptual Framework

The conceptual framework of the effect of monetary policy on the performance of deposit money banks in Nigeria examines the interconnected processes through which monetary policies influence long-term healthy growth and stability of Nigeria DMBs. By analysing core components such as monetary policy proxied by Return on Assets, Monetary Policy Rate, Cash Reserve Ratio, Statutory Liquidity Ratio, Treasury Bill Rate, Central Bank Exchange Rate and

Inflation rate this framework provides insight into how effective monetary policy practices can support the performance of deposit money banks in Nigeria in a sustainable manner and enhance socio-economic outcomes in Nigeria.

Conceptual Framework of effect of monetary policy on the performance of deposit money banks in Nigeria

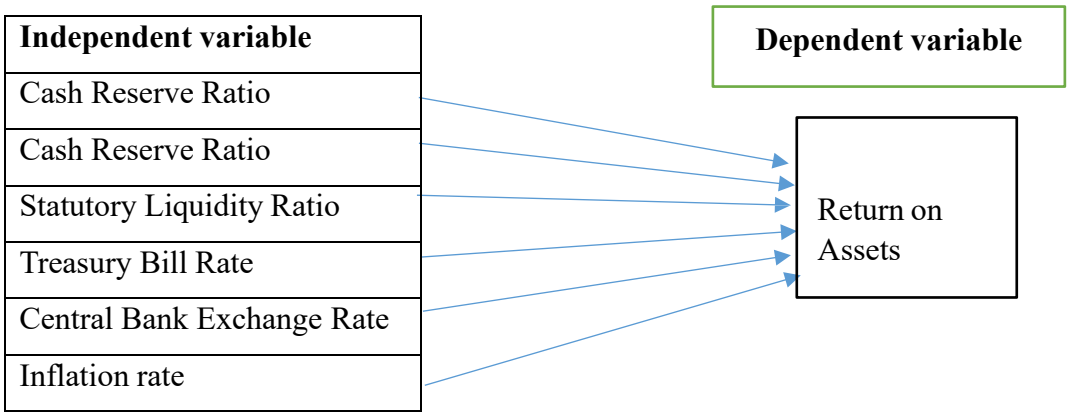


**Figure 1** : Conceptual framework of effect of monetary policy on the performance of deposit money banks in Nigeria

**Source:** Author's design (2024)

### 2.5 Theoretical Framework

The relationship between monetary policies and the financial performance of deposit money banks in Nigeria can be understood through the lens of several economic theories. Two particularly relevant frameworks are the Money Supply Theory and the Bank Lending Channel Theory.

#### 2.5.1 Money Supply Theory

The Money Supply Theory, developed by Milton Friedman in the 1960s, posits that changes in the money supply have a direct and significant impact on economic variables such as inflation, output, and interest rates (Friedman, 1968). According to this theory, an increase in the money supply leads to lower interest rates and higher economic activity in the short run, but it also results in higher inflation in the long run. Conversely, a decrease in the money supply raises

interest rates and slows economic activity in the short run, but it helps control inflation in the long run.

In the context of Nigeria's monetary policy and bank performance, the money supply Theory provides valuable insights. When the Central Bank of Nigeria (CBN) adjusts its Monetary policy tools such as the Cash Reserve Ratio (CRR), Central Bank Exchange Rate (EXR), and Monetary Policy Rate (MPR)-it directly influences the money Supply in the economy (Kkocha, 2023). For instance, when the CBN increases the CRR, it requires banks to hold a larger portion of their deposits as reserves, effectively reducing the amount of money available for lending. This decrease in the money supply aligns with Friedman's theory, potentially leading to higher interest rates and slower economic activity in the short run (Hassan & Oloruntoba, 2022).

For deposit money banks, this could mean a contract action in loan demand, affecting their interest income and, consequently, their Return on Assets (ROA). Similarly, when the CBN raises the MPR, signalling tighter monetary conditions, it aligns with the theory's prediction of higher interest rates and slower economic activity, again potentially affecting banks' loan growth and profitability (Omankhanlen *et al.,* 2021; Ozili, 2023).

However, the Money Supply Theory also suggests that these actions can help control inflation in the long run. Lower inflation can provide a more stable economic environment, benefiting banks through reduced economic uncertainty, better asset quality (as borrowers face more stable costs), and potentially higher real returns on their assets (Bala, Godiya, *et al.,* 2022; Suleiman *et al.,* 2022). On the other hand, when the CBN lowers the CRR or MPR, it increases the money supply, aligning with Friedman's prediction of lower interest rates and higher economic activity in the short run. For banks, this could translate into increased loan demand, potentially boosting their interest income and ROA (Beauty & Tonye, 2022; Suleiman *et al.,* 2022). However, the theory also warns of higher inflation in long run, which could pose challenges for banks through increased operational asset-liability mismatches, and the risk of economic overheating-

### 2.5.2 Bank Lending Channel Theory

The Bank Lending Channel Theory, a component of the broader credit view of monetary policy transmission, posits that changes in monetary policy affect the real economy not only through their impact on interest rates (the traditional interest rate channel) but also through their effect on the supply of bank loans (Bernanke & Blinder, 1988; Kashyap Stein, 1995). This theory argues that monetary policy changes can directly influence banks' balance sheets, particularly their reserves and deposits. which in turn affects their ability and willingness to extend credit.

In the context of Nigeria's monetary policy and bank performance, the Bank Lending Channel Theory provides a powerful framework for understanding how the CBN's policy tools impact deposit money banks' operations and financial performance. The theory suggests that when the CBN tightens monetary policy, it reduces bank reserves, constraining their ability to create new loans (Ifurueze, 2022). For instance, when the CBN increases the Cash Reserve Ratio (CRR), banks must hold a larger portion of their deposits as reserves at the central bank. This action directly reduces the volume of deposits that banks can use for lending, aligning with the Bank Lending Channel Theory's prediction that tighter monetary policy constrains bank loan supply (Abdullahi, 2022; Okore & Iswadiubu, 2023). With fewer funds available for lending, banks may become more selective in their credit allocation, focusing on higher-quality borrowers or sectors with lower perceived risks. This shift could impact banks' net interest margins and, consequently, their Return on Assets (ROA), especially if they cannot fully pass on higher cost of funds to borrowers (Abdullahi. 2022: Jamil, 2022; Okore & Nwadiubu 2023).

Conversely, when the CBN cases monetary policy by lowering the CRR or MPR, the Bank ending Channel Theory predicts an expansion in bank credit. With more reserves available and lower funding costs, banks can increase their lending activities, potentially boosting their interest income and ROA (Akanbi. 2021). However, the theory also suggests that this credit expansion may not be uniform across all sectors or borrower types. Banks may direct this increased lending capacity toward sectors they perceive as having higher growth potential or lower risks, which could have distributional effects on the economy and, indirectly, on banks' asset quality and profitability in different sectors (Akanbi, 2021; Oladejo & Akinola, 2023).

The Bank Lending Channel Theory also offers insights into how monetary policy changes can affect banks' risk-taking behaviour. During periods of monetary easing, with abundant liquidity and low interest rates, banks may be tempted to take on more risk in search of higher yields (Abdullahi, 2022; Munandar *et al.,* 2023; Otiwu & Edward, 2024). This could involve lending to riskier borrowers, extending credit for longer terms, or investing in higher-risk assets. While this might boost short-term profitability and ROA, it could also sow the seeds for future asset quality problems, especially if economic conditions deteriorate or if monetary policy tightens sharply (Shirya *et al*., 2023).

## 2.6 Empirical Review

Monday, (2024) evaluates the impact of Monetary Policy on the performance of Deposit Money Banks in Nigeria. The study objectives include evaluating the impact of the Monetary Policy Rate (MPR) and Liquidity Ratio (LOR) on Return on Assets (ROA). It also sought to evaluate the impact of the Inflation Rate (IFR) and Open Market Operation (OMO) on Return on Equity (ROE). The study utilized the casual comparative design. The research employed Secondary Sources of Data Collection, and đata were obtained from the annual financial statement and reports. The multiple regression analysis was employed to test the impact of monetary policy instruments on the performance Deposit Money Banks in Nigeria. The result shows that Monetary Policy Rate (MPR) and Liquidity Ratio (LQR) have no significant impact on Return on Assets (ROA). Furthermore, it revealed that Inflation Rate (IFR) and Open Market Operations (OMO) have a significant impact on the Return on Equity (ROE). The study concluded that the Monetary Policy Instruments of the Central Bank of Nigeria (CBN) have both Positive and Negative impacts on the performance of the Nigerian Banking Industry for the Pre and Post Banks Consolidation Periods.

Chukwudi and Chukwubuzo, (2023) examine how Nigerian deposit money banks behave in relation to monetary policy. Evidence from the study showed that the central bank successfully used monetary policy instruments to increase the lending portfolio of DMBs to the private sector. In particular, the cash reserve ratio has been carefully adhered to by banks in Nigeria because it improved banks' performance over the long term. Another element of monetary policy that has assisted banks in maintaining their profitability is the loan-to-deposit ratio,

which guarantees the private sector's unrestricted access to bank credits. However, the rate of all rates the monetary policy rate-has not positively impacted bank lending to the private sector. This also holds true for the liquidity ratio and the exchange rate.

Ifurueze, (2022) investigates the nexus between monetary policy instruments and the real sector of the Nigerian economy. The Vector Autoregressive Distributed (VAR) lag model was employed as the methodology. Findings show that an increase in agricultural output, service output, exchange rate, and inflation rate in the previous period will lead to an increase in agricultural output in the current period. An increase in manufacturing output and interest rate in the previous period will lead to a decrease in agricultural output in the current period. An increase in agricultural output, service output, and manufacturing output in the previous period will lead to an increase in service output in the current period. An increase in agricultural output, manufacturing output, exchange rate, inflation rate, and money supply in the previous period will lead to an increase in manufacturing output in the current period.

Abdullahi, (2022) investigates the monetary policy impact on private sector performance in Nigeria. The study applies Autoregressive Distributive Lag (ARDL) method. The ARDL Bound test shows that a long- run relationship exists among the variable. The ADF and PP Unit Root tests on the variables show that all the variables are I(1) process, with exception of real exchange rate which is I(0) process. The study uses an annual time-series data from 1981-2021 on four variables - credit to private sector as a percentage of economic growth, broad money supply, real interest rate and real exchange rage. The result shows that the broad money supply has a significant positive impact on the private sector performance both in the short run and long run.

Hassan & Ahmad, (2022) examines the effect of monetary policy on the financial performance of Flour Mills Nigeria plc using an annual dataset from 1990 to 2021. The financial performance is measured as return on assets while monetary policy is a proxy by monetary policy rate. Other control variables in the model are exchange rate, inflation rate and managerial efficiency. In the estimation, this study employed the autoregressive distributed lag (ARDL) model. The results of this study reveal that monetary policy has a significant negative effect on the financial

performance of flour mills plc while the exchange rate and inflation rate have no significant influence on the financial performance of the company. The result further suggested that managerial efficiency has a significant positive effect on the financial performance of the sampled firm.

Oladipupo and Oladipo, (2022) examined the impact of monetary policy motivate performance of listed deposit money banks in Nigeria. The objective of the study was to determine the effect of cash reserved on return on asset of listed deposit money bank in Nigeria, ascertain the influence actual lending rate on return of asset of listed deposit money bank in Nigeria. As well examine the relationship between exchange rate and return of asset of listed deposit money bank in Nigeria. This study is predicated on the Keynesian theory of monetary policy and the monetarist theory. The population of the study consisted on thirty-three (33) deposit money banks listed on the NSE, however, only five (5) samples were selected from the population. Secondary data source was explored in presenting the facts of the situation were obtained from audited financial report of sample deposit money bank covering a period of ten (10) years (2010-2020). The collected data were analysed using Descriptive, Granger Causality and Ordinary Least Square (OLS) regression analysis. From the results of the findings, it was revealed that cash reserved (RCR) has a significant effect on return on asset; actual lending rate has a significant effect on return on asset, however, exchange rate has significant effect on return on asset of listed deposit money bank.

Akanbi (2021) examined the impact of monetary policies on the performance on stock market performance in Nigeria for the period 2011-2018. The main aim of this study was to determine the impact of monetary policy on the stock market in Nigeria. The theoretical foundation of the study was the McKinnon-Shaw hypothesis. The technique employed was OLS multiple regression data was collected from secondary sources. The Nigerian Exchange All Share Index was the proxy for the dependent variable. Monetary policy was measured by monetary policy rate, treasury bill rate, and prime lending rate as the independent variable. The findings of the study show that the monetary policy rate has a positive and insignificant impact on stock market performance, the treasury bill rate has a negative and significant impact on stock market

performance. The prime lending rate has a negative but insignificant relationship with stock market performance within the period of the study. Deposit rate has a positive and significant relationship with stock market performance.

Omankhanlen *et al*., (2021) examined the nexus between monetary policy and the achievement of a bank's profit objective. There have been lots of arguments about the benefits of monetary policy implementation on deposit money bank's operations, since the policies have been seen to impact on their performance. This study was carried out to establish the influence of variables like Liquidity Ratio, Interest and Money supply (M2), which are used as monetary policy instruments, on deposit money bank profitability objective. The study covers the period from 2002-2019. The Auto Regressive *Distributed* Lag and Error correction model were adopted in the analysis of the data. The study revealed there was a positive long run relation-ship between Liquidity Ratio and deposit money bank's profitability; there also existed a negative long run relationship between interest rate and deposit money bank profitability; lastly, there existed a positive long run relationship on Money Supply (M2) and deposit money bank's profitability.

### 2.3.1 Gaps in Literature

While the existing literature provides valuable insights into the relationship between monetary policies and bank performance, several gaps remain that warrant investigation, particularly in the Nigerian context. This study addresses these gaps within the scope of its objectives. First, there is a lack of recent and comprehensive studies that specifically examine the impact of the Cash Reserve Ratio (CRR), Central Bank Exchange Rate (EXR), and Monetary Policy Rate (MPR) on the Return on Assets (ROA) of deposit money banks in Nigeria. Most existing studies either focus on a broader set of monetary policy tools or consider performance metrics other than ROA. For instance, Ifurueze (2022) and Abdullahi (2022) investigated the impact of monetary policies on the real sector and private sector performance, respectively, but did not explicitly examine the effects on bank profitability ratios like ROA. Similarly, while Hassan & Ahmad (2022) and Monday (2024) explored the influence of monetary policy on bank performance, they did not specifically analyse the individual effects of CRR, EXR, and MPR on ROA. This study aims to fill this gap by providing a targeted and granular analysis of how these three critical policy instruments impact the ROA of deposit money banks in Nigeria.

Second, there is a need for more recent data and analysis that capture the dynamic economics landscape and policy shifts in Nigeria over the past few years. Many existing studies, such as Omarankhanlen et al. (2021) and Oladipupo & Oladipo (2022), rely on data that predates the COVID-19 pandemic and the subsequent economic challenges faced by Nigeria. The pandemic, coupled with fluctuations in oil prices and inflationary pressures, has prompted significant adjustments in monetary policies, including changes to the CRR, EXR, and MPR. By utilizing data from 2016 to 2023, this study aims to provide more up-to-d -date insights into how these recent policy changes have affected the financial performance of deposit money banks in Nigeria, as measured by ROA.

Finally, most existing studies (e.g., Akanbi, 2021; Bala, 2022: Monday, 2024) have focused on the industry-wide or aggregate impact of monetary policies on bank performance, overlooking potential heterogeneity among individual banks. However, as suggested by the Bank Lending Channel Theory (Bernanke & Blinder, 1988; Kashyap & Stein, 1995), banks with different capital positions, liquidity levels, or access to alternative funding sources may respond differently to monetary policy changes. This study aims to address this gap by utilizing panel data, which allows for the analysis of bank-specific effects and the potential variations in how individual deposit money banks in Nigeria are impacted by changes in CRR, EXR, and MPR. By addressing these research gaps, this study aims to contribute to the existing body of knowledge by providing a comprehensive, up-to-date, and nuanced understanding relationship between monetary policies and the financial performance of deposit money banks in Nigeria, with a specific focus on the Return on Assets (ROA) metric.

# CHAPTER THREE

# METHODOLOGY

## **3.0** The Theory Underpinning the Study is Keynesian Monetary Theory

The Keynesian Monetary Theory is a foundational framework underpinning the study of the effect of monetary policy on the performance of deposit money banks (DMBs) in Nigeria. Rooted in the seminal work of Keynes (1936), this theory emphasizes the role of monetary policy in influencing aggregate demand and, consequently, economic activity. The theory asserts that monetary policy tools, such as interest rate adjustments and control of the money supply, have direct and indirect effects on the banking sector's operations and profitability. In the Nigerian context, the relevance of the Keynesian perspective is evident in the interplay between monetary policy and the financial health of DMBs. Changes in the monetary policy rate (MPR), a key instrument of the Central Bank of Nigeria (CBN), impact the cost of borrowing and lending, which are critical determinants of banks' revenue streams. For instance, when the CBN adopts a contractionary monetary policy by raising the MPR, borrowing costs increase, reducing loan demand and affecting banks' credit portfolios (Adebayo et al., 2022). Conversely, an expansionary policy characterized by lower interest rates can stimulate borrowing and investment, enhancing banks' profitability (Oladipo & Akinyele, 2023).

The Keynesian framework also highlights the stabilizing role of monetary policy in mitigating economic fluctuations. Ajayi and Atanda (2023) argue that effective monetary interventions reduce systemic risks, fostering an environment conducive to the growth and stability of DMBs. Moreover, the theory underscores the importance of liquidity management in ensuring the smooth functioning of financial institutions. As noted by Nwankwo and Obasi (2023), liquidity constraints arising from tight monetary policies can impair banks' ability to meet their obligations, underscoring the critical link between monetary policy and operational efficiency.

Empirical studies further validate the Keynesian theory's applicability. For example, Eze *et al.* (2022) found that monetary policy significantly influences credit creation, a core function of DMBs in Nigeria. The study revealed that periods of monetary tightening reduce banks' loanable funds, adversely affecting their performance metrics such as return on equity (ROE) and return on assets (ROA). These findings align with Keynes' argument that monetary policy serves as a powerful tool for influencing economic and financial outcomes.

In conclusion, the Keynesian Monetary Theory provides a robust framework for understanding the dynamics of monetary policy and its impact on the performance of deposit money banks in

Nigeria. By linking macroeconomic policies to microeconomic outcomes, this theory offers valuable insights for policymakers and financial institutions aiming to optimize monetary interventions for sustainable banking sector performance.

### 3.1 Research design

This study adopts an ex-post facto research design. This design was used because of its relevance in causal research, such as the present study. It was also employed because it is a design suited for occasions in which the researcher did not have control over the independent variables, as the situation necessitating the study had already taken place. This design was deemed most apt considering that the study made use of already existing audited financial statements of deposit money banks in Nigeria.

### 3.2 Population

The study population covers the entire 35 deposit money banks operating in Nigeria as of 31st December 2023.

#### 3.2.1 Sample size and sampling Technique

In selecting the sample for the study, the following were considered: sampled banks had prepared their financial statements in line with IFRS guidelines from 2012 to 2023; sampled banks were listed each year over the period from 2012 to 2023; sampled banks had published annual reports for the 14-year period from 2012 to 2023; and the shares of sampled bank were actively traded during the period under consideration. 12 of the 35 deposit money banks met the considerations above; hence, the 12 deposit money banks were selected using purposive non-profitability sampling techniques.

Purposive sampling was chosen as it allowed for the selection of banks that possessed specific characteristics or qualities relevant to the scope of the study. Therefore, the data used in the analysis Consisted of 12 deposit money banks in Nigeria from 2010 to 2025, a period of 14 years.

### 3.3 Sources and Method of Data Collection

The study used secondary data obtained from the Central Bank of Nigeria (CBN) statistical bulletin for monetary policy variables as well as deposit money banks aggregate data for return on asset on a quarterly basis from 2010-2023. The use of secondary data in this study was

informed by the fact that the study was biased, which required quantitative data to test the research hypotheses.

## 3.4 Method of Data Analysis

This study used both descriptive and inferential statistics to analyse the collected. Descriptive statistics, such as mean, standard deviation, minimum, and maximum, were employed to describe the nature of the data. Inferential statistics, including correlational analysis, multicollinearity tests, and regression analysis, were used to draw inferences and analyse the relationships between monetary policies and financial performance. Specifically, Vector Error Correction Model (VECM) techniques was used to analyse the data via the statistical software of E-View 12.

### 3.4.1 Table 1: Variable Measurement

| VARIABLES | DEFINITION | MEASEREMENT | SOURCE |
|---|---|---|---|
| Dependent Variable: ROA | Return on Assets | Net Income / Total Assets | (Hassan & Oloruntoba 2022) |
| Independent Variable: (i) CRR | Cash reserve Ratio | Percentage of deposits held as reserves with CBN | (Alalade et al., 2023) |
| (ii) EXR | Central Bank Exchange Rate | Official Naira to USD exchange rate | (Iwedi & James 2023) |
| (iii) MPR | Monetary Policy Rate | Interest rate charged by CBN on loans to banks | (Abdullahi, 2022) |
| (iv) SLR | Statutory Liquidity Ratio | Percentage of deposit liability of banks to be kept in liquid form all time | Adams & Adams (2019) |
| (v) TBR | Treasury Bill Rate | The return rate on treasury which is used to proxy open market operation | Adekunle & Kolawole (2017) |

**Author's Compilation (2025)**

### 3.5 Model Specification

In this study, the model specification was adopted from the work of Shirya *et al.* (2023), which examined the relationship between monetary policy instruments and financial performance of commercial banks in Nigeria. Their model is represented as follows:

$FP = f(OMO, MPR, CRR)$ ..... (1)

$FP = \beta + \beta_1 OMO_t + \beta_2 MPR_t + \beta_3 CRR_t + e_t$ ..... (2)

Where:

FP= Financial Performance (proxied by Earnings per Share)

OMO = Open Market Operation

MPR= Monetary Policy Rate

CRR = Cash Reserve Ratio

To adapt this model for the current study, which aims to investigate the impact of monetary policies on the financial performance of deposit money banks in Nigeria, the dependent variable proxy will be replaced with ROA instead of Earnings per Share (EPS), as ROA is the focal performance metric in this study. Since the study intends to examine the impact of the Central Bank Exchange Rate (EXR) in addition to CRR and MPR, EXR will be included as an independent variable. The Open Market Operations (OMO) variable will be excluded from the model, as this study specifically focuses on the effects of CRR, EXR, and MPR. With these modifications, the adapted model for this study becomes:

$ROA_{it} = \beta o + \beta_1 CRR_{t1} + \beta_2 SLR_{t2} + \beta_3 TBR_{t3} + \beta_4 MPR_{t4} + \beta_5 EXR_{t5} + \beta_6 INF_{t6} + e_t$ ..... (3)

where

$ROA_{it}$ =Return on Assets of bank i at time t

$CRR_t$ = Cash Reserve Ratio for bank at time t

$SLR_t$ = Statutory Liquidity Ratio for bank at time t

$TBR_t$ =Treasury Bill Rate for bank at me t

$MPR_t$ =Monetary Policy Rate at time t

$EXR_t$ = Central Bank Exchange Rate at time t

$INF_t$ = Inflation rate at time t

Bo= intercept $\beta_1$, $\beta_2$, and $\beta_3$ =Coefficients of CRR,

EXR, and MPR $e_{it}$ =Error term for bank i at time

### 3.5.1 Estimation Techniques

To ensure accurate and reliable results, the following estimation techniques were employed:

**i.** Descriptive Statistics**:**

----To provide an overview of the data, including mean, standard deviation, minimum, and maximum values kurtosis, Jackbera etc for the key variables.

----Unit Root Tests (ADF or PP) to confirm stationarity of the variables,

----Co-integration Tests (Johansen Test) to assess long-term relationships among the variables

**ii. Ordinary Least Squares (OLS):** Initial estimation to test the linear relationships.

iii. Vector Error Correction (VEC) Models

VEC models are particularly useful in capturing the interdependencies between monetary policy instruments and bank performance metrics. This method allows for the analysis of impulse response functions and variance decompositions, which highlight how shocks to monetary policy affect variables like loan growth and profitability over time (Sims, 1980). For instance, a VEC model can trace the dynamic relationship between changes in the MPR and banks' net interest margins (Adebayo *et al.,* 2023).

This model is suitable for evaluating how shocks in monetary policies and bank performance as it affects income indices over time while maintaining a long-term equilibrium.

iv. Diagnostic Tests:

Heteroskedasticity -- to check and ensure robustness of the results outcomes.

## 3.6 A Priori Expectations for model

An a priori expectation equation represents the anticipated relationship between variables based on economic theory or prior knowledge**.** The a priori expectation provides expected signs and significance of the values of the coefficient of the parameters under review on the part of our model and based on theoretical assumptions and empirical findings it is stated as:

ROA $\neq \beta 0 \geq 0$; $\beta 1 \geq 0$, $\beta 2 < 0$, $\beta 3 < 0$, $\beta 4 \geq 0$, $\beta 5 <> 0$and $\beta 6 >$

0 A priori expectation $\beta_1 > 0$ (positive relationship between

MPR and ROA) $\beta_2 < 0$ (negative relationship between CRR

and ROA) $\beta_3 < 0$ (negative relationship between SLR and

ROA) $\beta_4 > 0$ (positive relationship between TBR and ROA)

$\beta_5$ >< (ambiguous relationship between EXR and ROA) $\beta_6 < 0$
(positive relationship between INF and ROA)

Cash Reserve Ratio (CRR): Expected relationship: Negative ($\beta_1 < 0$) Rationale: An increase in CRR typically reduces the amount of money banks can lend out, potentially decreasing their profitability. Higher CRR means banks must hold more reserves, reducing their ability to generate income from loans.

Central Bank Exchange Rate (EXR): Expected relationship: Ambiguous ($\beta_2$ >< 0) Rationale: The impact of exchange rates on bank profitability can be positive or negative, depending on the bank's foreign currency exposure and the overall economic conditions. A depreciation in the local currency could increase the value of foreign currency assets but also increase the cost of foreign currency liabilities.

Monetary Policy Rate (MPR): Expected relationship: Positive ($\beta_3 > 0$) Rationale: An increase in MPR generally allows banks to charge higher interest rates on loans, potentially increasing their interest income and profitability. However, it's worth noting that extremely high rates might reduce loan demand and increase default risk.

**1. Data Limitations**

**Availability**: Inconsistent or missing data and time period can limit the comprehensiveness of the analysis.

**Quality**: Variations in data quality and reliability across sources may affect the robustness of the results.

2. **Measurement Errors:** Proxy measures like ROA may not fully capture sustainability. Indicators for bank performance which may not perfectly capture the intended concepts, leading to potential measurement errors.

3. **External Factors**: Variables beyond bank performance, such as political instability, forex manipulation and cryptocurrency speculation may also affect performance sustainability, making it challenging to isolate the budget's impact.

4. **Methodological Limitations**: Advanced models such as VECM are sensitive to the specification and stationarity of data, potentially impacting the robustness of results.

**5.** Scope of Variables**:**

The study may not capture all variables influencing monetary policy and DMBs performance in Nigeria, such as political stability, external debt dynamics, and global economic conditions. Overreliance on macroeconomic indicators may overlook localized economic effects and regional disparities within Nigeria.

## CHAPTER FOUR

## DATA PRESENTATION AND ANALYSIS OF RESULTS

### **4.0** Introduction

This section presents the Regression model analysis. The model was subjected to various tests (such as the Multicollinearity Test. Autocorrelation Test, test of Heteroskedasticity, Test of Stationarity, Cointegration Test, and ARDL Bound Test). The results of the tests are as presented in Table 4.1 to 4.9. Discuss of these results are presented in section 4.2

### **4.1** Results

Table 2 are the analytical results of the descriptive statistics presented for this study.

**Table 2: Summary Statistics the Descriptive Statistics for Each Variable:**

| | ROA | MPR | CPR | SLR | TBR | EXR | INF |
|---|---|---|---|---|---|---|---|
| Mean | 1.573793 | 11.59103 | 16.48621 | 50.39393 | 7.931379 | 241.9703 | 13.12586 |
| Median | 1.86000 | 12.0000 | 22.5000 | 47.60000 | 8.470000 | 196.9900 | 12.00000 |
| Maximum | 3.900000 | 15.33000 | 27.50000 | 87.15000 | 14.24000 | 449.1300 | 21.34000 |
| Minimum | -8.900000 | 6.000000 | 1.000000 | 30.40000 | 0.750000 | 74.04000 | 8.00000 |
| Std. Dev. | 2.176651 | 2.591200 | 9.943725 | 14.51206 | 4.051839 | 107.4605 | 3.440096 |
| Skewness | -3.956244 | -0.952829 | -0.418321 | 0.771706 | -0.237412 | 0.412798 | 0.476413 |
| Kurtosis | 19.93547 | 3.012721 | 1.568058 | 3.044805 | 1.838908 | 1.871224 | 2.530342 |
| Jarque-Bera | 422.2129 | 4.388296 | 3.323435 | 2.880822 | 1.901426 | 2.363193 | 1.363553 |
| Probability | 0.000000 | 0.111453 | 0.189813 | 0.236830 | 0.386465 | 0.306789 | 0.505718 |
| Sum | 45.64000 | 336.1400 | 478.1000 | 1461.424 | 230.0100 | 7017.140 | 380.6500 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sum Sq. Dev. | 132.6587 | 188.0009 | 2768.574 | 5896.797 | 459.6871 | . 323337.5 | 331.3593 |
| Observations | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

**Notes:** ROA -Return on asset, MPR-Monetary policy rate, CRR- Cash reserve ratio SLR- Statutory liquidity ratio, TBR-Treasury bill rate, EXR- Exchange rate and INF -Inflation rate

Source: Author's Computation (2004)

From Table 2, return on asset (ROA) has a mean value of 1.57% indicating that the aggregated return on asset of Nigerian deposit money banks over the 29 years of the study is about 1.57%. This tends to increase or decrease by about 2.17% as shown by standard deviation. The minimum profitability ratio as measured by return on asset (ROA) is -8.90% while the maximum ratio of profitability according to Table 4.1 is 3.90%. The estimated parameters indicate that Nigerian banks maintain an average level of profitability position. The position might however fall below the average as shown by the minimum value.

Regarding the monetary policy variables, descriptive parameters were also estimated for monetary policy rate (MPR), cash reserve ratio (CRR), statutory liquidity ratio (SLR) and treasury bills rate (TBR). The mean value of the monetary policy rate (MPR) is 11.59% indicating that on average, the monetary policy rate increased by about 12% between 2009 and 2022. The minimum MPR is 6%o over the selected period while the maximum is about 15.33%. The minimum rate indicates that the lowest monetary policy rate over the years under consideration is a negative far below 10%. The rate keeps increasing over time as buttressed by the maximum value recorded which has been more than a 15% increment.

Finally, the mean treasury bills rate (TBR) is 7.93%. It means that the average rate on treasury bills of government in Nigeria on semi-annual basis from 2010 to 2023 is about 8%. The minimum and maximum change in TBR have also been reported in Table 4.1. as 0.75% and 14.24% respectively.

The study controlled for macroeconomic variables exchange rate and inflation rate which are capable of influencing the financial performance of the banks. According to Table 4.1, exchange rate (EXR) has a mean value of N242 per dollar, minimum value of N74 and a maximum value of N449 per dollar. The exchange rate movement is a measure of monetary stability, the level of which also determines the financial performance of the country's banking industry. The maximum value of N449 shows that volatility of the Naira exchange rate in Nigeria which is capable of affecting economic and banking activities. Inflation rate (INF) is another

macroeconomic variable that can affect both the financial performance of Nigerian banking industry. Over the study periods, inflation rate shows an average of 13% with a standard deviation of 3.44%. This indicates a high double-digit inflation on average. The maximum value which is the highest inflation rate in the whole of period under consideration is 21%, and its minimum value is 8% as shown in Table 4.1.

By implication, high inflation rate tends to have certain effect on bank profitability. High inflation erodes purchasing power of money, discourage investment with consequential effect on aggregate demand. When this happens, borrowers find it difficult to repay bank loans and financial performance is affected.

Summarily, Table 4.1 describes the behavior of monetary policy variables and macroeconomic (control) variables that are capable of influencing financial performance (measured with ROA) in Nigeria.

## 4.2. Test of Stationarity

Table 3: Augmented Dickey-Fuller test of Unit Root

| Variable | t-statistic | Prob | Order of Integration |
|---|---|---|---|
| ROA | -4.791213 | 0.0006 | I(0) |
| MPR | -6.183260 | 0.0000 | I(1) |
| CRR | -5.420549 | 0.0001 | I(1) |
| SLR | -6.611503 | 0.0000 | I(1) |
| TBR | -6.611503 | 0.0393 | I(0) |
| EXR | -6.149352 | 0.0000 | I(1) |
| INF | -5.010499 | 0.0004 | I(1) |

Source: Author s computation (2024)

Stationarity of time series data means that the series have constant mean and that any abnormality or shock will only be temporary. Overtime, the effect of such is expected as the series revert to their long run mean values. However, non-stationary time series data contain permanent shocks which affect OLS regression analysis bringing about incorrect result and conclusion. Table 4.2 presents result of unit root test to ascertain the stationarity of the series.

Augmented Dickey-Fuller test was conducted and result is as reported in the above Table 3. The hypothesis of Augmented Dickey-Fuller test is that the series has unit root (not stationary). The null hypothesis is rejected if p-value is less than 0.05. According to Table
4.2, only TBR, out of the four monetary policy variables was found to be stationary at level, without necessarily going through differencing procedure. That TBR has no unit root with I(0) order of integration, with p-value of 0.0393, which is less than 0.05. Sometimes, the series has to be differenced for it to be stationary. Order of integration shows the number of times that a series is differenced to be stationary. Other three variables-MMPR. CRR and SLR became stationary after the first different. They are therefore reported as I(1) series in Table 4.6 with p- values fo.0000, 0.0001 and 0.0000 respectively. Similarly, the two control variables were also found with unit root and differenced once for stationary. So EXR and INF are I(I) series with p-values of 0.0000 and 0.0004 respectively.

Summarily, result of ADF test shows that data are combination of I(0) and I(1) series. The implication of this is that OLS can no longer be used to estimate the model so as to explain the short run relationship.

The available option is to test for possible long run cointegration between the dependent and independent variables.

### 4.3 Cointegration Test Table

**4:** ARDL Bound Test

| **Test Statistic** | **Value** | **K** | |
|---|---|---|---|
| **F-statistic** | 4.798947 | 6 | |
| **Critical Value Bounds** | | | |
| **Significance** | 10 Bound | | **11 Bound** |
| **10%** | 2.12 | | **3.32** |
| **5%** | 2.45 | | **3.61** |
| **2.5%** | 2.75 | | **3.99** |
| **1%** | **3.15** | | **4.43** |

**Source: Author's computation (2024)**

Cointegration test was conducted with ARDL Bound Test because the series are mixture of I(0) and I (1) which could not be properly handled by Johansen test of cointegration. The hypothesis

is that there is no cointegrating equation and this should be rejected if F-statistic is higher than the critical value of the upper bound (11 Bound) at 5% level of significance. It should then be concluded that there is cointegration, hence long run relationship exists.

In Table 4, the value of F-statistics (4.7989) is greater than critical value of the upper bound (3.61) at 5% level of significance. The null hypothesis is hereby rejected and it is concluded that cointegration (long run relationship) exists between the dependent and independent variables. It therefore became imperative to estimate the model for both short run and long run relationship among the variables. The regression model estimation was done via the Vector Error Correction Model (VECM) analysis.

### 4.4. Preliminary Analysis Table

**5:** Pairwise Correlation

| Variable | MPR | CRR | SLR | TBR | EXR | INF |
|---|---|---|---|---|---|---|
| MPR | 1.0000 | 0.6169 | 0.6057 | 0.3864 | 0.6196 | 0.1958 |
| CRR | 0.6169 | 1.000 | 0.5551 | -0.0797 | 0.4555 | 0.3729 |
| SLR | 0.6057 | 0.5551 | 1.0000 | -0.0117 | 0.5623 | 0.0529 |
| TBR | 0.3864 | -0.0797 | -0.0117 | 1.0000 | -0.2892 | -0.3485 |
| EXR | 0.6196 | 0.4555 | 0.5623 | -0.2892 | 1.0000 | 0.6383 |
| INF | 0.1958 | 0.3729 | 0.0529 | -0.3485 | 0.6383 | 1.0000 |

**Source: Author's computation (2024)**

Table 5 presents the pair-wise correlation of the explanatory variables to check for possible multicollinearity among the variables, It is a fundamental assumption of Ordinary Least Square (OLS) estimator that no multicollinearity should exist among the variables of the model, for the estimator to remain as best linear and unbiased estimator. In other words, regression result becomes biased and unreliable if the model suffers from multicollinearity problem. According to Gujariti (2004), regression model is exposed to multicollinearity issue if the pair-wise between any two independent variables is more than 80%

It could be clearly observed in Table 5 that none of the correlation co-efficient is in the range of 0.8 as pointed out by Gujarati (2004). Therefore, it can be concluded that the model is free from

multicollinearity. However. pair-wise correlation as a test multicollinearity has been criticized by researchers as a weak method which need support of another test to be sure of the extent of relationship between any pair of independent variables. This study therefore employed variance inflation factor to further evaluate the multicollinearity.

Table 6: Variance Inflation Factor (VIF)

| Variable | Coefficient Variance | Variance VIF | Centred VIF |
|---|---|---|---|
| C | 10.56877 | 64.44806 | NA |
| MPR | 0.281074 | 241.3885 | 3.111390 |
| CRR | 0.021406 | 47.93939 | 4.461591 |
| SLR | 0.002165 | 36.20972 | 2.684329 |
| TBR | 0.036670 | 17.61138 | 3.544564 |
| EXR | 0.000144 | 61.01527 | 5.760424 |
| INF | 0.041977 | 47.02631 | 2.924818 |

**Source: Author's computation (2024)**

Variance inflation factor (VIF) is a stronger tool for detecting multicollinearity among independent variables. The rule of thumb is that a variable whose VIF (Centered) value is more than 5 tends to collinear with other variables. Such a variable should be dropped from the model. Looking at Table 4.3: however, none of the variables shows a VIF score of more than 5. It is therefore safe to submit no multicollinearity exist among the independent variables of the model.

### 4.2.2 Autocorrelation Test

**Table 7: Breusch-Godfrey Serial Correlation LM Test**

| | | | |
|---|---|---|---|
| F-statistic | 0.041573 | Prob. F (1,21) | 0.8404 |
| Obs*R-squared | 0.057297 | Prob. Chi-Square (1) | 0.8108 |

**Source: Author s Computation (2024)**

Autocorrelation means that the error terms are serially correlated which implies that the error in the current period relates with estimation error from past period. When that happens, the model cannot be estimated with high level of accuracy. Autocorrelation is generally not a problem but it only tells us that the model is yet to capture all necessary information. The

assumption of OLS is that errors terms are not correlated. If this is violated, OLS cannot give a reliable estimate unless remedial actions are taken.

The null hypothesis underlying the Breusch-Godfrey Serial Correlation LM Test is that there is no serial or autocorrelation and this should be rejected if the calculated p-value is less than 0.05. If otherwise, the null hypothesis is accepted with a conclusion of no autocorrelation. From the above Table 7, the calculated p-value (Chi-Square) is 0.8108 which is greater than 0.05. The null hypothesis is therefore rejected and the study concluded that no autocorrelation exists.

**4.2.3 Test of Heteroskedasticity**

**Table 8: Heteroskedasticity Test: Breusch-Pagan-Godfrey**

| | | | |
|---|---|---|---|
| F-statistic | 2.086487 | Prob. F(6,22) | 0.0963 |
| Obs*R-squared | 10.51738 | Prob. Chi-Square(6) | 0.1045 |
| Scaled explained SS | 36.32712 | Prob. Chi-Square(6) | 0.0000 |

**Source: Author's computation (2024)**

Heteroskedasticity means that residuals (error terms) do not possess equal variance. That is, errors differ from time to time. OLS assumes that equal variance exists among the error terms, hence the hypothesis that residuals are homoscedastic. The hypothesis will be rejected if the p-value is less than 0.05.

Breusch-Pagan-Godfrey test of Heteroskedasticity is presented in Table 8. According to the Table, the probability of Chi-Square (p-value) is 0.1045 which is greater than 0.05. The null hypothesis 1s hereby accepted and it was asserted that residuals homoscedastic. In other words, the model has no heteroskedasticity problem.

## 4.3. Vector Error Correction Model (VECM) Analysis

Table 9: Long run Model

| Variable | Coefficient | Standard Error | t-statistics |
|---|---|---|---|
| MPR(-1) | 3.856705 | 0.26530 | 14.5374 |
| CRR (-1) | -0.215843 | 0.06251 | -3.45283 |
| SLR (-1) | -0.074833 | 0.02259 | -3.31271 |
| TBR (-1) | -1.687984 | 0.09721 | -17.3652 |
| EXR (-1) | -0.065773 | 0.00440 | -14.9623 |
| INF (-1) | 1.202037 | 0.06872 | 17.4929 |

**Source: Author's Computer (2024)**

Table 9 presents the result of long run analysis of vector error correction model. According the Table, the lag of MPR has positive long run relationship with ROA. The relationship is denoted with the coefficient of 3.856705 indicating that 1% increase of in MPR will lead to increase of approximately 3.9% in bank profitability measured as return on asset. The positive relationship between MPR and ROA was found be significant at 5% level of significance as indicated by t - value of 14.54 which is higher than critical value of 1.96

Conversely, CRR was found to have exerted a long run negative impact on financial performance with coefficient of -0.215843 indicating about 0.21% long-run decrease in return on asset with just 1% increase in the cash reserve ratio of the banks. The impact was found to be significant at 5% level of significance with a t-statistic of -3.45 which greater than the critical value of -1.96. Similarly, statutory liquidity ratio (SLR) had a significantly negative relationship with return on asset (ROA), The result is supported by the t-value of -3.31 which is higher than critical value of -1.96. The relationship between treasury bill ratio (TBR) and return on asset (ROA) is also negative and significant. According to Table 9, 1% increase in TBR tends to decrease ROA by 1.68%. The significance of the relationship was buttressed by the t-value that was reported to be -14.96. On the effect of control variables, exchange rate (EXR) had a long run negative relationship with ROA. The result shows that 1% increase in EXR will result to about 0.07% decrease in ROA. This means that Naira exchange rate affect bank performance in the long run. In the like manner, inflation has significantly long run effect bank performance as measured on asset with just 1% increase in the cash reserve ratio of the banks. The impact by aggregate ROA of the banks. According to the result reported in Table 9, 1% rise in inflation rate plummet return on asset by 1.20%. The effect of inflation was found to be significant at 0.05 level of significance as supported by t- value of 17.49.

Summarily, in the long run, financial performance of the banks, tends to be affected

Significantly by quantitative tools of monetary policy as well as exchange and inflation rate. To determine the short run relationship between the monetary policy variables and banks' financial

performance, Eror correction term (ECT) presented in Table 10 below.

**Table 10: Error Correction Model**

| **Variable** | **Coefficient** | **Standard Error** | | | | **t-statistics** |
|---|---|---|---|---|---|---|
| D(ROA(-1)) | 0.161508 | 0.11682 | | | | 1.38250 |
| D(MPR(-1) | 0.656692 | 0.50713 | | | | 1.29491 |
| D(CRR(-1)) | -0.294567 | 0.17584 | | | | -1.67518 |
| D(SLR(-1)) | -0.026232 | 0.04199 | | | | -0.62465 |
| D(TBR(-1)) | -0.618765 | 0.21440 | | | | -2.88609 |
| D(EXR(-1) | 0.055352 | 0.01559 | | | | 3.54943 |
| D(INF(-1) | 0.620570 | 0.15362 | | | | 4.03967 |
| ECT | -0.515212 | 0.08122 | | | | -6.34332 |
| C | -0.890304 | 0.37659 | | | | -2.36414 |
| $R^2$ | 0.850876 | | | | | |
| F-Stat. | 11.41163 | | | | | |

Source: Authors computation (2024)

Table 10 shows the result of error correction model to estimate the speed of adjustment from long run to short run equilibrium. Error correction term (ECT) is included to determine the speed at which the error in long run estimates is being corrected annually.

The sign (- +) of error correction term determines the interpretation to be given to the short run relationship between any dependent and independent variables. If the ECT is negative, any negative relationship is interpreted as positive and vice-versa.

From Table 10, the ECT is -0.515 indicating that the error in the long run model is being corrected at the rate of 52% (approximately) annually. In other words, the deviation from the long run relationship is corrected at the rate of 52% in the present period. Since the ECT value is negative, then positive coefficients should be reported as negative and vice-versa as

established in theoretical model. Therefore, negative relationship exists between MPR and ROA as a measure of financial performance. The relationship is however not significant as indicated by the t-value of -1.29 which is less than the critical value of 1.96.

Conversely, CRR, and SLR, showed positive relationship with return on asset. The relationship between each of the monetary policy variables, was not significant as indicated by the calculated t-statistics of -1.68 and -0.62 for CRR and SLR respectively, which is less than -1.96. However., TBR has positive and significant short run effect on ROA of the banks. The significance of the positive relationship between TBR and ROA is supported by the t-value of -2.89 which is greater than -1.96 at 5% significance level.

Finally, the two control variables- exchange rate (EXR) and inflation (INF) have significantly short run negative relationship with return on asset (ROA). The calculated t-values for the variables are 3.55, and 4.04 respectively. The t-values are greater than critical value of t-statistic (1.96) at 5% level of significance. Hence the effects of the control variables were found to be significant in the short run.

Regarding the fitness of the model, $R^2$of 0.85 indicates that 85% of the variations in the Regarding the fitness of variable were explained in the model by the independent variables. Also, F-statistic of 11.41 testifies to the joint significance of quantitative tools of monetary policy in determining financial performance of the banks.

## **4.2** Discussion of Findings

This study analysed the quantitative tools of monetary policy and their effects financial performance of banks in Nigeria. Both the long and short run models were estimated. In the long run, the study found that monetary policy rate (MPR) has significantly positive effect on the financial performance which was measured by the aggregate return on asset of the banks. This implies that the higher the rate, the greater the tendency the banks profitability and performance will increase. This finding is in tandem with Rashid et al

(2014) which reported that monetary policy has positive effect on financial performance of banks. It is also in consonance with Ekpung et al (2015) that overall monetary policy has a significant effect on the banks.

Other monetary policy variables- CRR, SLR, and TBR were found to have exerted significantly long run negative influence on return on asset of the banks. As for the cash reserve ratio, the

increase in the ratio means banks will have less funds to pursue profitable engagements. This tends to reduce the financial performance of the banks in the long run. In the case of statutory liquidity ratio, it means the portion of the liability that the banks should keep in liquid form. This portion will not be available for lending purpose. So, the profitability might be affected negatively in line with the theoretical explanation of profitability and liquidity trade-off. In relation to Treasury bills ratio that was found to have long run negative relationship with return on asset, the implication of this is that, increase in the rate will make investment in treasury bills more profitable and attractive to the investors that putting their money in banks as a deposit. The reduced deposits mean reduced lending capacity of the banks which ultimately result in long run reduced profitability. These findings however contradicted past studies like Udeh (2015) and Dare & Okeya (2017).

In summary, the study found that monetary policy variables have long run significant effect on the financial performance of banks in Nigeria. In the short run, however, the treasury bill rate (TBR) is the only monetary policy variable that exerts a significant effect on the financial performance of the banks.

# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

## **5.1** Summary

This study examined monetary policy and its effect on the financial performance of deposit money banks in Nigeria. Concepts, theories, and empirical studies that provided background for the study were extensively reviewed and discussed. The study also specified the model adopted and the estimation techniques used.

Vector Error Correction Model (VECM) estimation technique was used for this study because it is suitable for panels with few time series observations per individual and large samples in the cross-section dimension. It also accommodates omitted variable bias and is capable of controlling for unobserved individual heterogeneity, and endogeneity problems.

From the analyses carried out, the findings of the study showed that the monetary policy rate had significantly positive effects on the return on assets of the banks. It was also found that the

cash reserve ratio, statutory liquidity ratio, and treasury bills ratio were found to exerted significant long-run negative influence on the return on assets of the banks.

Also, exchange rate and inflation had short-run negative and significant effects on the return on assets of the banks.

## 5.2 Conclusion

The study investigated the effect of monetary policy on the financial performance of deposit money banks in Nigeria, between 2010 to 2024. Although this area has been explored by previous studies, the results have remained mixed and the present study is unique because it introduced more variables for more robust analysis and reliable results.

In carrying out this research, data were collected from the CBN statistical bulletin for monetary policy variables and aggregate data on the return on assets of deposit money banks.

In line with the results of the analysis, the study found that the explanatory variables had a significant effect on return on assets. The study therefore concluded, based on the findings, that financial monetary policy influences the financial performance of deposit money banks in Nigeria.

## 5.3 Recommendations

Based on the findings of the study and conclusion therefrom, the study recommended that:

i. Government should ensure a stable monetary policy rate to enhance banks profitability through lending at a more competitive interest rate;

ii. Central Bank of Nigeria (CBN) should keep the cash reserve ratio at the level that will ensure more loanable funds for the banks. This will go a long way in improving the banks' profitability as a measure of financial performance;

iii. Central Bank of Nigeria (CBN) should also monitor the compliance of the banks with statutory liquidity requirements to ensure that the banks are always liquid to meet its customers' demand for funds. This is because the inability to maintain adequate liquidity exposes the banks to risk with attendance cost on the financial performance of the banks;

iv. CBN should keep the liquidity ratio at an optimum level as excess liquidity affects the profitability of the banks; ease cost of switching in the selection of audit film for new engagement as excessive audit will have some effects on the company profitability;

v. Management of deposit money banks in Nigeria should ensure that their excess liquidity is invested in short-term marketable security such as treasury bills to earn some return and boost their profitability;

vi. Government should institute an effective policy for foreign exchange market management for the stability of the exchange rate in Nigeria.

## REFERENCES


Abdullahi, K. (2022). Impact of Monetary Policy on Manufacturing Sector Performance in Nigeria. *Journal of Economics and Allied Research, 7(3), 1-12*

Akanbi, A. (2022). Effect of Monetary Policy on Stock Market Performance in Nigeria. *Journal of Global Economics and Business, 2(5), 101-115*

Akeem, L. B., Taiwo, O. O., Augustine, A. A., Edinaeval, A.P., & Olawumi, L. B. (2022). Monetary Policy and Financial Performance: Empirical Evidence from Listed Deposit Money Banks in Nigeria. *Journal of Positive School Psychology, 6(9), 5135-5145.*

Akinsanmi, F. J. S., Rotimi, O., Olabisi, A., & Osatohanewa, A. R. (2018). Do Monetary policies really influence performance of banks in Nigeria? *KIU Interdisciplinary Journal of Humanities and Social Sciences, 3(1), 53-54.*

Akinpunonu, U. E., & Orajaka, U. P (2021). Effect of Monetary Policy on Industrial Growth in Nigeria. *International Journal of Entrepreneurship and Business Innovation, 4(1), 47-60.* https://doi.org/10.5289/ijebi-1z4iybye

Alalade, Y. S. A., Oseni, E., & Adekunle, O. A. (2020). Monetary Policy and Financial Performance of Deposit Money Banks in Nigeria. *Asian Social Science, 16(11), 123.* https://doi.org/10.5539/ass.v16n11p123

Amira, E. A., Alala, B. O., & Musiega, M.(2023). Influence of Liquidity Risk Management on Financial Performance of Commercial Banks in Kenya. *African Journal of Empirical Research, 4(2), 7-13.* https://doi.org/10.51867/ajernet.4.2.3

Bala, U. (2022). The Effect of Monetary policy on the Performance of Deposit Money Banks in Nigeria. *Journal of Business Management and Economic Research, 6(1), 10.23. https://doi.org/10.29226/TR1001.2022.292*

Bala, U. (2022), Godiya, I., Hadith, N. B., & Maijama'a, R. (2022). The Effect of Monetary Policy on the performance of Deposit Money Banks in Nigeria. *Journal of Business*

*Management and Economics Research, 6(1). 10-23, https://doi.org/10.29226/TR1001.2022.292*

Beauty, I., & Tonye, T. (2022). Cashless Policy and Performance of Deposit Money Banks in Nigeria. *Journal of Economics, Management & Social Sciences, 8(2), 44-55*

Chukwudi, N. A., & Chukwubuzo, U. J. (2023). Monetary Policy and Deposit Money Banks Performance in Nigeria.. *Social Science Research, 991), 1-18.*

Cobham, D., Macmillan, P., Mason, C., & Song, M. (2022). Economic Performance under different monetary policy frameworks. *Journal of policy Modelling, 44(2), 431-449.* https://doi.org/10.1016/j.jpolmod.2022.03.001

Ekong, C. N., & Ekong, U. M. (2022). Monetary Policy and Industrial Sector Performance in Nigeria: Measuring the Extended Impact on the Economy. *Journal of Applied Financial Econometrics 3(1), 97-131. https://doi.org/10.47509/jafe.2022.v03i01.06*

Hassan, A., & Ahmad, Z. (2022) Monetary Policy and Financcial Performance of consumer Goods Manufacturing Firms: Evidence from Flour Mills Nigeria Plc. *Saudi Journal of Economics and Finance, 6(8), 257-263.* https://doi.org/10.36348/sjef.2022.v06i08.001

Hassan, J. S., & Oloruntoba, O. (2022). Monetary Policy and the Financial Performance of Quoted Deposit Money. *KIU Interdisciplinary Journal of Humanities and Social Sciences MONETARY, 3(2), 195-222*

Ifurueze, P. C. (2022). Monetary Policy Instruments and Performance of Financial Sector in Nigeria. *Journal of Management and Business Studies, 4(3), 23-56.* https://doi.org/10.9790/5933-1302074151

Iwedi, M., & James, E. D. (2023). Monetary Policy and the commercial Banks profitability in Nigeria. *Journal of Business & Management, 1(4), 296-314.* https://doi.org/10.47747/jbm.v1i4.1383

Jackson, E., Tamuke, E. (2022). Credit Risk Management and the Financial Performance of Domiciled Banks in Sierra Leone: An Empirical Analysis. *Journal of Economic Policy Research / ikisat politikasi Arastirmalari Dergisi, 9(1), 139-164.* https://doi.org/10.26650/jepr1012975

Jamil, M. N. (2022). Monetary Policy Performance under Control of exchange rate and consumer price index. *Journal of Environmental Science and Economics, 1(1), 28-35.* https://doi.org/10.56556/jescae.v1i1.7

Kocha, C. N. (2023). Monetary Policy and Financial Performance of Listed Deposit Money Banks in Nigeria. *Nigerian Journal of management Sciences, 24(*January), 365-373.

Koronoski, A. (2022). Monetary Policy Financial Crises. Gospodarka Narodowa, 235(10), 33-48. https://doi.org/10.33229/gn/101230

Kwashie, A. A., Baidoo, S. T., & Ayesu, E. K. (2022). Investigating the impact of credit risk on financial performance of commercial banks in Ghana. *Cogent Economics & Finance, 10(1).* https://doi.org/10.1080/23322039.2022.2109281

Monday, R. E. (2024). Monetary Policy and Financial Performance of Commercial Banks Listed on the Nigeria Exchange Group. *International Journal of Innovative Finance and Economics Research, 12(01), 35-44*

Munandar, A., Fatimah, S., Cakranegara P. A., Kunda, A., & Putri, A. N. (2023). Examining the Impact Managerial Ownership and Financial Performance on Dividend Policy. *Sean Institute, 12(01), 66-70*

Ndum, N.B. (2022). Effect of Monetary Policy on Profitability of Insurance Companies in Nigeria. *International Journal of Research in Education and Sustainable Development, 2(4) 22-31.*

Nguyen, H. H., Nguyen, T. P., A., & Tran, T. (2022). Impacts of monetary policy transmission on bank performance and risk in the Vietnamese market: Does the Covid-19 pandemic matter? Impacts of monetary policy transmission on bank performance and risk in the Vietnamese market: Does Covid-19 pandemic. *Cogent business & Management, 9(1).* https://doi.org/10/1080/23311975.2022.2094591

Oanh, T. T. K., Van, L. T. T., & Dinh, L. Q. (2023). Relationship between financial inclusion, monetary policy and financial stability: An analysis in high financial development and low financial development countries. *Heliyon, 9(6), e16647.* https://doi.org/10.1016/j.heliyon.2023.e116647

Obayagbona, J., & Ajao, M. G. (2022). Monetary Policy and Private Sector Performance in Nigeria (1995-2020). *African Journal of Accounting and Financial Research, 5(1), 35-44.* https://doi.org/10.52589/ajafr-v2hinpoa

Okore, O. A., & Nwadiubu, A. O. (2023). Monetary Policy and Economic Growth in Nigeria: 1986-2019. *Journal of Humanities and Social Policy, 8(2), 54-65.* https://doi.org/10.56201/jhsp.v8.no2.2022.pg54.65

Oladejo, T. M., & Akinola A. O. (2023). Monetary Policy and Profitability of Nigerian Deposit Money Banks. *Researchgate.Net, 8(3) 115-125.* https://www.researchgate.net/profile/Titilayo-Oladejo/publication/374756341_Monetary_Policy_and_Profitability_of_Nigeria_Deposit_Money_Banks/links/652e53166725c324010d3e7b/Monetary-Policy-and-Profitability-of0Nigerian-Deposit-Money-Banks.pdf

Oladipupo, O. F., & Oladipo, O. N. (2022). Monetary Policy and Financial Performance of Listed Deposit Money Banks in Nigeria. *Journal of Accounting and Management, 12(3), 205-217.*

Omankhanlen, A. E., Ilori, N., Isibor, A., & Okoye, L. U. (2021). Monetary policies and the achievement of bank profit objectives. *Journal of Central Banking Theory and Practice, 10(2), 201-220.* https://doi.org/10.2478/jcbtp-2021-002

Otiwu, D., & Edward, C. F. (2024). Monetary Policy Variables and Performance Manufacturing Sector in Nigeria. *World Journal of Entrepreneurial Development Studies (WJEDS), 9(2), 53-66. https://doi.org/10.56201/wjeds.v9.no2. 2024.pg53.66*

Ozili, P. K. (2023). Impact of Monetary Policy on Financial Inclusion in Emerging Markets. *Journal Of Risk and Financial Management, 16(303), 1-10.*

Paputungan, A. I., Juminawati, S., Judijanto, L., & Didih Muhamad Sudi. (2024). The Effect of Emergency Monetary Policy on Liquidity and Financial System Stability in Property Sector Companies in Indonesia. *Jurnal Aktiva: Riset Akuntansi Dankeuangan, 5(3), 198-210.* https://doi.org/10.52005/aktiva.v5i3.221

Shirya, A. I., Njoka, C., & Abdul, F. (2023). Relationship between Monetary Policy Instruments and Financial Performance of Commercial Banks in Nigeria. *Open Journal of Business and Management, 11(03), 945-962.* https://doi.org/10.4236/ojbm.2023.113051

Shumba, T., & Mukorera, S. (2023). Monetary Policy Implication on Macroeconomics Performance in the Common Monetary Area: A Panel-SVAR Framework. *Economics Article, 11(44), 1-18.*

Soemitra, A., Ismal, R., Fuadi, F., Al-Amin, H,. Harianto, S., Nur, N. M., & Hakim, A. F. (2021). Analysis of Islamic Monetary Policy Transmission on Business Sector and Msme

Performance. *E-Mabis: Journal Ekoonomi Manajemen Dan Bisnis, 22(2), 66-76.*

https://doi.org/10.29103/e-mabis.v22i2.697

Suleiman, U., Popoola, A., & Yahaya, A. O. (2022). Equity Financing and Financial Performance of Listed Deposit Money Banks in Nigeria. *International Journal of Research and Innovation in Social Science, 06(12), 619-624.* https://doi.org/10.47772/ijriss.2022.61236