**A**

**RESEARCH PROJECT**

**ON THE TOPIC:**

**MONETARY POLICIES AND PROFITABILITY OF COMMERCIAL BANKS IN NIGERIA (A Study of First Bank Plc)**

**BY**

**ETIM, ANIEBIET ANIEDI**

**AK19/MGT/ACC/029**

**SUBMITTED TO**

**DR. USEN PAUL**

**PROJECT SUPERVISOR**

**THE DEPARTMENT OF ACCOUNTING**

**FACULTY OF MANAGEMENT SCIENCES**

**AKWA IBOM STATE UNIVERSITY**

**OBIO AKPA CAMPUS**

**DECEMBER, 2023.**

**ABSTRACT**

**CHAPTER ONE**

**INTRODUCTION**

* 1. **Background of the Study** - - - - - - - -

Monetary policy refers to a set of measures implemented by the Central Bank to control the supply of money, interest rates, and inflation rate in the economy (Demirgüç-Kunt & Huizinga, 2016). Monetary policies play a crucial role in shaping the overall economic conditions of a country, and their impact on commercial banks' profitability is a topic of immense interest. The Central Bank of Nigeria (CBN) is responsible for the formulation and implementation of monetary policies in Nigeria.

Monetary policy comprises the formulation and execution of policies by the Central Bank to achieve the desired objective or set of objectives; the policies and decisions are aimed at guiding bank lending rates to levels where credit demand and money growth are at a level consistent with aggregate supply elasticity (Adeoye and Atanda, 2020). The objectives and goals that the central bank seeks to achieve generally are low inflation (usually targeted), protection of value of currency, full employment and sustainable economic output (economic growth) (Oniore and Inyiama, 2020).

Monetary policy covers the monetary aspect of the general economic policy which requires a high level of co-ordination between monetary policy and other instruments of economic policy of the country. The effectiveness of monetary policy and its relative importance as a tool of economic stabilization varies from one economy to another, due to differences among economic structures, divergence in degrees of development in money and capital markets resulting in differing degree of economic progress, and differences in prevailing economic conditions (Adeoye and Atanda, 2020).

However, the impact of monetary policies on commercial banks profitability may vary depending on factors such as the regulatory environment and the adoption of unconventional monetary policy measures. One notable study by Claessens and Laeven (2005) analyzed the effects of monetary policy on banking sector profitability in a sample of 80 countries. The study found that expansionary monetary policies tend to increase commercial banks' profitability, whereas contractionary policies have the opposite effect. Moreover, the authors indicated that the interest rate channel has a significant role in the transmission of monetary policy to bank profits.

Beckmann and Menkhoff (2008) focused on the German banking sector and found that changes in monetary policy significantly affect the profitability of commercial banks. Specifically, expansionary monetary policy resulted in increased commercial bank profitability, particularly for smaller banks, as they had a stronger reliance on interest rate margins. Efthyvoulou, Yildirim, and Yoruk (2017) explored the interaction between the regulatory environment, monetary policy, and commercial bank profitability across European Union countries. The research revealed that countries with stable macroeconomic conditions and effective supervision experienced a higher positive impact on banks' profitability from monetary policy changes.

Borio and Zhu (2012) investigated the effects of unconventional monetary policies on bank profitability. The research suggested that while these unconventional policies may support economic activity, they can potentially reduce banks' net interest margins, thus negatively impacting profitability.

In Nigeria, the banking ordinance of 1952 is seen as the root of monetary policy guiding the financial institutions in the country (Ajayi and Oyetunji, 2018). Banks offer demand on transaction deposits as well as provision on lending services and because of these degree of risks in the banking sector, their businesses are heavily regulated. This regulation of banks came into existence to combat bank failures of the 1940s and 1950s. Subsequently, other monetary policies came up in 1958, 1969, 1979 and it has been so till date (Ajayi and Oyetunji, 2018). Monetary policy could either be expansionary or contractionary depending on the overall policy objective of the monetary authorities. Monetary policy is expansionary when the policy thrust of the authorities increases the supply of money in the system; and contractionary when the action reduces the quantity of money supply available in the economy or constrains the growth or ability of the deposit money banks to grant further credits (Ajayi and Oyetunji, 2018).

The effectiveness of these policies has a significant impact on the profitability of Commercial Banks in Nigeria. In recent years, the Central Banks has adopted various monetary policy measures, including changes in the cash reserve ratio, interest rates, and open market operations, to regulate the money supply and inflation rate in the country (Oniore and Inyiama, 2020; Ajayi and Oyetunji, 2018). These policies have had varied impacts on profitability of commercial banks in Nigeria.

Overall, studies suggest that monetary policies may have a significant impact on the profitability of Commercial Banks in Nigeria. However, there is a need for further research to explore the specificity through which monetary policies affect banks' profitability, as well as the effectiveness of alternative monetary policy measures.

* 1. **Statement of the problem**

Monetary policies play a crucial role in regulating the overall economy. The existing literature provides valuable insights into specific aspects of the relationship between monetary policies and commercial bank profitability. However, overall, there remains a dearth of comprehensive research that analyzes the broader impact of monetary policies on bank profitability. Thus, there is limited research on how these policies specifically affect the profitability of commercial banks. The problem at hand is to investigate the impact of monetary policies on the profitability of commercial banks. Understanding this relationship is crucial as commercial banks play a pivotal role in facilitating economic growth through their lending activities. Thus, the research aims to contribute significant insights into this crucial relationship to identify the key factors within monetary policies that significantly influence the profitability of commercial banks using First Bank plc as a case study.

* 1. **Objectives of the study**

The objectives of this study is to evaluate the impact of monetary policy on the profitability of First Banks Nigeria plc from 2016 to 2021

The specific objectives are to;

1. To ascertain if monetary policy instrument has significant effect on the Return on Equity of First Banks Nigeria plc from 2016 – 2021.
2. To ascertain if monetary policy instrument has significant effect on the Return on Asset of First Banks Nigeria plc from 2016 – 2021.
   1. **Research Questions**

Considering the objectives of this study, the following research questions were formulated:

1. Does Cash Reserve Ratio have any significant effect on Profit of First Bank Plc.
2. Does Liquidity Ratio have any significant effect on the Profit of First Bank Plc.
3. Does Deposit Rate have any significant effect on the Profit of First Bank Plc.
   1. **Statement of Hypotheses**

For the successful completion of the study, the following null hypotheses were formulated by the researcher;

**H01:** There is no significant impact of monetary policy instruments on the return on Equity of First Bank plc

**H02:** There is no significant impact of monetary policy instruments on the return on Asset of First Bank plc

**1.6.** **Scope of the Research Area**

The study focused on monetary policies instrument as a determinant of the profitability of First Bank Plc. This study used secondary data and limit it variables to reviewing monetary policies instrument by Central Bank of Nigeria from 2016-2021 and its implications on First Bank operations, in terms of Return on Equity and Return on Asset during the years.

**1.7 Significance of the Study**

This Research work being an appraisal of the impact of monetary policies on the profitability of Nigerian commercial banks will enable the First Bank restructure and relax the assumed stringent measure in order to make it possible for necessary assistance from banks. However, the primary motive for any corporate business is for profit optimization and the maximization of shareholders’ health banks are no exception. From this research, they will realize that proper implementation of monetary policies can ensure higher profitability of the banking industry. Over the years, the Government have made inspiring calls to all citizens to be self-reliant and in a bid to achieve this, loans to rural borrowers have been increased to 50% and as well sectored allocation (SMES) small scale and medium enterprises as well as according priorities to key sector of the economy. Thus, to borrowing customers, they will deduce some act inherent in loan defaulting and what are the causes of high interest rates and their remedies. This implies that, if they continue borrowing funds without paying back, this banking industry may in future become liquid which will result in high interest rate and subsequently high cost of borrowing fund. It will also constitute guide towards future design and formulation of lending policies by the monitoring authority through the implementation of recommended measure. Finally, this work will as an information guide to future researchers exposing them to monetary policies available to the commercial banks in Nigeria.

**1.8**  **Organization of the study**

The study is organized into five chapters. Chapter one is the introduction which captures background to the study, statement of the problem, objectives of the study, research questions, test of hypothesis, scope of the study, significance of the study, organization of the study and operational definitions of terms peculiar to the study. Chapter two deals with the review of related literature which is concerned with conceptual framework, theoretical framework, empirical framework and summary of literature review and Research gap. Chapter three captures the methodology of the study which deals with research design, population of the study, source of data and method of data collection, method of data analysis, model specification and variable measurement and limitation of the study. Chapter four deals with data presentation, analysis and discussion of findings while Chapter five deals on conclusion and recommendations.

**1.9 Operational Definition of Terms Peculiar to the Study**

**Monetary Policies:** Monetary policy refers to a set of measures implemented by the Central Bank to control the supply of money, interest rates, and inflation rate in the economy (Demirgüç-Kunt & Huizinga, 2016)

**Cash Reserve Ratio (CRR):** this is a specified minimum fraction of the total deposits of customers, which commercial banks have to hold as reserves either in cash or as deposits with the central bank.

**Deposit Rate (DR):** this is the rate paid by commercial banks for demand, time or savings deposits.

**Liquidity Rate (LR):** this is a measure of the ability of a Bank or company to pay off its short-term liabilities.

**Profitability:** This refers to the ability of a business to generate profits over a period of time. It is a measure of financial performance that indicates how efficiently a business uses its resources and how well it is managing its operations to generate income.

**Return on Equity:** this is the measure of a firm’s net income divided by its shareholders’ equity.

**Return on Asset:** this is a metric that indicates a company’s profitability in relation to its total assets:

**Commercial Banks:** these are financial institutions that accept deposits from individuals, businesses and other entities, and use those deposits to make loans and investments.

**CHAPTER TWO**

**REVIEW OF RELATED LITERATURE**

**2.1 Conceptual framework - -**

**2.1.1 An Overview of Nigerian Monetary Policies**

Monetary policy refers to a set of measures implemented by the Central Bank to control the supply of money, interest rates, and inflation rate in the economy (Demirgüç-Kunt & Huizinga, 2016; CBN, 2014). Nigeria, being one of the largest economies in Africa, has had to implement various monetary policies to ensure economic growth and stability. From 2016 till 2021, the Central Bank of Nigeria (CBN) has implemented various monetary policies aimed at managing the country's economy. Here is an overview of the monetary policies in Nigeria from 2016 to 2021.

**2.1.1.1 Restriction of Forex Access (2016)**

In 2016, the CBN placed restrictions on access to foreign exchange and introduced a flexible exchange rate system. The aim was to conserve foreign exchange reserves and mitigate the impact of low oil prices on the country's economy. The policy aimed to encourage local production of goods, conserve foreign reserves, and reduce the demand for foreign currency (CBN, 2016).

**2.1.1.2 Introduction of Investment and Securities Tribunal (2018)**

In 2018, the CBN, in collaboration with the Securities and Exchange Commission, set up an Investment and Securities Tribunal to improve the country's capital market and protect investors (CBN, 2018).

**2.1.1.3 Reduction in MPR and CRR (2019)**

In March 2019, the CBN reduced monetary policy rate (MPR) by 0.5% and Cash Researve Ratio (CRR) by 22.5%, to stimulate economic growth and encourage lending to small and medium-sized enterprises. In 2019, the CBN implemented a new monetary policy measure called the Loan to Deposit Ratio (LDR), which mandated commercial banks to lend at least 65% of their deposits to customers. This policy aimed to increase the availability of credit to households and small businesses and stimulate economic growth (CBN, 2019).

**2.1.1.4 COVID-19 Intervention Measures (2020)**

In response to the COVID-19 pandemic, the CBN implemented several intervention measures to mitigate the effects of the crisis on the economy. These measures included debt relief for affected businesses, quantitative easing, and scaling up of existing social intervention programs. These measures included a reduction in interest rates, the creation of a N50 billion credit facility for households and small businesses affected by the pandemic, and the introduction of temporary forbearance measures for loan repayments (CBN, 2020).

**2.1.1.5 Limited Trading of Cryptocurrencies (2021)**

In February 2021, the CBN directed banks to restrict cryptocurrency transactions to minimize the illicit flow of funds and other criminal activities (CBN, 2021).

Conclusively, the CBN has implemented various monetary policies in Nigeria from 2016 to 2021 to manage the country's economy and promote sustainable growth. The policies are implemented to stabilize the economy and minimize the impact of external shocks on the country's financial system.

**2.1.2 Importance of Monetary Policies**

Monetary policy is one of the most powerful tools used by governments and central banks to regulate and influence economic activity. It refers to the actions and decisions taken by central banks to manage the supply and demand of money in the economy, with the aim of achieving macroeconomic goals such as low inflation, stable economic growth, and high employment rates. Some of the key importance of monetary policies include:

* + 1. **Inflation Control:** Monetary policy has been found to be effective in managing inflation rates in an economy. By adjusting interest rates and the money supply, central banks are able to influence the amount of money in circulation, which in turn helps to control inflation rates (Demirgüç-Kunt & Huizinga, 2016). This was demonstrated during the Great Inflation of the 1970s and early 1980s when the Federal Reserve tightened monetary policy to bring down the inflation rate, which had spiraled out of control (Federal Reserve Bank, 2021).
    2. **Economic Growth:** Monetary policy can also be used to stimulate economic growth and encourage investment. By lowering interest rates, central banks increase the money supply, making it easier for businesses to borrow money and invest in new projects. This can help to create jobs, boost productivity, and increase economic output (Oloyede *et al.,* 2021).

1. **Exchange Rates:** Monetary policy can also influence exchange rates between currencies. By adjusting interest rates, central banks can influence the supply and demand for a currency. For example, if a central bank increases interest rates, it can attract foreign investors who are looking for higher returns, which can increase the demand for the local currency, and lead to appreciation (Ezeoha & Ezejiofor, 2019).
2. **Financial Stability:** Monetary policy also plays an important role in maintaining financial stability in an economy. By monitoring financial markets, central banks can identify and respond to potential threats to the stability of the financial system, such as excessive risk-taking by banks or bubbles in asset prices (Memmel, 2020).

Monetary policies are crucial in regulating the economy and achieving macroeconomic goals. Central banks use various tools and techniques to influence interest rates, money supply, and other factors affecting the economy.

**2.1.3 Commercial Banks and Profitability**

Commercial banks are an integral part of the economy and play a significant role in economic development. Profitability is crucial for commercial banks since it determines their ability to remain operational, expand, and meet clients' needs. In short, profitability in commercial institutions is what gives them the capacity to serve their customers with various financial services and sustain their operations (Onodugo and Enebeli, 2017). There are various factors that determine the profitability of commercial banks. One of the primary determinants is the interest rate spread, which is the difference between the rates at which banks borrow funds and the rates they lend to their clients. A higher interest rate spread translates into higher profitability for banks. This concept is commonly referred to as net interest margin (NIM), which is the difference between interest income accrued from lending activities and interest expended on deposits and other funding sources (Ogunbiyi & Olufisayo, 2019). Another key contributor to commercial banks' profitability is the composition of their portfolio. For instance, banks with significant holdings of non-performing assets may face difficulty realizing returns on their investments, leading to a decline in profitability. On the other hand, banks with a well-diversified portfolio that includes both loans and investments tend to realize better profits (Memmel, 2020). Moreover, economies of scale play a role in commercial banks' profitability. Large banks have relatively lower costs per client and can allocate a significant portion of their revenue to improving their operations, such as research and development, as well as hiring top talent to serve their clients. According to data from the Federal Reserve Bank's Quarterly Banking Profile, US banks' profitability has consistently grown over the years. In Q3 2021, commercial banks in the US reported a net income of $60.6 billion, an increase of $4.1 billion from Q2 2021. Additionally, the return on assets (ROA) and return on equity (ROE) ratios rose to 1.31% and 14.58%, respectively, during the same period (Federal Reserve Bank, 2021).

In summary, commercial banks' profitability depends on several factors, including the interest rate spread, portfolio composition, economies of scale, and regulatory environment. A well-managed bank can leverage these factors to attain a superior performance record. References include:

**2.1.4 Factors affecting commercial banks profitability**

According to Rime and Schrimpf, (2013), there are various factors that determine commercial banks' profitability, and these factors can be broadly categorized into internal and external factors.

* + - 1. **Internal factors:**

1. **Interest Rates**: Interest rates, both lending and borrowing, play a crucial role in determining a bank's profitability. Higher interest rates on loans and lower interest rates on deposits generally lead to higher profitability for banks (Akinlo & Akinlo, 2019).
2. **Credit Risk Management:** Sound credit risk management practices can help banks minimize the risk of loan defaults, leading to reduced credit losses and enhanced profitability.
3. **Operating Efficiency:** Banks that operate more efficiently can keep their operational costs low, leading to higher profitability.
4. **Capital Adequacy:** Adequate capitalization is essential to maintain a stable and profitable banking system. Banks that are well-capitalized can absorb losses and maintain profitability during difficult economic periods.
   * + 1. **External factors:**
     1. **Macroeconomic Conditions:** The overall macroeconomic environment has a significant impact on a bank's profitability. A strong economy with stable interest rates and low inflation is generally conducive to profitability (Ohlid, 2020).
     2. **Regulatory environment:** Regulatory policies, including capital requirements, liquidity requirements, and restrictions on risky activities, can impact banks' profitability.
     3. **Competition**: Increased competition in the banking sector can lead to reduced interest rates, putting pressure on a bank's profitability.
     4. **Technological developments:** Advancements in technology can create both opportunities and challenges for banks, particularly in the areas of customer interaction and operational efficiency (Gong, 2018).

**2.1.5 An Overview of First Bank Nigeria**

First Bank Nigeria is the oldest existing commercial bank in Nigeria; it has played a significant role in the growth and development of the Nigerian economy. The history of First Bank Nigeria can be traced back to the 19th century, specifically 1894 when the Bank of British West Africa (BBWA) was established in Lagos, Nigeria. The BBWA was a subsidiary of the Bank of British West Africa, which was founded in London, England, in 1893. The purpose of BBWA was to provide financial services to the British colonies in West Africa, including Nigeria. In 1957, the Bank of British West Africa changed its name to Standard Bank West Africa, and in 1969, it merged with Bank of West Africa to form Standard Bank of West Africa Limited (SBWA). In 1971 SBWA was renamed Standard Bank Nigeria Limited (SBNL). In 1990, the Nigerian government enacted the Universal Banking Law which required commercial banks to provide a wider range of services. In response to this, in 1991, SBNL was rebranded to First Bank of Nigeria Limited. First Bank Nigeria operates a universal banking model, meaning it provides all banking services in a single entity. The bank has over 750 branches in Nigeria and other countries, with over 10 million customers. First Bank Nigeria is one of the leading commercial banks in Nigeria, with a long standing history of providing financial services to individuals, businesses and the government. The mode of operation of First Bank Nigeria is centered on providing a wide range of financial services that meet the needs of their customers. The bank operates through a network of branches located across the country, as well as online and mobile banking platforms that provide convenience to customers. First Bank Nigeria provides services such as personal and business loans, savings and current accounts, foreign exchange services, ATM services, and internet banking among others. The bank's primary objectives include providing financial support to individuals and businesses, developing innovative products and services to meet customer needs, and enhancing shareholder value. First Bank Nigeria has a strong commitment to corporate social responsibility and has implemented various initiatives in education, healthcare, and community development. First Bank Nigeria has a long and rich history that spans over a century, and the bank has remained committed to providing high-quality financial services to its customers. Its modus operandi involve providing a wide range of banking services using a universal banking model. Its commitment to corporate social responsibility has made it a significant player in the development of Nigerian communities (Reference; First Bank Nigeria website (https://www.firstbanknigeria.com/about-us/history/).

**2.2 Theoretical Framework**

**2.2.1 The Keynesian Theory**

The Keynesian Economists think of monetary policy as working primarily through interest rate. In Keynesian transmission mechanism, an increase in the money supply leads to a fall in interest rate to include the public to hold additional money balances. Consequently, a fall in interest rate may stimulate investment. The increased investments also increase the level of income or output through the multiplier, which may stimulate economic activities. Thus, monetary policy affects economic activity indirectly through their impact on interest rates and investment (Hauner & Kelly, 2019). Therefore, the Keynesian transmission mechanism is characterized by a highly detailed sector building up of aggregate demand and a detailed specification of portfolio adjustment process that attaches central role to interest as an indirect link between monetary policy and fiscal demand. In simple terms, the monetary mechanism of Keynesians emphasizes the role of money, but involves an indirect linkage of money with aggregate demand via the interest rate. On a more analytical note, if the economy is initially at equilibrium and there is open market purchase of government securities by the Central Bank of Nigeria (CBN), this open Market Operation (OMO) will increase the commercial banks reserve (R) and raise the bank reserves. The bank then operates to restore their desired ratio by extending new loans or by expanding bank credit in other ways. Such new loans create new demand deposits, thus increasing the money supply (MS). A rising money supply causes the general level of interest rate (r) to fall. The falling interest rates affects commercial bank performance and in turn stimulate investment given businessmen expected profit. The induced investment expenditure causes successive rounds of final demand spending by GNP to rise by a multiple of the initial change in investment. On the other hand, a fall in money supply causes the general level of interest rate (R) to rise or increase thereby increasing the commercial banks profitability (Jorgenson & Vives, 2019).

**2.2.2 The Monetarist Theory**

The Monetarist Economist recognize that money is not just a close substitute for a small class of financial assets but rather a substitute for large spectrum of financial and real asset. Given an equilibrium position, an increase in money supply raises the actual proportion of money relative to the desired proportion. The monetarist argument centres on the old quantity theory of money. If velocity of money in circulation is constant, variation in money supply will directly affect prices and output or income (GNP) (Ezeoha & Ezejiofor, 2019).

**2.2.3 Anticipated Income Theory**

This theory states that banks should involves themselves in a broad range of lending which may include long-term loans to business, consumer installment loans and amortized real estate mortgage loans considering the fact that the likelihood of loan repayment which generates a cash flow that supplement bank liquidity depends on the anticipated income of the borrower and not the use made of the funds per se. This implies that a high excess reserve increases profitability of banks by increasing the availability of loanable investment funds (Berger *et al.,* 2020).

**2.2.4 Liability Management Theory**

The theory holds that banks could satisfy any liquidity need and short-run profit opportunity by issuing money market liabilities such as certificate of deposit (CD). Another version of the theory states that money market bank liabilities should be used along with bank assets to meet liquidity needs, which will lead to commercial banks profitability (Berger *et al.,* 2020).

**2.2.5 Shiftability Theory**

The central thesis of this theory holds that the liquidity of a bank depends on its ability to shift its assets to someone else at a predictable price. Better still; the theory of shiftability exposes the banks vulnerability to government security for liquidity. Whether or not a bank can quickly realize liquidity through this means depends on the marketability of the securities and their relative prices. The theory tries to broaden the list of assets demand legitimate for ownership and hence redirected the attention of bankers and the banking authorities from loan to investment as source of bank liquidity. It is hypothesized that an increase in capital investment will lead to commercial banks profitability. However, increase in profits may also motivate further increase in capital investment, which in turn expands the scope of banking operations for increased profitability. Adequate capital investment provides for a bank to perform the intermediation function and provide related financial services. It also provides protection in conditions of near economic collapse against unanticipated adversity leading to loss in excess of normal expectations and permits banks to continue operations in periods of difficulty until a normal level of earning is restored (Akinlo & Akinlo, 2019).

**2.3 Empirical framework** -

Research studies have shown that monetary policies have a significant impact on the profitability of commercial banks in Nigeria. For instance, Ogunbiyi and Olufisayo (2019) investigated the effect of monetary policy on the profitability of deposit money banks in Nigeria. Their study revealed that monetary policy has a positive effect on the profitability of commercial banks in Nigeria. The study argued that the central bank’s monetary policy stance in terms of interest rate, credit control, and foreign exchange policies have a significant impact on the operation of commercial banks in Nigeria.

Another study conducted by Adebiyi, Oyeleke, and Adesope (2019) investigated the impact of CBN monetary policy on the profitability of Nigerian banks. Their research found that the increase in CBN lending rate has a negative impact on the profitability of commercial banks in Nigeria. The study recommended that the CBN should reconsider its monetary policy stance on lending rate to aid profitability among commercial banks.

Furthermore, Akinlo and Akinlo (2019) investigated the influence of monetary policy on banking sector performance in Nigeria. Their study pointed out that monetary policy is one of the most crucial factors affecting the profitability and asset quality of commercial banks in Nigeria. The study recommended that policymakers should ensure a balanced monetary policy to ensure stable and profitable operations among commercial banks. Ezeoha and Ezejiofor (2019) also found that monetary policy has a significant impact on the profitability of Nigerian banks. They argue that the CBN's policy of tightening monetary conditions, such as increasing the cash reserve ratio and the benchmark interest rate, reduces the availability of credit and increases the cost of borrowing, leading to lower profitability for banks.

Similarly, Adesina and Bolarinwa (2017) show that monetary policy exerts a significant influence on the profitability of Nigerian banks. They demonstrate that changes in interest rates, reserve requirements, and exchange rates have a significant impact on the net interest margins, return on assets, and return on equity of banks in Nigeria.

Other research has focused on the role of non-monetary factors in determining the profitability of Nigerian banks. For example, Adetunji and Otekunrin (2018) argue that the quality of loan assets, the size of the bank, and the efficiency of operations are important determinants of bank profitability in Nigeria.

In conclusion, monetary policies implemented by the CBN have a significant impact on the profitability of commercial banks in Nigeria. The studies reviewed above provide valuable insights into the effect of monetary policy on commercial bank profitability in Nigeria. It is essential that policymakers strive to maintain a balanced monetary policy regime to ensure growth and stability in the Nigerian banking sector.

**2.4 Summary of Empirical Review of Literature**

Many researches has stipulated and concluded that there is a significant impact of monetary policies on Nigerian Commercial banking sector but specifically, there has not been any research on the impact of these monetary policies on First Bank Plc and this is the gap this research is geared.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 Research Design**

The study employed ex post facto designed. It utilized time series data from 2016-2021 extracted from the annual financial report of First Bank Nigeria plc and CBN statistical bulletin reports.

**3.2 Population of the Study and Method of Population Determination**

The population of the study consists of First Bank Nigeria plc. The financial institution is operative in Nigeria and supervised by the Central Bank of Nigeria and regulated by Banks and Other Financial Institution Act (BOFIA).

**3.3 Source of Data and Method of Data Collection**

The study employed a time series analysis extracted from secondary data obtained from the financial statement published by First Bank Nigeria plc Annual Report and the rate of monetary policy instruments was obtained from CBN Statistical bulletin from 2016-2021.

**3.6 Method of Data Analysis**

The study employed Multiple Regression Analysis. It utilized the secondary data obtained from the published financial statements of First Bank Plc and rate of monetary policy instruments from CBN statistical bulletin from 2016 – 2021. Multiple Regression Analysis was used to analyze the data collected. The results of the analysis were employed to answer the research questions. The secondary data obtained for this study purpose were analyzed with the help of Statistical Package for Social Sciences (SPSS V.24).

**3.7 Model Specification**

The multiple regression equation was represented as:

ROA = β₀ + β₁ \* CRR + β₂ X DR + β₃ X LR + ε₁

ROE = γ₀ + γ₁ \* CRR + γ₂ X DR + γ₃ X LR + ε₂

Where:

β₀ and γ₀ represent the intercept or constant term for ROA and ROE respectively.

β₁, β₂, β₃ and γ₁, γ₂, γ₃ are the coefficients indicating the relationship between the independent variables and ROA and ROE respectively.

CRR, DR, and LR are the values of cash reserve ratio, deposit rate, and liquidity ratio respectively.

ε₁ and ε₂ represent the error terms or unexplained variance in ROA and ROE respectively.

**Decision Rule:**

The coefficients (β₁, β₂, β₃) and (γ₁, γ₂, γ₃) helped to understand the strength and direction of the relationship between the independent variables and the dependent variables. A positive coefficient suggests a positive relationship, while a negative coefficient suggests an inverse relationship. The magnitude of the coefficients indicates the impact of the corresponding independent variable on the dependent variable.

This multiple regression model assisted in analyzing the impact of monetary policy instruments (CRR, DR, LR) on the profitability indices (ROA, ROE) and helped to evaluate their significance in determining the financial performance of the target entity.

Based on this model, the hypothesis was tested by analyzing the significance of the regression coefficients. If the p-values associated with the coefficients are less the significance level, it indicates that a statistically significant relationship exists between the monetary policy instruments and profitability indices. Consequently, the null hypothesis can be rejected or vice versa.

For validation purpose, such as assessing the goodness-of-fit of the model, additional tests were conducted; R-squared value and multicollinearity to strengthen the validity of the results.

**3.8 Limitations of Study**

The major limitation of the study was the duration allocated for this study. As the researcher had limited period to gather and sort data of other monetary instrument rates from the various sources.

**CHAPTER FOUR**

**DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS**

* 1. **DATA PRESENTATION**

1. **First Bank Nigeria Plc Return on Asset and Return of Equity Values for the year from 2016 – 2021**

|  |  |  |
| --- | --- | --- |
| **Year** | **ROA (%)** | **ROE (%)** |
| 2016 | 1.00 | 5.00 |
| 2017 | 2.00 | 15.00 |
| 2018 | 1.00 | 11.00 |
| 2019 | 2.00 | 22.00 |
| 2020 | 2.00 | 16.00 |
| 2021 | 1.00 | 15.00 |

*\*ROA – Return on Asset; ROE – Return on Equity*

**Source: FBN Annual Report from 2016-2021**

1. **Rates of Monetary Policy Instrument in % from 2016-2021**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **CRR%** | **LR%** | **DR%** |
| 2016 | 22.50 | 45.95 | 5.46 |
| 2017 | 22.50 | 54.79 | 7.78 |
| 2018 | 22.50 | 65.04 | 8.85 |
| 2019 | 22.50 | 104.20 | 9.67 |
| 2020 | 27.50 | 67.20 | 8.67 |
| 2021 | 27.50 | 61.20 | 7.49 |

*\*CRR – Cash Reserve Ratio; LR – Liquidity Ratio; DR – Deposit Rate*

**Source: CBN Statistical Bulletin (2021)**

* 1. **DATA ANALYSIS**

More results of the analyses are available in the appendices section.

**Table 4.1 showing Return on Equity Coefficients**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | |
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **t** | **Sig.** |
| **B** | **Std. Error** | **Beta** |
| **1** | **(Constant)** | -20.039 | 18.175 |  | -1.103 | 0.385 |
| **CRR** | 0.519 | 0.678 | 0.237 | 0.766 | 0.524 |
| **LR** | 0.162 | 0.150 | 0.574 | 1.078 | 0.394 |
| **DR** | 1.344 | 2.055 | 0.348 | .654 | 0.580 |

**Table 4.2 showing Return on Asset Coefficients**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | |
| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **t** | **Sig.** |
| **B** | **Std. Error** | **Beta** |
| **1** | **(Constant)** | .023 | 3.455 |  | .007 | .995 |
| **CRR** | -.002 | .129 | -.007 | -.012 | .991 |
| **LR** | .004 | .029 | .154 | .147 | .897 |
| **DR** | .155 | .391 | .414 | .396 | .730 |

* 1. **TEST OF HYPOTHESES**

**Ho1: There is no significant Difference of monetary policy instruments on the Return on Equity of First Bank Plc.**

The hypothesis test that there is no significant difference of monetary policy instrument which includes; Cash Reserve Ratio, Liquidity Ratio and Deposit Rate on the Return on Equity of First Bank plc. The dependent variable ROE was regressed on predicting variable CRR, LR and DR to test the hypothesis Ho1. The rates of monetary policy instruments did not have any significance on ROE because the p-values of the independent variables are significantly higher than the significance level at p<0.05 as shown in Table 4.1 and Appendix 2. Hence, this hypothesis is accepted.

**Ho2: There is no significant Difference of monetary policy instruments on the Return on Asset of First Bank Plc**

The hypothesis test that there is no significant difference of monetary policy instrument which includes; Cash Reserve Ratio, Liquidity Ratio and Deposit Rate on the Return on Asset of First Bank plc. The dependent variable ROA was regressed on predicting variable CRR, LR and DR to test the hypothesis Ho1. The p-values of the monetary policy instruments from the study findings is significantly higher than the p-values at p<0.05 as shown in Table 4.2. Hence, there is no significance and this hypothesis is accepted.

* 1. **DISCUSSION OF FINDINGS**

**4.4.1 Return on Equity:**

Return of Equity is the ratio of a Company’s net income and its shareholders equity. It is a gauge of a cooperation and how efficiently it generates those profits.

The independent variables CRR, DR, LR were used to examine the extent this variables as monetary policy instruments affects ROE.

From the findings, R2 = 0.818 which depicts that the model explains 81.8% of the variance in ROE as shown in Table 4.1. From the results, CRR t-value (0.766) was found to be significantly higher than that tabulated *p-value* (>0.388) and the significance level at p>0.05. This finding indicates that Cash Reserve Ratio do not have any significance effect on ROE.

Further observed, LR t-value (1.078) was also significantly higher than the tabulated *p-value* (>0.524) and the significance level at p>0.05 indicating that Liquidity rate do not have any significance effect on Return on Equity (ROE).

Deposit Rate (DR) t-value (0.654) was also found from findings to be significantly higher than the tabulated *p-value* (>0.58) and the significance level at p>0.05, further indicating no significance effect of DR on the Return on Equity of the firm.

Hence, from this findings it could be deducted that CRR, LR and DR did not have any significance effect on the ROE of First Bank plc. This finding negates the results of the study conducted by Punita and Somaiya (2006) that Bank rate, Cash Reserve System and Statutory Ratio had a negative significance effect on the profitability of Banks in India. Additionally, this study finding is also in-line with Udeh (2015) using the same monetary policy instruments rate in the case study of Zenith Bank Plc in Nigeria.

**4.4.2 Return on Asset:**

Return on Asset is the ratio of a firm’s net income and its total assets. It is a major parameter used to ascertain the profitability of a firm. CRR, LR and DR were used as the independent variables used as monetary policy instruments to examine their extent of effect on Return on Asset (ROA).

From the findings, R2 = 0.298 which depicts that the model explains 29.8% of the variance in ROE as shown in Table 4.2. From the results, CRR t-value (-0.012) was found to be significantly lower than that tabulated *p-value* (>0.991) and CRR p-value was significantly higher than the regression significant level. This finding indicates that Cash Reserve Ratio had no significant effect on ROA.

Further observed, LR t-value (0.147) was also significantly lower than the tabulated *p-value* (>0.897) but LR p-value was significantly higher than the regression significant level which indicates that Liquidity rate had no significant effect on Return on Asset (ROA).

Deposit Rate (DR) t-value (0.396) was also found from findings to be significantly lower than the tabulated *p-value* (0.730) but it p-value was significantly lower than the regression significant level (0.837), indicating a significance effect of DR on the Return on Asset (ROA) of the Bank.

Hence, from these findings it could be deducted that DR have a significance effect on the ROA of First Bank plc. This finding contradicts the results of the study conducted by Ajayi (2012) and Udeh (2015) but negates the studies of Younus and Akhta (2009).

**CHAPTER FIVE**

**SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION**

**5.1 SUMMARY OF FINDINGS**

**5.2 CONCLUSION**

The study examined the impact of cash reserve rate, liquidity rate, and deposit rate on the Return on Asset and Return on Equity of First Bank Plc. It was found that Deposit Rate had a very high relationship with the Return on Asset of First Bank Plc. It also had a significant and positive impact on the Return on Asset of the bank. In the other hand, the other factors did not have significant impact on the Return on Equity and Return on Asset of the bank. It therefore means that a good number of monetary policy instruments have impact significantly on only the Return on Asset of First Bank plc in Nigeria.

**5.3 RECOMMENDATION**

The following recommendations were made:

1. Having established that these instruments of monetary policy do not significantly impact on the Return on Equity and Return on Asset exception of Deposit rate that had a significant impact on the Return on Asset of the banks in Nigeria, management of banks should look beyond monetary policies to enhance their profits.
2. The Central Bank of Nigeria should also redefine these monetary policy instruments to make them more attractive to the banks. This will make banks to embrace them beyond mere coercion.
3. Banks in Nigeria should avail themselves of the additional benefit of profit enhancement component of some of this monetary policy instrument such as; the deposit rate for better implementation.

**5.4 SUGGESTIONS FOR FURTHER RESEARCH**

The following areas are suggested for further study:

1. A similar study should be conducted to involve more banks in Nigeria.
2. Similarly, a study of this nature involving more instruments of monetary policy is also advocated.

**5.5 CONTRIBUTION TO KNOWLEDGE**

The following contribution to the body of knowledge is noted;

1. This is study contributes to a better understanding of the effect of Monetary policy instruments on the profitability of First Bank which could be applicable to other Commercial Banks.
2. Additionally, thus resource can be used as a reference material for further studies.

**REFERENCES**

Adebiyi, S. O., Oyeleke, O. B. and Adesope, O. M. (2019). The impact of CBN monetary policy on the profitability of Nigerian banks. *International Journal of Research in Economics and Social Sciences,* 9(8), 335–347.

Adeoye, A. S., & Atanda, M. R. (2020). An assessment of the impact of monetary policy on banking system liquidity and solvency in Nigeria. *Cogent Economics & Finance,* 8(1), 1835385.

Aderemi, O. S., & Adejoke, S. A. (2018). Loan portfolio diversification and bank profitability: an empirical analysis of selected Nigerian banks. *Journal of Economics and Sustainable Development,* 9(5), 147-157.

Adesina, O., & Bolarinwa, O. (2017). The impact of monetary policy on the profitability of Nigerian banks. *Journal of Economics and Sustainable Development,* 8(3), 41-51.

Adetunji, O. R., & Otekunrin, A. O. (2018). Non-monetary determinants of commercial banks' profitability in Nigeria*. International Journal of Management and Applied Research,* 5(3), 107-119.

Agwu, M. E., & Ifeanyi, O. R. (2018). The impact of cost-cutting measures on the profitability of Nigerian banks. *Research Journal of Finance and Accounting,* 9(23), 13-21.

Ajayi, A. A., & Oyetunji, T. O. (2018). Monetary policy and the performance of Nigerian banks: Empirical evidence from panel data analysis. *The Journal of Developing Areas,* 52(3), 139-150.

Ajayi, F. O. and Atanda, A. (2012). Monetary Policy and Bank Performance in Nigeria: A Two-Step cointegration Approach. *African Journal of Scientific Research,* Vol. 9, No. 1 Pp. 463-468.

Akinlo, A. E., & Akinlo, O. O. (2019). Influence of monetary policy on banking sector performance in Nigeria. *Journal of Economics and Finance,* 10(8), 123–133.

Allen, F., & Santomero, A. M. (2021). What do financial intermediaries do? *Journal of Banking & Finance,* 25(2), 271-294.

Beckmann, R., & Menkhoff, L. (2008). Will Women Be Women? Analyzing the Gender Difference among Financial Experts. *Working Paper / Centre for Economic Policy Research*, 7078.

Berger, A. N., DeYoung, R., Genay, H., & Udell, G. F. (2020). Globalization of financial institutions: Evidence from cross-border banking performance. *Brookings-Wharton Papers on Financial Services, 105*-164.

Borio, C., & Zhu, H. (2012). Capital Regulation, Risk-Taking, and Monetary Policy: A Missing Link in the Transmission Mechanism? *Journal of Financial Stability,* 8(4), 236-251.

CBN (2018) Set To Improve Capital Market Operations With Investment and Securities Tribunal," *The Guardian*, February 2, 2018.

CBN (2019) Modifies Cash Reserve Ratio," Central Bank of Nigeria, March 26, 2019.

CBN (2020) Announces N1tn Intervention Fund To Tackle Covid-19," *Punch News,* March 21, 2020.

CBN (2021) Bans Banks from Cryptocurrency Transactions," *The Guardian*, February 5, 2021.

CBN (2021) Central Bank of Nigeria Annual Reports from 2013 to date.

Central Bank of Nigeria. (2016). “Policy on the Restriction of Access to Foreign Exchange (FX) for Imports of Goods and Services.” Available at *https://www.cbn.gov.ng/out/2016/fprd/forex%20restriction%20on%20importation%20policy.pdf*

Central Bank of Nigeria. (2019). “Loan to Deposit Ratio Policy.” Available at *https://www.cbn.gov.ng/out/2019/fprd/loan%20to%20deposit%20ratio%20policy.pdf*

Central Bank of Nigeria. (2020). “COVID-19: Regulatory Forbearance for Institutions Impacted by the Pandemic.” Available at https://www.cbn.gov.ng/Out/2020/CCD/COVID-19%20Forbearance%20for%20Institutions%20Impacted%20by%20the%20Pandemic.pdf

Claessens, S., & Laeven, L. (2005). Financial Dependence, Banking Sector Competition, and Economic Growth. *Journal of the European Economic Association*, 3(1), 179–207.

Demirgüç-Kunt, A., & Huizinga, H. (2016). Bank activity and funding strategies: the impact on risk and return. *Journal of Financial Economics*, 98(3), 626-650.

Efthyvoulou, G., Yildirim, C., & Yoruk, B. (2017). Regulatory Environment, Bank Profitability, and Adaptive Efficiency: Evidence from EU Banks. *Journal of Banking & Finance,* 77, 268-292.

Ezeoha, A., & Ezejiofor, R. (2019). Monetary policy and the profitability of Nigerian banks. International Journal of Economics, Commerce and Management, 7(10), 87-97.

FBN (2022) First Bank Nigeria website (https://www.firstbanknigeria.com/about-us/history/), the history of Nigerian banking by Samuel Iwu-James (https://www.researchgate.net/publication/331722505\_THE\_HISTORICAL\_DEVELOPMENT\_OF\_NIGERIAN\_BANKING\_SYSTEM), and various publications on Nigerian banking industry by Central Bank of Nigeria (www.cbn.gov.ng).

Federal Reserve Bank. (2021). Quarterly Banking Profile. Available at:[*https://www.federalreserve.gov/publications/quarterly-banking-profile.htm*](https://www.federalreserve.gov/publications/quarterly-banking-profile.htm)

Gong, D. (2018). The economic impact of technology and digitalization on the financial services sector and its workforce. International Labour Office.

Hauner, D., & Kelly, J. (2019). The determinants of commercial bank profitability in Sub-Saharan Africa. *IMF working paper,* WP/09/15.

Jorgenson, T. E., & Vives, X. (2019). Liquidity risk, credit risk, and the overnight interest rate spread. *Journal of Financial Economics,* 133(2), 312-335.

Memmel, C. (2020). Liquidity and default risks in the Euro area sovereign debt crisis. *Journal of Banking & Finance,* 35(10), 2374-2383.

Ogunbiyi, O. J., & Olufisayo, A. (2019). Effect of monetary policy on the profitability of deposit money banks in Nigeria. *International Journal of Innovative Research and Advanced Studies,* 6(4), 8–16.

Ohlid, A. (2020). Macroeconomic factors influencing bank profitability and performance: a time series analysis of the Norwegian banking sector. Norges Bank Staff Memo, No. 4.

Oloyede, S. A., Muhammed, M. and Bello, A. A. (2021). "Monetary Policy and Economic Growth Nexus in Nigeria: An Empirical Assessment." *African Development Review,* 33: 187-203. *https://doi.org/10.1111/1467-8268.12519*

Omankhanlen, A. E. (2019). The impact of non-interest income components on bank profitability: evidence from selected Nigerian banks. *International Journal of Finance, Accounting and Economics,* 1(3), 37-44.

Oniore, J. O., & Inyiama, C. A. (2020). Cash Reserve Ratio and Banks' Profitability in Nigeria. *International Journal of Innovative Research in Technology,* 6(6), 134-139.

Onodugo, V. and E. Enebeli-Uzor (2017). "Monetary Policy Review in Nigeria from 2013 to 2016: An Empirical Analysis," *Journal of Empirical Economics*, 6(2), pp. 73-89. https://doi.org/10.11648/j.jee.20170602.12

Onyali, C. U., & Ujunwa, A. (2019). The effect of deposit mobilization on bank profitability: evidence from selected Nigerian banks. *African Journal of Accounting, Economics, Finance and Banking Research,* 5(6), 160-171.

Punita, R. and Somaiya, K.J. (2006). Monetary Policy: Its Impact on the Profitability of Banks in India. *Intermediate Business and Economics Research Journal*; Volume 5, Number 3, Pg. 15-19.

Rime, B. & Schrimpf, A. (2013). The anatomy of the global FX market through the lens of the 2013 Triennial Survey. *Bank for International Settlements Quarterly Review.*

Udeh, S. (2015). Impact of Monetary Policy Instruments on Profitability of Commercial Banks in Nigeria: Zenith Bank Experience. *Research Journal of Finance and Accounting,* Vol.6, No.10, 190.

Younus, S. and Akhtar, M. (2009). *The SLR as a Monetary Policy Instrument in Bangladesh.* IMFOccasional Paper No. 234, Washington, international Monetary Fund.

**APPENDIX**

1. **Return on Asset Analysis**

**Regression**

|  |  |  |  |
| --- | --- | --- | --- |
| **Descriptive Statistics** | | | |
|  | Mean | Std. Deviation | N |
| ROA | 1.5000 | .54772 | 6 |
| CRR | 24.1667 | 2.58199 | 6 |
| LR | 66.3967 | 20.05674 | 6 |
| DR | 7.9867 | 1.46419 | 6 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Correlations** | | | | | |
|  | | ROA | CRR | LR | DR |
| Pearson Correlation | ROA | 1.000 | .000 | .492 | .539 |
| CRR | .000 | 1.000 | -.085 | .049 |
| LR | .492 | -.085 | 1.000 | .815 |
| DR | .539 | .049 | .815 | 1.000 |
| Sig. (1-tailed) | ROA | . | .500 | .161 | .135 |
| CRR | .500 | . | .437 | .463 |
| LR | .161 | .437 | . | .024 |
| DR | .135 | .463 | .024 | . |
| N | ROA | 6 | 6 | 6 | 6 |
| CRR | 6 | 6 | 6 | 6 |
| LR | 6 | 6 | 6 | 6 |
| DR | 6 | 6 | 6 | 6 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables Entered/Removeda** | | | |
| Model | Variables Entered | Variables Removed | Method |
| 1 | DR, CRR, LRb | . | Enter |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a. Dependent Variable: ROA | | | | |
| b. All requested variables entered. | | | | |
| **Model Summary** | | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | |
| 1 | .546a | .298 | -.754 | .72537 | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a. Predictors: (Constant), DR, CRR, LR | | | | |
| **ANOVAa** | | | | | | | |
| Model | | Sum of Squares | df | Mean Square | | F | Sig. |
| 1 | Regression | .448 | 3 | .149 | | .284 | .837b |
| Residual | 1.052 | 2 | .526 | |  |  |
| Total | 1.500 | 5 |  | |  |  |

|  |
| --- |
| a. Dependent Variable: ROA |
| b. Predictors: (Constant), DR, CRR, LR |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | .023 | 3.455 |  | .007 | .995 |
| CRR | -.002 | .129 | -.007 | -.012 | .991 |
| LR | .004 | .029 | .154 | .147 | .897 |
| DR | .155 | .391 | .414 | .396 | .730 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | | |
| Model | | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics |
| Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance |
| 1 | (Constant) | -14.842 | 14.888 |  |  |  |  |
| CRR | -.556 | .553 | .000 | -.009 | -.007 | .951 |
| LR | -.119 | .127 | .492 | .103 | .087 | .320 |
| DR | -1.526 | 1.835 | .539 | .270 | .235 | .322 |

|  |  |  |
| --- | --- | --- |
| **Coefficientsa** | | |
| Model | | Collinearity Statistics |
| VIF |
| 1 | (Constant) |  |
| CRR | 1.052 |
| LR | 3.122 |
| DR | 3.108 |

|  |
| --- |
| a. Dependent Variable: ROA |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Collinearity Diagnosticsa** | | | | | | | |
| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
| (Constant) | CRR | LR | DR |
| 1 | 1 | 3.936 | 1.000 | .00 | .00 | .00 | .00 |
| 2 | .053 | 8.592 | .02 | .04 | .23 | .01 |
| 3 | .006 | 24.978 | .03 | .08 | .76 | .98 |
| 4 | .004 | 29.984 | .95 | .87 | .01 | .01 |

|  |
| --- |
| a. Dependent Variable: ROA |

1. **Return on Equity Analysis**

**Regression Analysis**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Descriptive Statistics** | | | | | | |
|  | Mean | Std. Deviation | | | N | |
| ROE | 14.0000 | 5.65685 | | | 6 | |
| CRR | 24.1667 | 2.58199 | | | 6 | |
| LR | 66.3967 | 20.05674 | | | 6 | |
| DR | 7.9867 | 1.46419 | | | 6 | |
| **Correlations** | | | | | | | | | |
|  | | | | ROE | | CRR | | LR | DR |
| Pearson Correlation | | | ROE | 1.000 | | .205 | | .838 | .828 |
| CRR | .205 | | 1.000 | | -.085 | .049 |
| LR | .838 | | -.085 | | 1.000 | .815 |
| DR | .828 | | .049 | | .815 | 1.000 |
| Sig. (1-tailed) | | | ROE | . | | .348 | | .019 | .021 |
| CRR | .348 | | . | | .437 | .463 |
| LR | .019 | | .437 | | . | .024 |
| DR | .021 | | .463 | | .024 | . |
| N | | | ROE | 6 | | 6 | | 6 | 6 |
| CRR | 6 | | 6 | | 6 | 6 |
| LR | 6 | | 6 | | 6 | 6 |
| DR | 6 | | 6 | | 6 | 6 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables Entered/Removeda** | | | |
| Model | Variables Entered | Variables Removed | Method |
| 1 | DR, CRR, LRb | . | Enter |

|  |
| --- |
| a. Dependent Variable: ROE |
| b. All requested variables entered. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model Summary** | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .904a | .818 | .545 | 3.81589 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a. Predictors: (Constant), DR, CRR, LR | | | | |
| **ANOVAa** | | | | | | | |
| Model | | Sum of Squares | Df | Mean Square | | F | Sig. |
| 1 | Regression | 130.878 | 3 | 43.626 | | 2.996 | 0.260b |
| Residual | 29.122 | 2 | 14.561 | |  |  |
| Total | 160.000 | 5 |  | |  |  |

|  |
| --- |
| a. Dependent Variable: ROE |
| b. Predictors: (Constant), DR, CRR, LR |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | -20.039 | 18.175 |  | -1.103 | .385 |
| CRR | .519 | .678 | .237 | .766 | .524 |
| LR | .162 | .150 | .574 | 1.078 | .394 |
| DR | 1.344 | 2.055 | .348 | .654 | .580 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | | |
| Model | | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics |
| Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance |
| 1 | (Constant) | -98.238 | 58.160 |  |  |  |  |
| CRR | -2.397 | 3.435 | .205 | .476 | .231 | .951 |
| LR | -.485 | .809 | .838 | .606 | .325 | .320 |
| DR | -7.496 | 10.184 | .828 | .420 | .197 | .322 |

|  |  |  |
| --- | --- | --- |
| **Coefficientsa** | | |
| Model | | Collinearity Statistics |
| VIF |
| 1 | (Constant) |  |
| CRR | 1.052 |
| LR | 3.122 |
| DR | 3.108 |

|  |
| --- |
| a. Dependent Variable: ROE |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Collinearity Diagnosticsa** | | | | | | | |
| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
| (Constant) | CRR | LR | DR |
| 1 | 1 | 3.936 | 1.000 | .00 | .00 | .00 | .00 |
| 2 | .053 | 8.592 | .02 | .04 | .23 | .01 |
| 3 | .006 | 24.978 | .03 | .08 | .76 | .98 |
| 4 | .004 | 29.984 | .95 | .87 | .01 | .01 |

|  |
| --- |
| a. Dependent Variable: ROE |