

**INTEREST RATE DRIVERS AND FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN KENYA**

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REQUIREMENT FOR THE AWARD OF MASTER'S DEGREE IN
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DECLARATION

This thesis is my original work and has not been presented for examination in any other university.

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DEDICATION

To my cherished family and friends, whose boundless love, encouragement, and unwavering belief in me have been the bedrock of my academic pursuits.

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ABBREVIATIONS AND ACRONYMS

BOM	Bank of Mozambique
BOT	The Bank of Tanzania
CAR	Capital Adequacy Ratio
CBK	Central Bank of Kenya
CBN	Central Bank of Nigeria
CBR	Central Bank Rate
CIR	Cost-To-Income Ratio
IDX	Indonesia Stock Exchange
KBA	Kenya Bankers Association
LCR	Liquidity Coverage Ratio
LDR	Loan-To-Deposit Ratio
LLPR	Loan Loss Provision Ratio
NIMS	Net Interest Margins
NPL	Non-Performing Loans
OER	Operating Expense Ratio
PBOC	People's Bank of China
RBI	Reserve Bank of India
ROA	Ratio Of Return On Assets
ROE	Return On Equity
RWA	risk-weighted assets
SARB	South African Reserve Bank

ABSTRACT

Money supply and demand, monetary policy, inflation, credit risk, liquidity risk, and economic growth are some of the variables that influence interest rates. Over the past ten years, interest rate volatility has been the primary driver of significant change in Kenya's banking system. Objective of the study was to assess the effect of interest rate drivers on financial performance of commercial banks in Kenya. The study focused four variables which included: liquidity risk, credit risk, inflation rate and monetary policy. The theories reviewed are based on the key variables and they included the pecking order theory, credit migration theory, monetary theory and rational expectations theory. This study used a descriptive research approach. The participants were expected to include 47 upper-level managers, 128 mid-level managers, and 303 lower-level employees from the Commercial Banks' headquarters in Nairobi. This research made use of a stratified sampling method. A basic data set was utilized in the research. A pilot group of 22 individuals was used to test the reliability and validity of the study methods. Descriptive statistics was used to evaluate the quantitative data. This study made use of SPSS version 28, a statistical program designed for use in the social sciences. The mathematical model that revealed the correlations between the variables was found by means of multiple linear regression analysis. In summary, the study established that liquidity risk, credit risk, inflation rate and monetary policy were found to be satisfactory in explaining financial performance of commercial banks in Kenya. In addition, correlation analysis revealed that liquidity risk, credit risk, inflation rate and monetary policy were positively and significantly associated to financial performance. The following managerial recommendations were made; enhance liquidity management, strengthen credit risk management, adapt to inflation trends, align with monetary policy. Policy recommendations included the following: strengthen regulatory frameworks for liquidity, improve credit risk regulations, adaptive inflation management policies and monetary policy coordination.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

For monetary transactions between individuals, businesses, and governments, the banking industry mediates. Commercial banks, say Muriithi and Waweru (2017) have been vital in Kenya's economic growth. Periodic financial crises, however, threaten the sustainability and efficiency of banking activities. It might be difficult for people, businesses, and governments to receive the necessary funds when commercial banks are not performing up to par (Ratemo & Ndede, 2021).

For commercial banks, financial intermediation is fundamental (Alrwashdeh et al., 2023). Financial service providers may be accessed by enterprises, individuals, and other entities using this platform. A commercial bank's primary function is to provide loans to consumers and companies. As an additional service, commercial banks back savings accounts. The commercial banking sector also conducts credit checks on prospective borrowers. Commercial banks play a key role in easing the flow of funds from lenders to borrowers. The role of commercial banks is to level the playing field by acting as a mediator between those with excess cash and others who are low on funds or need additional capital (Nawabzada et al., 2021). Credit facilities have also been made more accessible to small and medium-sized businesses by commercial banks. Commercial banks have a crucial role in promoting economic progress (Kaddumia & Al-Kilani, 2020).

Commercial banks' abilities to meet their stakeholders' needs and goals through the use of financial indicators to track progress toward goals. This is because financial performance is considered as the backbone of commercial banks' operations, allowing them to invest in different areas and meet the demands of their stakeholders (Ghenimi

et al., 2020). There are few more essential metrics than the ROA ratio when evaluating a company's financial health. This ratio reveals how well a bank is able to transform its assets into profit. Alamri and Almazari (2021) state that this ratio may be calculated by dividing total assets by net profit.

A number of variables influence interest rates, including the money supply and demand, monetary policy, inflation, credit risk, liquidity risk, and economic growth. According to Alta'ani and Dali (2020), interest rate volatility has been the primary driver of significant developments in Kenya's banking system throughout the past decade. In 2020, interest rates paid to borrowers reached 30% and more, while rates obtained by savers stayed relatively modest (Al Maani et al., 2021). The majority of Kenya's economic sectors were either flatlining or falling in profitability, while the banking industry was showing signs of improvement. Despite the sector's high profitability, there has been a perceived decline in loan availability and usage, which has been a drag on economic growth (Bsoul et al., 2022).

1.1.1 Global Perspective on Interest Rate Drivers

The Federal Reserve plays a pivotal role in setting interest rates, influencing borrowing costs and ultimately affecting banks' profitability (Al-Manaseer, 2020). Changes in interest rates by the Fed can stimulate or dampen economic activity, directly impacting banks' net interest margins (NIMs). In a rising rate environment, banks can benefit from higher interest income on loans, yet face challenges with funding costs. Conversely, in a low-rate scenario, banks may experience compressed margins as loan yields decrease faster than deposit rates (Fareso, 2023).

The European Central Bank (ECB) dictates monetary policy for member nations. Similar to the U.S., changes in ECB's interest rates influence banks' profitability dynamics (El Mahdy, 2023). Countries like Germany, France, and Italy, with

significant banking sectors, closely monitor ECB's policies. Negative interest rates in some Eurozone countries pose challenges for banks, impacting their ability to generate profits from traditional lending activities. Moreover, prolonged low rates can spur risk-taking behavior among banks, potentially leading to asset bubbles and financial instability (Binsaddig et al., 2023).

The Bank of Japan (BoJ) employs unconventional monetary policies, including quantitative easing and negative interest rates, to combat deflationary pressures and stimulate economic growth (Shakatreh, 2020). However, prolonged ultra-low interest rates pose challenges for Japanese banks, constraining their profitability and incentivizing riskier lending practices (Otwoko & Maina, 2021). Moreover, an aging population and sluggish economic growth further weigh on the banking sector's performance, necessitating innovative strategies to maintain profitability (Al Zaidanin & Al Zaidanin, 2021).

Sathyamoorthi et al. (2020) asserts that in China, the PBOC steers monetary policy to support economic objectives, including growth stability and inflation control. Interest rate reforms aimed at liberalizing the financial sector have implications for Chinese banks' profitability. While lower rates can stimulate borrowing and investment, they also squeeze NIMs, especially for smaller banks heavily reliant on traditional lending (Kori et al., 2020). Additionally, regulatory measures to curb shadow banking activities and manage systemic risks impact banks' balance sheets and profitability outlook (Nikhil & Deene, 2023).

The Central Bank of Brazil oversees monetary policy to maintain price stability and support economic growth. Interest rate decisions influence banks' lending and deposit rates, affecting their profitability (Okoth & Muia, 2020). Inflationary pressures and currency volatility in Brazil pose challenges for banks in managing interest rate risks

and maintaining stable earnings. Moreover, political and economic uncertainties can exacerbate credit risks, impacting asset quality and overall financial performance (Okoth & Muia, 2020).

The Reserve Bank of India (RBI) implements fiscal policy to achieve sustainable growth and price stability. Interest rate movements by the RBI influence banks' lending rates and deposit rates, impacting their NIMs (Al-Shiyab, 2015). Structural reforms and initiatives like demonetization and the introduction of Goods and Services Tax (GST) have transformative effects on the banking sector, necessitating adaptation to new business models and digitalization to enhance efficiency and profitability (Alrwashdeh et al., 2023).

In Australia, the Reserve Bank of Australia (RBA) sets fiscal policy to achieve inflation targets and promote economic stability. Interest rate decisions impact banks' cost of funds and lending rates, affecting their profitability (Moyo & Tursoy, 2020). Australia's highly concentrated banking sector dominated by a few large banks faces competitive pressures amid low interest rates and regulatory scrutiny. Additionally, exposure to the housing market and household indebtedness pose risks to banks' asset quality and financial stability (Munangi & Sibindi, 2020).

In South Korea, the Bank of Korea (BOK) formulates monetary policy to support sustainable economic growth and maintain price stability (El Mahdy, 2023). Interest rate adjustments influence banks' lending and deposit rates, affecting their profitability dynamics. South Korean banks face challenges amid low interest rates, intensifying competition, and high household debt levels. Regulatory reforms aimed at enhancing financial stability and consumer protection impact banks' operations and profitability outlook (Alshehadeh, 2021).

In Singapore, the Monetary Authority of Singapore (MAS) manages monetary policy to ensure price stability and sustainable economic growth. Interest rate movements influence banks' net interest margins and profitability (Natufe & Evbayiro-Osagie, 2023). Singaporean banks operate in a competitive environment characterized by low interest rates, digital disruption, and regulatory reforms. Embracing technological innovations and expanding into regional markets are imperative strategies for banks to maintain competitiveness and profitability (Yeasin, 2022).

The Bank of Canada (BoC) fiscal policy to achieve inflation targets and promote economic growth. Interest rate decisions impact banks' lending rates and deposit rates, affecting their profitability dynamics (Onodugo et al., 2014). Canadian banks operate in a stable regulatory environment but face challenges amid low interest rates, slowing economic growth, and elevated household debt levels. If banks want to remain profitable in the face of changing market conditions, they must diversify their income streams away from interest and practice sensible risk management (Mutai, 2020; Mwawasaa & Ali, 2020).

Understanding the global perspective on interest rate drivers and their impact on the financial performance of commercial banks requires analysis across diverse economies. Central banks' monetary policy decisions influence banks' profitability dynamics through their effects on borrowing costs, lending rates and net interest margins. Economic, political, and regulatory factors further shape banks' operating environment and profitability outlook (Bw'auma, 2021). Adapting to evolving market conditions, embracing technological innovations, and implementing prudent risk management practices are imperative for banks to navigate challenges and sustain profitability in an increasingly complex global landscape (Manyaga et al., 2020).

1.1.2 Regional Perspective on Interest Rate Drivers

Beginning with Nigeria, the Central Bank of Nigeria (CBN) plays a central role in monetary policy formulation to achieve price stability and support economic growth (Alfawareh et al., 2022). Interest rate decisions by the CBN influence banks' cost of funds and lending rates, impacting their profitability. Nigerian banks operate in a competitive environment characterized by asset quality challenges, regulatory reforms and exposure to macroeconomic vulnerabilities such as currency volatility and oil price fluctuations. Strategic risk management and capital adequacy are critical for Nigerian banks to navigate uncertainties and sustain profitability (Bhatt et al., 2023).

To attain inflation objectives and ensure currency stability, SARB executes fiscal policy in South Africa. Financial institutions' net interest margins and profitability are impacted by interest rate changes made by the SARB, which impact both lending and deposit rates (Alfawareh et al., 2022). High levels of consumer debt, regulatory scrutiny, and economic uncertainty pose credit risks to South African banks, which operate in a mature and consolidated banking system (Naji & Shabib-Ul-Hassan, 2023). To be competitive and profitable in a dynamic market, South African banks must diversify their income sources beyond interest and embrace digital banking technologies (Bekhet et al., 2020).

According to Naja and Natsir (2023), Egyptian banks operate in a competitive market characterized by regulatory reforms, political uncertainties, and exposure to macroeconomic risks such as exchange rate fluctuations and inflationary pressures. Strengthening governance frameworks, enhancing credit risk assessment, and diversifying revenue streams are crucial for Egyptian banks to navigate challenges and sustain profitability (Otalú et al., 2014).

The Bank of Ghana (BoG) plays a pivotal role in monetary policy formulation to achieve price stability and support economic growth. Interest rate decisions by the BoG influence banks' lending and deposit rates, affecting their profitability dynamics (Hillowle & Warui, 2021). Ghanaian banks operate in a competitive environment characterized by regulatory reforms, exposure to commodity price fluctuations and credit risks associated with high non-performing loans (Sathyamoorthi et al., 2020). Enhancing capital buffers, improving asset quality, and leveraging digital financial services are essential strategies for Ghanaian banks to enhance resilience and profitability (Kablay & Gumbo, 2021).

The Banco Nacional de Angola (BNA) oversees monetary policy to maintain currency stability and support economic development. Interest rate decisions impact banks' cost of funds and lending rates, influencing their profitability (Sarkar & Rakshit, 2023). Angolan banks operate in a challenging macroeconomic environment characterized by oil price volatility, currency depreciation, and structural reforms aimed at diversifying the economy (Nganga & Atheru, 2020). Addressing asset quality challenges, strengthening capital adequacy, and enhancing liquidity management are imperative for Angolan banks to navigate uncertainties and sustain profitability amidst evolving market conditions (Ogundipe et al., 2020).

Moving to Ivory Coast, the Central Bank of West African States (BCEAO) plays a key role in monetary policy coordination for member countries, including Ivory Coast. Interest rate decisions by the BCEAO influence banks' lending rates and deposit rates, impacting their net interest margins and profitability (Suyanto, 2021). Ivorian banks operate in a dynamic market characterized by economic reforms, regional integration, and opportunities in sectors such as agriculture and infrastructure (Nderitu, 2022). However, challenges such as credit risk, regulatory compliance, and digital

transformation require Ivorian banks to adapt strategies to enhance competitiveness and profitability (Kemunto et al., 2020).

According to Jefferis et al. (2020), the Bank of Tanzania (BOT) formulates monetary policy to achieve price stability and support economic growth. Interest rate adjustments by the BOT influence banks' lending rates and deposit rates, affecting their profitability dynamics. Tanzanian banks operate in a competitive market characterized by regulatory reforms, digital financial inclusion initiatives, and exposure to sector-specific risks such as agriculture and tourism (Siddique et al., 2021). Strengthening risk management frameworks, enhancing corporate governance, and diversifying revenue streams are essential for Tanzanian banks to sustain profitability amidst evolving market dynamics (Nguyen, 2022).

In Mozambique, the Bank of Mozambique (BOM) oversees monetary policy to maintain price stability and support economic development. Interest rate decisions impact banks' cost of funds and lending rates, influencing their profitability (Naja & Natsir, 2023). Mozambican banks operate in a challenging macroeconomic environment characterized by debt distress, currency depreciation and vulnerabilities in sectors such as agriculture and natural resources (Mbabazize et al., 2020). Enhancing regulatory oversight, strengthening capital adequacy, and fostering financial inclusion are critical for Mozambican banks to navigate uncertainties and sustain profitability amidst economic challenges (Ogum & Jagongo, 2022).

1.1.3 Local Perspective on Interest Rate Drivers

Interest rate factors and their effects on commercial banks' performance are well-discussed and analyzed topics in Kenya's financial environment. Due to their impact on investment choices, the overall economy, and commercial banks' bottom lines and viability, it is critical to have a firm grasp of these factors (Walde & Makori, 2022).

The monetary policy determined by the CBK is a key factor influencing interest rates in Kenya, as stated by Ngaruiya et al. (2022). The Central Bank Rate (CBR) is one tool the CBK uses to control borrowing costs, which in turn affects the interest rates lent by commercial banks. Any shift in the CBR would have repercussions across the economy, including how well banks are able to make money (Ogum & Jagongo, 2022).

Kenya's economic performance and inflation rates play a significant role in driving interest rates. Inflation erodes the purchasing power of money, prompting central banks to adjust interest rates to stabilize prices (Anjom, 2021). High inflation rates often lead to tighter monetary policies, resulting in higher interest rates to curb spending and investment. Consequently, commercial banks face higher borrowing costs, which can squeeze their margins and constrain lending activities, thus impacting their financial performance (Okoth & Muia, 2020). Conversely, low inflation environments may incentivize lower interest rates, stimulating economic growth and enhancing banks' profitability through increased lending and investment opportunities. Furthermore, the global economic environment and external factors exert pressure on interest rates in Kenya (Bw'auma, 2021). Being an open economy, Kenya is susceptible to global economic trends, including changes in international interest rates and capital flows. External shocks such as fluctuations in commodity prices or shifts in global investor sentiment can influence Kenya's interest rate dynamics. Commercial banks must navigate these external forces, adjusting their strategies to mitigate risks and capitalize on emerging opportunities to maintain financial stability and performance (Manyaga et al., 2020).

According to Kori et al. (2020), government policies and regulations play a crucial role in shaping interest rate dynamics and commercial banks' performance. Fiscal policies, such as government spending and taxation, can impact aggregate demand and

inflation, indirectly influencing interest rates. Regulatory frameworks, including capital adequacy requirements and reserve ratios, also affect banks' lending behavior and profitability. Compliance with regulatory standards adds operational costs for banks, affecting their financial performance (Mutai, 2020). Additionally, government interventions in the banking sector, such as loan guarantee schemes or interest rate caps, directly influence banks' lending practices and profitability, shaping their financial performance (Kaimu & Muba, 2021).

The stability of Kenya's financial system and regulatory environment plays a critical role in shaping interest rates and commercial banks' performance. Sound macroeconomic policies, effective supervision and risk management frameworks contribute to financial stability, reducing uncertainty and systemic risks (Munangi & Sibindi, 2020). Confidence in the banking sector encourages deposit mobilization and promotes lending activities, supporting banks' profitability and overall financial performance. Conversely, concerns about asset quality, liquidity, or regulatory compliance can undermine investor confidence, leading to higher borrowing costs and weaker financial performance for commercial banks (Kemunto et al., 2020).

According to Moyo and Tursoy (2020), the drivers of interest rates and their impact on the financial performance of commercial banks in Kenya are multifaceted and interconnected. The monetary policy stance, economic fundamentals, global influences, regulatory environment, technological advancements, financial stability, and competitive dynamics collectively shape interest rate dynamics and banks' profitability. Commercial banks must carefully assess these factors, adapt their strategies, and innovate to navigate the evolving landscape, optimize financial performance, and contribute to sustainable economic growth in Kenya (Ratemo & Ndede, 2021; Ogum & Jagongo, 2022).

1.1.4 Commercial Banks in Kenya

In Kenya, commercial banks are crucial to the country's financial system, according to Kaimu and Muba (2021). These banks act as middlemen between savers and borrowers, which helps the economy flourish and supports different parts of the economy. Commercial banks in Kenya range from those based in the country to those with branches all over the world. According to Kori et al. (2020), there are several well-known commercial banks in Kenya. Among them are Equity Bank, KCB Bank Kenya, Cooperative Bank of Kenya, Standard Chartered Bank Kenya, Barclays Bank of Kenya (Absa Group), and Commercial Bank of Africa (CBA).

There has been a noticeable uptick in bank mergers and acquisitions in Kenya during the past decade, with 2019 and 2020 being particularly active years. Take, for instance, the completion of the merger and acquisition in September 2019 between Commercial Bank of Africa Limited (CBA) and NIC Group PLC. At the end of September 2019, Kenya Commercial Bank has bought out National Bank of Kenya's whole stock. In 2020, Mayfair Bank Ltd. was 51% owned by Commercial International Bank of Egypt, and Access Bank PLC bought out Transnational Bank PLC. Similarly, in the same year, Kenya Commercial Bank took up liabilities and assets worth KES 3.2 billion from Imperial Bank.

Regulation of commercial banks in Kenya falls under the purview of the CBK, the country's primary regulatory authority for the banking sector. The CBK oversees and supervises commercial banks to ensure financial stability, soundness, and compliance with regulatory requirements (Moyo & Tursoy, 2020). Key regulations governing commercial banks in Kenya include the Banking Act, the Central Bank of Kenya Act, and various prudential guidelines issued by the CBK (Ratemo & Ndede, 2021; Ogum & Jagongo, 2022). These regulations cover aspects such as capital adequacy, liquidity

management, risk management, corporate governance, consumer protection, and anti-money laundering measures (Kaimu & Muba, 2021).

Among the many services offered by Kenya's commercial banks include electronic banking, deposit taking, lending, trade financing, treasury operations, and foreign exchange (Ngaruiya et al., 2022). They cater to a wide range of customers' wants and preferences by providing a wide range of banking goods and services (Kaimu & Muba, 2021). Kenyan commercial banks typically offer a wide range of banking services, such as checking and savings accounts, loans for individuals and businesses, credit cards, overdraft protection, trade financing, wealth management, and management of both current and savings accounts (Kori et al., 2020).

According to Ngaruiya et al. (2022), the operations of commercial banks in Kenya are guided by their business strategies, operational policies, and regulatory requirements. These banks deploy sophisticated banking systems and technologies to manage their operations efficiently, enhance customer experience, and ensure compliance with regulatory standards. Core banking operations include deposit mobilization, credit risk assessment, loan origination, funds transfer, payment processing, risk management, regulatory reporting, and customer service delivery (Kori et al., 2020). Commercial banks in Kenya operate through a network of branches, ATMs, electronic banking platforms, and mobile banking applications to reach customers across the country (Anjom, 2021).

Commercial banks in Kenya also play an active role in supporting financial inclusion initiatives and promoting access to banking services among underserved and marginalized segments of the population (Nderitu, 2022). They collaborate with the government, development agencies, and other stakeholders to expand outreach, introduce innovative financial products and services and enhance financial literacy and

education (Natufe & Evbayiro-Osagie, 2023). Initiatives such as agency banking, mobile banking and digital payments have contributed to increasing financial access and inclusion in both urban and rural areas of Kenya, empowering individuals and businesses to participate more actively in the formal financial system (Nguyen, 2022).

1.2 Statement of the Problem

The effect of interest rate drivers on the financial performance of commercial banks in Kenya is a critical concern within the country's banking sector. As interest rates fluctuate due to various drivers such as monetary policy, economic conditions, global factors, and regulatory interventions, commercial banks face challenges in managing their profitability, asset quality and overall financial health (Ngaruiya et al., 2022). The problem stems from the complex interplay between interest rate dynamics and the financial performance of commercial banks (Kori et al., 2020). Fluctuations in interest rates directly influence banks' net interest margins, affecting their profitability and lending activities. High interest rates may discourage borrowing and investment, leading to a decline in loan demand and revenue for banks. Conversely, low interest rates may compress margins and incentivize excessive risk-taking to maintain profitability, potentially leading to asset quality deterioration and financial instability (Kaimu & Muba, 2021).

Return on equity (ROE) for Kenyan commercial banks fell to 20.94% in 2013, 20.88% in 2014, and 17.38% in 2015 (Central Bank of Kenya [CBK], 2020). The combined ROE for the top tier of banks in 2018 was 17.03%, which was a precipitous drop from the previous year. Investors flee commercial banks because of their chronic underperformance, which causes them to withdraw their money (Kiemo et al., 2020). Liquidity issues have been the cause of the failure of many commercial banks in

Kenya. According to Columbia Broadcasting System (CBS, 2020), liquidity issues were the main cause of the demise of Chase and Imperial Banks.

The volatile financial performance of commercial banks during the period from 2015 to 2019 is a cause for concern. The ROE of Equity Bank has decreased from 47.2% to 37.2%, Absa Bank from 30.4% to 26.4%, Stanbic Bank from 25.1% to 21.2%, and the Bank of India from 20.15% to 18.0%. The ROA figures for KCB, Equity bank, DTB Bank, Sidian Bank, Jamii Bora bank, and Paramount Universal Bank have shown a decline over the specified periods. From 2015 to 2019, the small banks experienced a decline in their Return on Equity (ROE), dropping from 6.23% to -12.93%. The banks in the medium size category experienced a decrease in their return on equity, dropping from 15.35% to 11.35%. During the period from 2015 to 2019, the ROE of the large banks experienced a decline, specifically from 25.89% to 25.70% (CBK, 2020).

Interest rates play a crucial role in the financial performance of commercial banks in Kenya, influencing their profitability, asset quality, and overall financial stability. In recent years, the CBK has made several adjustments to the benchmark interest rate, known as the Central Bank Rate (CBR), to navigate economic challenges. For instance, the CBK raised the CBR from 7.00% in March 2022 to 8.25% by October 2022, reflecting efforts to combat inflationary pressures and stabilize the economy (Central Bank of Kenya [CBK], 2022). These adjustments directly impact the interest rates that commercial banks can charge on loans and offer on deposits, thereby affecting their interest income and expense structures.

Moreover, the interest rate cap introduced in 2016, which limited the lending rates to no more than 4% above the CBR and set minimum deposit rates at 70% of the CBR, significantly altered the banking landscape. Although this cap was repealed in 2019, its effects linger, as banks had to adapt to a constrained interest rate environment,

which squeezed their profit margins. During the cap period, the average lending rate fell from 17.7% in 2015 to around 13.5% in 2017, reducing banks' net interest margins (Central Bank of Kenya [CBK], 2017). This led to a contraction in private sector credit growth, which dropped from 17.8% in 2015 to 2.4% in 2017, highlighting the critical interplay between interest rates and banking sector performance (CBK, 2017).

To find out what makes Kenyan banks so good, Ongore and Kusa (2013) looked into the matter. In contrast to the little impact of macroeconomic variables, the results showed that financial performance at Kenyan commercial banks was heavily impacted by decisions made by managers and the board of directors. However, the study failed to consider the impact of bank-specific characteristics on financial outcomes. Using a number of internal variables, King'oo (2015) examined the bottom lines of listed Kenyan banks. Revenue diversity and liquidity were determined to have minimal impact on commercial banks' financial performance, in contrast to the large effects of management efficacy, capital adequacy, and bank size. It was not considered in the study how earning potential affected the performance of the banks. Once other bank-specific variables are controlled for, asset quality remains the most important factor impacting commercial banks' profitability, according to Kamande (2022), research on listed commercial banks in Kenya. The study just took into account commercial banks that are listed. There appears to be significant disagreement among studies concerning the profitability of commercial banks. Few studies have examined how interest rates impact the bottom lines of commercial banks in Kenya. This study set out to rectify that lack of information by investigating how different interest rate factors affected the profitability of Kenyan commercial banks.

1.3 Research Objectives

This study was guided by the following general and specific objectives:

1.3.1 General Objective

To assess the effect of interest rate drivers on financial performance of commercial banks in Kenya.

1.3.2 Specific Objectives

The specific objectives included:

1. To establish the effect of liquidity risk on financial performance of commercial banks in Kenya.
2. To establish the effect of credit risk on financial performance of commercial banks in Kenya.
3. To establish the effect of inflation rate on financial performance of commercial banks in Kenya.
4. To establish the effect of monetary policy on financial performance of commercial banks in Kenya.

1.4 Hypotheses of the study

The study was guided by the following hypotheses

H₀₁: There is no significant relationship between liquidity risk and financial performance of commercial banks in Kenya.

H₀₂: There is no significant relationship between credit risk and financial performance of commercial banks in Kenya.

H₀₃: There is no significant relationship between inflation rate and financial performance of commercial banks in Kenya.

H₀₄: There is no significant relationship between monetary policy and financial performance of commercial banks in Kenya.

1.5 Significance of the Study

1.5.1 Policy Makers

Policy makers play a crucial role in shaping economic and financial outcomes, and studies on interest rate drivers and financial performance provide valuable insights to inform their decision-making processes. By understanding the complex relationships between interest rates, bank performance, and broader economic factors, policy makers can design more effective monetary and regulatory policies to achieve various objectives such as price stability, financial stability, and economic growth. Insights from such studies help policy makers anticipate the effects of their policy actions on the banking sector, interest rate transmission mechanisms, and overall macroeconomic conditions.

1.5.2 Commercial Banks

By gaining a deeper understanding of the drivers of interest rates and their implications for financial performance, banks can refine their risk management strategies, optimize their lending practices, and enhance their overall profitability. Moreover, insights from this study can help banks identify potential areas for improvement in their operations and develop targeted interventions to address them.

1.5.3 Researchers and Academicians

By delving into the complex nexus between interest rates, bank performance, and broader economic factors, researchers will be able to expand the theoretical frameworks and empirical evidence base, fostering a deeper understanding of the dynamics shaping financial markets and economies. Leveraging existing knowledge and methodologies, scholars uncover nuanced relationships and identify key drivers that influence the behavior of banks, lending patterns, risk management strategies, and overall economic outcomes.

1.6 Scope of the Study

The geographical scope included commercial bank based in Nairobi. This study assessed the effect of interest rate drivers on financial performance of commercial banks in Kenya. Therefore, the study was a good representation of the banking sector. The target population will be 47 senior management, 128 middle management and 303 lower management employees working in the Commercial Bank and based in their various headquarters. The target population was obtained from the Kenya Bankers Association for the various banks. The research was undertaken in a period of four months, from March 2024 to June 2024.

1.7 Limitation of the Study

One limitation could be the availability and reliability of data on interest rate drivers and financial performance. Data collection might be restricted by the accessibility of financial records from commercial banks, and the accuracy of such data could vary, potentially introducing bias or errors into the analysis.

The conclusions of the study might be constrained by the sample size and the degree to which the commercial banks that were chosen for investigation were representative. The findings could not apply to all Kenyan commercial banks if the sample is too small or lacks diversity.

Limitations in the methodologies used for data analysis, such as the choice of statistical models or variables included in the analysis, could impact the study's validity and reliability. Certain statistical techniques might not adequately account for complex interactions among variables.

1.8 Delimitation of the Study

To address the limitation of data availability and reliability, the study will focus on utilizing official data sources from regulatory bodies like the CBK and audited financial statements of commercial banks. Additionally, rigorous data validation and verification procedures will be employed to ensure the accuracy and consistency of the data used in the analysis.

To address concerns about sample size and representativeness, the study will adopt a comprehensive sampling approach that includes a diverse range of commercial banks operating in Kenya. Efforts will be made to ensure adequate representation across different bank sizes, ownership structures, and geographical locations to enhance the generalizability of the findings.

To overcome methodological limitations, the study will carefully select appropriate statistical models and methodologies based on established best practices in econometric analysis. Sensitivity tests and robustness checks will also be conducted to assess the robustness of the findings and ensure the validity of the conclusions drawn from the analysis.

By implementing these delimitations, the study aims to enhance the reliability, validity, and rigor of its findings, thereby providing valuable insights into the effect of interest rate drivers on the financial performance of commercial banks in Kenya.

1.9 Assumptions of the Study

For this study, it was assumed that honest responses will be received from respondents. Additionally, the data collection exercise was considered objective and independent. Therefore, the positivist paradigm was adopted. Lastly, it was assumed that respondents will understand the questions; the instruments therefore underwent testing

for validity and reliability before their use in data collection. This ensured the clarity of the questions for the respondents.

1.10 Operational Definition of Key Terms

The research was based on the following basic terms as defined.

Credit Risk:	The potential loss that a lender or financial institution may incur due to the failure of a borrower to repay a loan or meet its contractual obligations (Oluwayemisi & Fajuyagbe, 2022).
Financial Performance:	The assessment of a bank's profitability, efficiency, solvency, liquidity, and overall financial health (Fadun & Oye, 2020).
Inflation Rate:	The overall rate of growth in a country's consumer prices during a certain time period, usually expressed as a percentage measured on an annual basis (Adusei, 2021).
Interest Rate Drivers:	Factors or variables that influence the prevailing interest rates in an economy (Sarkar & Rakshit, 2023).
Liquidity Risk:	The inability to quickly convert assets into cash without significantly impacting their value (Fadun & Oye, 2020).
Monetary Policy:	The policies and procedures put in place by a nation's central bank to control the money supply, the availability of credit, and interest rates in order to accomplish certain government-level economic goals (Hillowle & Warui, 2021).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter dealt with the theoretical framework, the conceptual framework, review of key variables, empirical review and gaps that exist in the research.

2.2 Theoretical Framework

The theories reviewed are based on the key variables. These theories are pecking order theory, credit migration theory, monetary theory and rational expectations theory.

2.2.1 Pecking Order Theory

Adusei (2021) states that the Pecking Order Theory, which was established in 1984 by Myers and Majluf, provides understanding of how businesses, such as commercial banks, arrange their funding sources in a hierarchy. This hypothesis states that companies have a preference order for their preferred sources of funding, with internal funds (such retained earnings) at the top, debt in the middle, and external equity issue at the bottom. To sidestep the expenses and knowledge asymmetries that come with seeking funding from outside sources, businesses would rather raise capital internally, according to the idea (Jefferis et al., 2020).

According to Alkhazali et al. (2021), commercial banks' management of liquidity risk and its impact on financial performance may be understood by applying Pecking Order Theory. The danger that a bank won't have enough cash on hand or won't be able to get the money it needs at a fair price is known as liquidity risk. To mitigate liquidity risk, commercial banks use a mix of financing mechanisms, such as deposits, borrowing between banks, and short-term debt (Muriithi & Waweru, 2017).

Pecking Order Theory states that commercial banks will rather finance their operations and liquidity requirements with internal funds like retained earnings and current

deposits. Since they don't need issuing fresh debt or equity—both of which may be expensive and send the wrong message to investors—internal funds are the most dependable and economical source of funding (Ratemo & Ndede, 2021). When commercial banks' own resources aren't enough to cover their liquidity demands, they may seek funding from other sources, such as issuing debt. Quickly satisfying short-term liquidity needs, such supporting loan expansion or meeting depositor withdrawal requests, is possible via debt financing, which allows banks to raise cash rapidly. To effectively manage liquidity risk, commercial banks in Kenya frequently issue short-term debt instruments such certificates of deposit or commercial paper (El Mahdy, 2023).

Yulianti and Pakata (2023) state that commercial banks in Kenya may face consequences to their financial performance when they rely on debt financing to handle liquidity risk. Increasing the bank's leverage and interest expenditure through debt issuance may alleviate liquidity problems in the short term, but it can have a negative impact on profitability and financial stability in the long term. As a result of investors worrying about the bank's liquidity or solvency, borrowing rates might go up and the bank's rating could go down if it relies too much on debt financing (Binsaddig et al., 2023). In addition, according to Pecking Order Theory, commercial banks would rather not issue shares until absolutely necessary, as doing so may send the wrong message to investors and reduce the ownership stake of current shareholders. Most people think that issuing more shares of stock is a bad way to deal with liquidity risk since it lowers shareholder value and makes investors lose faith in the company (Al-Ardah & Al-Okdeh, 2022).

Finally, Pecking Order Theory lays forth a plan for how Kenyan commercial banks rank their funding options in order to control liquidity risk and keep their finances in

check. To avoid the risks and expenses of issuing external equity while yet having enough cash on hand to pay for immediate expenses and fuel long-term growth, banks are increasingly turning to internal funding and debt financing. Investors and politicians may use the work of Pecking Order Theory proponents to better understand corporate finance and capital structure choices, which in turn helps to improve banking sector efficiency and stability.

2.2.2 Credit Migration Theory

Credit Migration Theory, initially proposed by David Durand in the 1960s and further developed by Edward Altman in the 1980s, provides a framework for understanding the dynamic nature of credit risk and its impact on the financial performance of commercial banks (Ali & Oudat, 2020). The theory posits that credit risk is not static but rather evolves over time as borrowers' creditworthiness changes. This evolution, or migration, occurs as borrower's transition between different credit quality categories, such as from investment grade to speculative grade or vice versa (Kaddumia & Al-Kilani, 2020). Credit migration theory emphasizes the importance of monitoring changes in borrowers' credit profiles and adjusting risk management strategies accordingly to mitigate the potential adverse effects of credit risk on banks' financial performance (Ghenimi et al., 2020).

Credit risk plays a significant role in shaping the financial performance of commercial banks in Kenya. As lenders, banks are exposed to credit risk through their loan portfolios, which constitute a substantial portion of their assets (Shakatreh, 2020). The quality of these loan assets directly impacts banks' profitability, capital adequacy, and overall financial health. Credit risk arises from various sources, including borrower default, deterioration in borrowers' creditworthiness, and economic downturns that affect borrowers' ability to repay loans (Al-Manaseer, 2020).

One way in which credit risk affects the financial performance of commercial banks in Kenya is through loan defaults and non-performing loans (NPLs). When borrowers fail to repay their loans or experience financial difficulties, banks incur losses on their loan portfolios, leading to a decrease in profitability and capital erosion (Afolabi et al., 2020). High levels of NPLs not only impair banks' earnings but also erode investor confidence, potentially leading to liquidity pressures and funding challenges for banks. Therefore, effective credit risk management practices, such as rigorous credit assessment, monitoring, and provisioning for expected losses, are essential for mitigating the adverse impact of credit risk on banks' financial performance (Kemunto et al., 2020).

According to Afolabi et al. (2020), credit risk can affect the cost of funding for commercial banks in Kenya. Higher perceived credit risk associated with banks' loan portfolios may lead to an increase in the cost of capital, as investors demand higher returns to compensate for the perceived risk. This can raise banks' funding costs and reduce their net interest margin, squeezing profitability (Folajimi & Dare, 2020). Additionally, heightened credit risk may limit banks' access to funding sources, as investors become more risk-averse and cautious about lending to institutions with perceived higher credit risk profiles (Munangi & Sibindi, 2020).

Almansour et al. (2021) elucidates that credit risk can have broader implications for the stability of the banking sector and the overall economy in Kenya. A deterioration in credit quality across banks' loan portfolios can amplify systemic risks, leading to contagion effects and broader financial instability. In such scenarios, banks may face increased pressure to deleverage and tighten lending standards, further exacerbating economic downturns and constraining growth prospects. Therefore, proactive measures to address credit risk at the individual bank level and strengthen the

resilience of the banking sector as a whole are critical for promoting financial stability and sustainable economic growth in Kenya (Fareso, 2023).

Credit Migration Theory augurs well with credit risk variable because it offers valuable insights into the dynamic nature of credit risk and its implications for the financial performance of commercial banks in Kenya. By understanding how credit risk evolves over time and its impact on banks' profitability, capital adequacy, and systemic stability, banks can adopt proactive risk management strategies to identify, measure, and mitigate credit risk effectively. This entails robust credit assessment processes, ongoing monitoring of borrowers' credit profiles, and prudent provisioning for expected losses, thereby enhancing the resilience of banks and contributing to a more stable and resilient financial system in Kenya.

2.2.3 Monetary Theory

Proponents of monetary theory include renowned economists such as Milton Friedman and Friedrich Hayek. Friedman famously argued that inflation is always and everywhere a monetary phenomenon, emphasizing the importance of controlling the money supply to maintain price stability and promote long-term economic growth (Bandara et al., 2021). Hayek, on the other hand, emphasized the role of market forces and price signals in coordinating economic activity, warning against the dangers of central planning and excessive monetary intervention (Ekinici & Poyraz, 2019).

According to monetary theory, the general level of prices in an economy is directly affected by changes in the money supply, which can be caused by several variables or by the activities of central banks (Smarika & Sangeetha, 2021). The quantity theory of money is a crucial tool for this purpose; it states that, all else being equal, the quantity of money and the level of prices are directly related, supposing that both the velocity of money and the level of real production do not change (Yeasin, 2022). As more

money enters circulation to purchase the same quantity of goods and services, inflationary pressures build up when the money supply grows outpacing economic development (Kaimu & Muba, 2021).

According to Naja and Natsir (2023), the inflation rate is influenced by various factors, including changes in the money supply, government fiscal policy, international trade dynamics, and domestic economic conditions. Open market operations, reserve requirements, and the discount rate are monetary policy instruments that the CBK uses to control the money supply (OlaREWaju et al., 2020). If the CBK injects more money into the economy, either through direct intervention in financial markets or by lowering interest rates, it can stimulate spending and investment but may also fuel inflation if not carefully managed (Sathyamoorthi et al., 2020).

High inflation rates can have significant implications for the financial performance of commercial banks in Kenya. Firstly, inflation erodes the purchasing power of money, reducing the real value of loans and deposits held by banks (Dang, 2022). This can lead to a decline in the profitability of banks, especially if interest rates do not adjust quickly enough to compensate for the loss in purchasing power. Secondly, inflation uncertainty can increase the risk premium demanded by lenders, leading to higher interest rates on loans and potentially reducing the demand for credit, which can dampen economic activity and profitability for banks (Nikhil & Deene, 2023).

According to Okoth and Muia (2020), inflation can distort investment decisions and resource allocation, as investors and businesses may prioritize short-term investments or speculative activities over productive long-term projects. This can affect the quality of banks' loan portfolios and increase their exposure to credit risk (Sarkar & Rakshit, 2023). Additionally, inflation can create uncertainty and volatility in financial markets,

making it more challenging for banks to manage their balance sheets and liquidity positions effectively (Mwawasaa & Ali, 2020).

To sum up, inflation rate policy is consistent with monetary theory. This theory lays down the groundwork for comprehending how inflation rates, shifts in the money supply, and the health of Kenya's commercial banks all interact with one another. Effective monetary policy and careful banking practices are crucial for preserving macroeconomic stability and encouraging long-term economic growth, as high inflation rates can have a detrimental influence on banks' bottom lines, risk management, and investment choices.

2.2.4 Rational Expectations Theory

The Rational Expectations Theory is a cornerstone of modern macroeconomic thought, particularly in understanding the implications of economic policies, including monetary policy (Shakatreh, 2020). Developed in the 1960s and 1970s by economists such as John Muth, Robert Lucas, and Thomas Sargent, the theory posits that individuals form expectations about future economic variables based on all available information, including past data, economic theory and policy announcements (Walde & Makori, 2022). Crucially, these expectations are assumed to be “rational” in the sense that they are unbiased and efficient predictors of future outcomes.

According to Ngaruiya et al. (2022), Rational Expectations Theory suggests that individuals and firms form expectations about future inflation, interest rates, and other economic variables based on their understanding of the economy and the behavior of policymakers. For example, if a central bank announces a new inflation target or changes its policy interest rate, individuals and firms will adjust their expectations about future inflation and interest rates accordingly (Oluwayemisi & Fajuyagbe, 2022).

One of the key implications of Rational Expectations Theory is the Lucas Critique, named after Robert Lucas. This critique suggests that the effectiveness of economic policy depends on how individuals and firms anticipate and respond to policy changes (Fadun & Oye, 2020). In other words, if policymakers change their behavior in response to past policy outcomes, individuals will adjust their expectations, potentially undermining the intended effects of the policy (Otwoko & Maina, 2021).

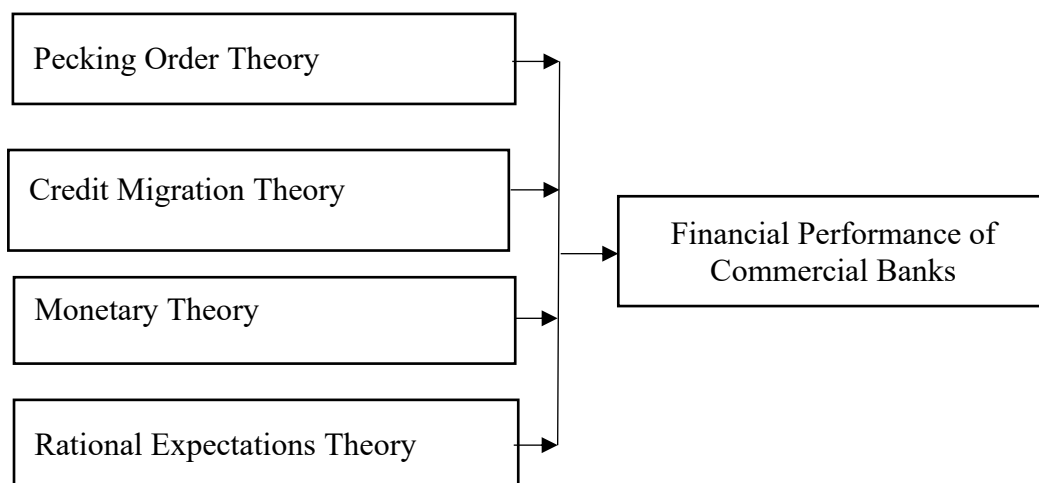
Rational Expectations Theory suggests that the effectiveness of policy actions by the CBK depends on how well economic agents understand and anticipate those actions (Adusei, 2021). As an illustration, suppose the CBK were to declare an expansionary monetary policy in an effort to boost the economy, individuals and firms may anticipate higher inflation in the future and adjust their behavior accordingly, such as demanding higher wages or increasing prices, which could offset the intended effects of the policy (Fadun & Oye, 2020). Furthermore, Rational Expectations Theory has implications for the transmission mechanism of monetary policy. According to this theory, changes in monetary policy affect the economy through various channels, including expectations about future inflation, interest rates, and asset prices. For instance, if the CBK lowers its policy interest rate, individuals and firms may anticipate lower borrowing costs and increase their spending and investment, thereby stimulating economic activity (Anjom, 2021).

In summary, Rational Expectations Theory provides a framework for understanding how individuals and firms form expectations about future economic variables, including inflation, interest rates, and policy actions. In the context of monetary policy in Kenya, this theory suggests that the effectiveness of policy actions by the CBK depends on how well economic agents anticipate and respond to those actions. By incorporating expectations into economic models, Rational Expectations Theory has

contributed to our understanding of the dynamics of inflation, interest rates, and other key economic variables, informing policymakers' decisions to promote macroeconomic stability and sustainable growth.

Figure 2.1

Theoretical Framework



2.3 Empirical Literature Review

2.3.1 Liquidity Risk and Financial Performance of Commercial Banks

This study looked at the relationship between liquidity risk and the financial performance of Kenyan commercial banks (Murithi and Waweru, 2022). The interest period for each of Kenya's 43 commercial banks that were formally registered lasted from 2005 to 2014. The study employed ROE as a financial performance metric, and cash flow ratio and NSFR as liquidity risk indicators. Data was sourced from financial reports submitted to the Kenyan Central Bank by commercial banks. To reduce endogeneity problems and time-invariant, unobserved firm specific effects, panel data approaches were used, such as GMM and random effects estimates. When looking for a correlation between two variables, we employed a pairwise method. To determine if the regression was statistically significant, we utilized Wald and F-tests. In order to determine the extent to which the independent variables may account for the variation

in the dependent variable, it was assessed by comparing the coefficients of determination within and between the variables. Both the short-term and long-term financial performance of Kenya's commercial banks are unaffected by LCR, according to the results, but NSFR significantly reduces bank profitability. In spite of this, liquidity risk hurts financial results over time. As a result, managing liquidity should be an essential concern for bank executives.

Ratemo and Ndede (2021) looked at how banks' corporate financial performance was affected by liquidity problems. Researchers set out to do a number of things, including find out how factors including capital adequacy, operational efficiency, asset quality, and bank size affected this performance. Furthermore, the effect of the money supply on the correlation between liquidity hazards and commercial banks' profitability was also identified. A total of 42 commercial banks from Kenya were included in the sample, and each one of them used a causal research technique. This study relied on secondary sources to produce its results. The secondary data consisted of financial records and information gathered from CBK and other commercial banks. In a favourable and statistically significant way, the size coefficient impacts commercial banks' bottom lines. Investment banks' bottom lines were positively affected by sufficient capital, but negatively and statistically significantly by low asset quality. The operational efficiency coefficient of a commercial bank was favorably and statistically significantly related to its financial performance. The money supply moderates the relationship between liquidity worries and commercial banks' performance because of its bigger coefficient of determination. For commercial banks looking to maximize revenues, expanding the range of commodities offered is a key advice.

El Mahdy (2023) looked into how liquidity risk affected the efficiency of Egypt's banking sector. The study also looked at how liquidity risk and nonperforming loans affected the profitability of Egyptian banks. The 396 observations that make up the empirical data were collected from Egyptian banks that are listed on the Egyptian Stock Exchange and span the years 2013–2021. The study utilized mixed-effects models for its statistical analysis. Return on assets (ROA), return on equity (ROE), and stock price are some of the common ways that financial firms are evaluated. Liquidity risk considerably reduces financial performance for banks when ROA is utilized as a criterion, according to the research. In addition, ROE is a performance indicator for banks, and nonperforming loans have a negative association with ROE. Even more concerning is the fact that nonperforming loans and liquidity risk have a negative interaction that impacts bank performance when we examine the stock price model. This makes it quite evident that strategies for managing liquidity risk are major factors in a bank's profitability. Because of the importance of protecting investors' funds, banks must implement stringent risk management strategies.

The effects of optimizing liquidity risk on stability were investigated in a research by Yulianti and Pakata (2023). After accounting for credit risk and operational efficiency, researchers in Indonesia set out to quantify the effects of liquidity risk on the stability of Islamic commercial banks from 2012 to 2021. Financial reports outlining the activity of Islamic commercial banks were provided by the financial services authority from 2012 to 2021 and are used as secondary data in this study. Ten Islamic commercial banks were selected for the sample using a purposive selection method, which is a non-probability sampling strategy. Six hypotheses were tested in the analytical procedure. This study found that liquidity risk is one factor that can affect a

bank's stability directly; however, credit risk and operational efficiency are additional factors that mediate this link.

Using information collected between 2003 and 2017, Alrwashdeh et al., (2023) investigated the elements impacting the liquidity risk of Jordanian commercial banks. The study's sample includes all commercial banks using panel 2 standard linear regression and pooled ordinary least squares econometric approaches. The scholarly study found that large banks, high ROA and CAR ratios, risk, low NPL rates, T-equality, and T-liability all had a positive effect on liquidity risk. However, ROE has a negative and heavy impact on liquidity risk. Researchers concluded that authorities should keep an eye on the internal traits of banks that reduce their liquidity so that bank runs are less likely to occur.

This study, undertaken by Al-Chahadah et al. (2022) investigated the correlation between liquidity risk and profitability in commercial banks that are publicly traded on the Amman Stock Exchange. Indicators of liquidity risk did not show a statistically meaningful link with the majority of profitability metrics. Alternatively, there was statistical significance for the utilization ratio (UR) and cash reserve ratio (CRR) indices. A statistically significant association exists among the investment returns, legal reserve ratios, and return on equity. Another study that looked at the effects of liquidity risk and credit risk on the profitability of Iraqi commercial banks (Al-Husainy & Jadah, 2021). Researchers found a positive and statistically significant relationship between liquidity risk and bank profitability. Financial institutions' bottom lines are inversely tied to credit risk.

Alshehadeh (2021) examined the correlation between commercial banks' liquidity risk and profitability using Amman Stock Exchange data. The analysis used annual records from 2010 to 2019 as its foundation. To do this, an appropriate multiple regression

model was used. The liquidity risk indicators did not show a substantial association with most profitability assessments. Whatever the situation may be, the UR and CRR indexes were statistically significant. Investment returns, legal reserve ratios, and return on equity were all significantly related. Financial policy planners at Jordanian commercial banks would do well to pay closer attention to the correlation between liquidity risk indicators and profitability in light of this study's conclusions. This is because the level of liquidity has a direct correlation to the quantity of investments received by banks. Therefore, the market value of the bank is affected by increasing the bank's share on the stock exchange.

Predicting liquidity needs is crucial for financial institutions to succeed or fail. This may be done by different deposit structures or the excess amount, which determines performance (Kaddumia & Al-Kilani, 2020). The study's objectives were to measure the association between liquidity risk management and banks' performance through the use of an analytical descriptive approach. In order to investigate this effect, we calculated and analyzed performance and liquidity indicators of thirteen publicly listed Jordanian commercial banks. Data used in this analysis comes from commercial banks in Jordan, serving as both the population and the sample. According to the research, when the ratio of loans to total deposits was high, it had no effect on earnings per share (EPS) but a considerable negative effect on operational cash flow per share (OCFS). The quick ratio accounted for the uptick in performance indicators for the banking industry. The proportion of investments and cash to total deposits was one performance indicator that demonstrated progress. A decline in the ratio of total loans to total assets would have a little negative impact on profits per share but a large negative impact on OCFS. Because of the larger effect on OCFS, it is preferable to

utilize cash basis performance metrics instead of accrual basis indicators when developing a strategy for managing liquidity risk.

At Jordanian banks' bottom lines, Al-Ardah and Al-Okdeh (2022) examined liquidity risk. Net working capital, liquidity ratios, and total deposits to cash and investments were used to assess liquidity risk. For financial success, we included return on assets and adjusted the bank's size using the natural logarithm of total assets. Quantitative analysis was essential for the inquiry. Amman Stock Exchange's thirteen commercial banks participated fully in the poll. For Amman Stock Exchange-listed Jordanian commercial banks, liquidity risk affects profits. Investment to total deposits, current liquidity, net working capital, and cash were closely related. From a sample of Jordanian commercial banks listed on the Amman Stock Exchange, researchers discovered that liquidity risk affects ROA, a financial performance statistic, differently with bank size. In order to achieve optimal financial performance ratios, the research suggests that commercial bank administrations should make more active use of liquidity within acceptable risk bounds. If banks evaluate the risks and benefits of liquidity risk investments carefully, they may boost their bottom lines.

2.3.2 Credit Risk and Financial Performance of Commercial Banks

Funds disbursed by banks have the potential to be non-refundable by customers. Distribution of funds is carried out with a strict mechanism and the principle of prudence. Credit risk is a risk that has the potential to arise due to a customer's failure to fulfill the obligation to return the funds received (Syatiria & Hamdani, 2017). The higher the potential for uncollectible loans, the greater the third party funds that are not successfully received back by the bank. This condition can have an impact on bank financial stability which is decreasing. The low rate of credit refunds reduces the amount of funds that can be used to fulfill obligations and run bank operations. Low

credit risk can increase the level of bank stability (Ali et al., 2019, Ghenimi et al., 2020). Failure to manage the disbursement of credit funds will result in high non-performing loans. This has the potential to increase the risk of bankruptcy. In other words, the higher the amount of credit risk, the greater the potential for bank failure which will have an impact on decreasing bank stability. The high number of non-performing loans requires banks to incur high accounts receivable write-off costs. As a result, banks will lose revenue and opportunities to optimize third party funds for redistribution.

According to Chen and Pan (2012), the biggest concern for banks is credit risk. Credit risk and associated problems may arise for banks as a result of heightened awareness of potential dangers. For the most part, this is because of specific client characteristics and financial circumstances that necessitate substantial empirical investigation. Furthermore, banks might be able to weather losses from their regular revenue streams, but there's always the chance that unexpected losses would be too big for that (Olalekan, 2023). Banks should also allocate sufficient funds to credit management so that it can effectively balance lending, risk, and borrowing requirements. The goal of credit risk management is to lower risk and raise the bank's risk-adjusted return rates by taking on and maintaining appropriate levels of credit exposure (Suyanto, 2021).

Bhatt et al. (2023) set out to solve the mystery of how credit risk management in Nepalese commercial banks relates to their business results. Further exploration of the topic is provided by the investigation of the impact of credit risk management on the productivity of Nepalese commercial banks. According to the findings, there seems to be a connection between environmental risk and credit risk management. New research shows that CRM strategy is significantly impacted by credit evaluation metrics. The findings highlight the significant impact of market risk analysis on credit

risk management. A number of factors affect commercial banks' bottom lines, including environmental risk, market risk analysis, credit risk management, and credit evaluation criteria. Successful managers have figured out how to lessen the likelihood of bad financial outcomes and increase the likelihood of good ones using risk prevention and control tactics.

Bank performance was examined by Suyanto (2021) in relation to poor credit, liquidity, and capital adequacy. Financial institutions trading on the Indonesia Stock Exchange supplied the data, which covers the years 2011–2019. The program called WarpPLS 6.0 was used to assist the PLS-SEM analysis method. Research shows that poor credit and liquidity do not significantly affect bank performance. Poor performance by banks is often accompanied by high levels of poor credit. Low profitability is accompanied by a drop in bank earnings. Further evidence that the association is not statistically significant is the fact that banks may still use available resources to cover a portion of poor credit. One intermediary variable that has moderated the impact of poor credit and liquidity on bank performance is capital sufficiency. Capital sufficiency also significantly impacts the allocation of loans. According to agency theory, the money in a checking, savings, or deposit account is owned by the savers (the "principal") and managed by the bank (the "agent"). If clients always pay their bills on time, negative credit will never occur.

Afolabi et al. (2020) investigated the impact of credit risk on the profitability of microfinance firms in Nigeria. Six randomly selected microfinance organizations' published financial reports covering the years 2012–2018 provided the panel data used in the regression model. To determine how credit risk indicators impacted the banks' bottom lines, the researchers used a panel Ordinary Least Squares (OLS) regression strategy. As a substitute, we used nonperforming loans and reserves for loan losses.

The analysis found that non-performing loans considerably reduce ROA (t-stat=-2.4768 and $p=0.02 < 0.05$), whereas loan-loss provisions had a little negative effect (t-stat=-1.3316 and $p=0.19 > 0.05$). A t-statistic of 2.8171 and a p-value of $0.01 < 0.05$ indicated a positive and statistically significant relationship between returns on assets and total loans and advances, a control variable that was also included in the results. The study concluded that credit risk significantly impacted the profitability of Nigerian microfinance institutions. To cut down on defaults, microfinance institutions can institute credit policies that make it easier to keep an eye on their loan portfolios. Additionally, the government should make sure that microfinance banks follow the rules on debt accumulation by directing their appropriate organizations to do so.

Based on data collected from Nigerian DMBs for a period of twelve years (2010-2021) after the uniform accounting year-end was enforced by the CBN in 2009, Natufe and Evbayiro-Osagie (2023) analyzed the ROI and credit risk management of these institutions. The variables that comprised the data set were LLP, SZ, CAR, LQR, RAR, and NPLR. As for the dependent variable, it was ROI for equity. Panel data regression analysis reveals that CAR, RAR, NPLR, and SZ are the critical factors that control ROE. Currently, Nigerian DMBs rely mostly on Eurobond borrowings from offshore sources due to the CBN's prohibition on using local depositors' funds to build risk assets. During the research period, the data showed that shareholders of DMBs with international banking licenses in Nigeria received more handsome payments than those who invested in risk-free assets, such as government notes. Therefore, the CBN should maintain its supervision by doing periodic evaluations to guarantee that DMBs are correctly managing their credit risk; this would lessen the likelihood of loan defaults.

To find the association between credit risk management and financial success, Majani (2022) investigated commercial banks registered on Kenya's Nairobi Securities

Exchange from 2016 to 2019. The results of the trend, correlation, and regression analyses showed no statistically significant relationship between the NPLR, LLPR, and ROE. When it came to LAR, ROE was positively correlated, while CAR was negatively correlated. Researchers Kwashie et al. (2022) examined the impact of credit risk on the profitability of commercial banks in Ghana using data collected from 2013 to 2018. The two financial criteria that they used to evaluate their performance were ROA and EVA. It takes into account factors including the bank's age and size, loan-to-advance ratio, capital adequacy ratio, GDP, inflation and monetary policy rate (MPR) when determining risk. Regression model statistical examination of NPL's impact on ROA and EVA showed that EVA was substantially lower than ROA. The effects of LAR on ROA and EVA were minor yet positive. Although CAR had a large negative impact on LAR, its favorable effect on ROA was negligible. While size did affect EVA positively, it did not affect ROA in a statistically meaningful way. While age, GDP, and INF all had a favorable effect on ROE, none of these variables were associated with EVA. There was a statistically significant and observable negative impact of MPR on ROA on EVA.

Through an analysis of Vihiga County banks, Mudanya et al. (2022) sought to understand how commercial banks in Kenya handle credit risk and how well they do financially. Information gathered and analyzed came from the self-administered survey as well as secondary sources such as the banks' financial statements covering the years 2016–2021. Statistical analysis revealed that credit policies and processes, credit scoring, and monitoring loan defaults are all components of credit risk management techniques that significantly affect commercial banks' ROA. Credit risk management was another area of focus for the study of Nepalese commercial banks (Bhatt et al., 2023). As a result of analyzing data from a self-administered survey using

PLS-SEM, their conclusions are complicated. Credit evaluation metrics significantly impact credit risk, which in turn is favorably connected with environmental risk. In Nepalese commercial banks, market risk analysis influences credit risk management, which in turn influences environmental risk, market risk analysis, credit assessment metrics, and bank performance.

Nwanna and Umeh (2019) investigated the impact of credit risk management on the profitability of Nigerian deposit money institutions from 1989 to 2014 using the over parameterized and parsimonious ECM, and from 1998 to 2016 using Granger causality. The committee has decided that ROA and ROE will be the key performance metrics. At the same time, risk indicators for credit were the ratios of LDR, NLTL and TLTA. Their conservative ROA ECMs showed that this year's NLTL and its one lag period were the sole factors substantially reducing ROA. On the other hand, according to their conservative ROE ECMs, the current-period TLTA greatly enhanced ROE, and its one lag period considerably decreased ROE as well. Like Abubakar et al. (2019), Nwanna and Umeh (2019), and Harcourt (2017) it is noteworthy to note that no significant influence of NLTL was found on ROE. Still, between 2003 and 2018, a sample of deposit money banks in Nigeria were studied by Akinselure and Akinola (2019) to see how credit risk management affected their profitability. The researchers employed multiple regression models to establish a direct correlation between credit risk management and profitability. ROA and ROE were used as proxies for profitability, while the loan losses ratio was utilized as a proxy for credit management.

Munangi and Sibindi (2020) examined the impact of credit risk on the bottom lines of 18 separate South African banks from 2008 to 2018. To investigate the relationship between credit risk and financial performance, which was quantified by NPLs and ROA or ROE, respectively, a panel data approach known as pooled OLS was

employed. Additionally, the random effects and fixed effects estimators were utilized. When looking at the relationship between credit risk and financial performance, the study discovered a negative link. Consequently, the incidence of non-performing loans increases as bank profitability decreases. The second important takeaway is that the study proved that growth improves financial success. The findings demonstrate that bank development improves the capacity for production. Further evidence pointed to a positive relationship between capital adequacy and monetary achievement. Although a larger capital adequacy ratio might make a bank more competitive by generating trust in its stakeholders, a huge capital base may be perceived as a symptom of passivity and the waste of resources that could have been better utilized in other initiatives. Finally, there was no link between firm size and financial performance, according to the analysis. Last but not least, the study found that bank leverage and financial performance were inversely related. The findings indicate that local banks should adopt stringent and careful lending standards to lower the incidence of non-performing loans. Authorities should increase their supervision of financial institutions to ensure they are adhering to regulations on the management of their credit risk in order to decrease the probability of bank failure.

2.3.3 Inflation Rate and Financial Performance of Commercial Banks

Moyo and Tursoy (2020) looked at how the South African commercial banks' bottom lines were affected by inflation and the currency rate. This research looked at four of South Africa's biggest commercial banks from 2003 to 2019: Nedbank, Standard Bank, Capitec Bank, and FirstRand Bank are the bank names. Evaluation of the company's financial performance was based on the ROE and inflation and exchange rate. Overall, the ARDL, FMOLS, and DOLS models contribute to the research's success in achieving its objective. According to the findings, the rate of inflation has a significant

inverse relationship with total ROE, but the exchange rate has a marginally positive relationship with ROE.

The impact of inflation trends on the performance of Jordan's banking industry was examined by Almansour et al. (2021) using data from five Jordanina listed banks on Amman Stock Exchange from 2009 to 2019. Margin of net interest, return on investment, and ROA are the performance measures used in this study. To test whether inflation has an effect on bank performance, we use regression analysis as part of our empirical strategy for this quantitative method. According to descriptive statistics, the performance of Jordan's banks has been steadily improving from 2015 to 2018. This suggests that the banking sector has been operating efficiently during the research period, even if the country's inflation rate has been rising. Inflation rate and bank performance are strongly inversely related, according to the research. The findings also reveal that inflation has a substantial impact on the banks' profitability. The effect of macroeconomic variables on banks' performance can be better understood if interested parties focus on other macroeconomic variables. The banking industry is just one part of the financial market that will be the focus of future studies.

Credit risk, particularly non-performing loans, was studied by Akeem et al. (2022) to determine their effect on the profitability of Ghanaian commercial banks. Two indicators of monetary health are return on assets and economic value added. Additionally, internal bank criteria are taken into account, including the bank's age and size. The study include macroeconomic parameters including GDP, inflation, and the monetary policy rate. The research is based on panel data that covers the years 2013–2018 and pertains to fifteen commercial banks in Ghana. The results of the random effect estimate approach show that non-performing loans have a negative impact on both financial performance measures. Both financial performance indicators are

negatively affected by the monetary policy rate, with only a slight negative influence on the economic value-added statistic. Size and return on assets are two measures of financial success that are positively affected by age, gross domestic product, and the size of the bank. Strict credit risk management regulations should be followed by commercial banks while lending money and monitoring credit risk. In order to fix the situation, policies are frequently revised due to the inverse association between non-performing loans and financial outcomes. Banks should assess the value of collateralized depreciable assets on a regular basis, ideally once a year, to reflect the assets' deteriorating value. As a measure of financial performance, economic value-added has been mostly disregarded in previous research on the correlation between credit risk and financial success; this study fills that void.

Boahen et al. (2022) investigated how credit risk affected the profitability of Ghanaian banks. Profitability and credit risk were determined to be significantly correlated using the following measures: net charge-off rate, non-performing loan rate, and pre-provision profit as a percentage of total new loans and advances. Profitability, bank size, deep capital, and expansion all have a favorable correlation with each other. Credit risk of Ghanaian banks using ROA and ROE as financial performance metrics and capital adequacy ratio and non-performing loans as credit risk indicators. They found a substantial correlation. Credit risk was also examined by Marshal and Onyekachi (2021) in relation to the efficiency of a small number of Nigerian banks. Banks do better when their non-performing loan percentage is lower in relation to their loan advances, according to the statistics. A similar research was carried out by Samuel and Adeniyi (2022) to ascertain the effect of credit risk on the efficiency of Nigerian commercial banks. The results show that financial institutions are not as efficient as they may be due to credit risk. Also, a poor sign of a bank's health is the ratio of loans

and advances to total deposits, according to the research. Ebenezer and Omar (2022) found the same thing for Nigeria. It was already widely known, but Noman et al. (2023) provided the proof: credit risk harms the bottom lines of Bangladeshi banks. Net income margin, return on equity, and return on assets are some of the financial performance metrics that are part of the research. Capital adequacy, the ratio of non-performing loans to gross loans, the ratio of loan losses to non-performing loans, and the ratio of non-performing loans to gross loans are all useful metrics for assessing credit risk.

As stated by Ekinici and Poyraz (2019) there is an inverse relationship between non-performing loans and ROA and ROE. The profitability of the Sri Lankan banking system is influenced by credit risk, as stated by Bandara et al. (2021). The research indicates that ROA is reduced when non-performing loans are included. If we take out the net charge-off ratio and the loan-to-deposit ratio, we can see how profitable Sri Lankan banks are. A positive relationship between ROA and capital adequacy ratio was also discovered in the study. In their study of Indian commercial banks, Smarika and Sangeetha found that return on equity was strongly inversely related to non-performing assets. On the other hand, the study found no evidence of a correlation between capital adequacy ratio and ROE. Both Kaimu and Muba (2021) and others have found that non-performing loans reduce ROA. Financial performance, non-performing loans, and capital adequacy ratio were all found to be negatively correlated with commercial banks in Bangladesh, according to Yeasin (2022). A commercial bank's profitability is still positively correlated with its loan-to-deposit ratio.

Siddique et al. (2020) investigated the impact of NPLs and other bank-specific factors on the financial performance of commercial banks in both developing and developed Asian countries due to the alarmingly high ratio of NPLs. In order to measure financial

performance, this research takes into account bank-specific indicators such as CAR, sales growth, bank size, CER, and ROA and ROE. Using secondary panel data spanning 2006–2015, this empirical analysis draws its conclusions. Nineteen commercial banks from developing Asian nations (Pakistan and India) and seventeen commercial banks from developed Asian countries (Japan and Saudi Arabia) were chosen for the study. When estimating coefficients, the generalized technique of moment is employed to counteract the influence of certain endogenous factors. Commercial banks in both emerging and developed nations have a bad relationship between NPLs and CERs and their financial performance (ROA and ROE). For the most part, financial performance factors are inversely related to bank size. There is a strong positive correlation between the two financial performance metrics (ROA and ROE) in both groups, as well as between sales growth and the capital adequacy ratio. Management of commercial banks and regulatory bodies should implement policies that guarantee banking operations are efficient because of the significance of commercial banks to a country's economy as a whole.

Companies listed on the IDX that deal in consumer products were studied by Naja and Natsir (2023) to see how inflation, liquidity, and capital structure impacted their financial performance. Finding out how inflation, liquidity, and capital structure impacted the financial performance of consumer goods sector businesses listed on the Indonesia Stock Exchange (IDX) from 2016 to 2020 is the main objective of this empirical scientific study. ROE is used as a financial performance metric, capital structure as a measure of capital structure, liquidity as a proxy for financial performance, and inflation (IND) as a proxy for yearly inflation rate. Forty different consumer products businesses were chosen for this study. One hundred and twenty observations were produced using the purposive sampling procedure. Using EViews

12, panel data regression was used to analyze the data. Companies listed on the IDX that deal in consumer goods saw a positive and significant effect of inflation on their financial performance, while liquidity had a negative and insignificant effect. On the other hand, capital structure had a positive and significant effect.

Using data from retail establishments in South Africa, Olarewaju et al. (2020) assessed how inflation accounting affected business decisions and bottom line results. A quantitative research strategy was used in the investigation. In all, 161 customers from the 20 establishments in Kwa-Zulu Natal that were considered filled out our survey. Exploratory factor analysis and linear regressions were employed in this investigation. There were positive correlations found among the variables used in this study. Hence, for more accurate financial statements, it is advised that retail establishments continuously account for fluctuations in inflation and use inflation accounting methodologies. A lot of people are still not happy about how historical cost accounting is utilized to assess financial success. This has a favorable effect on their ability to make decisions and their financial results.

2.3.4 Monetary Policy and Financial Performance of Commercial Banks

The monetary policies and performance of Kenya's commercial banks were studied by Mutai (2020). In general, the performance of commercial banks has been steadily declining over the past decade. The study's overarching goals were to find out how commercial banks in Kenya fared when exposed to different interest rates, cash reserve ratios, open market operations, and discount window operations; how commercial banks fared when exposed to different market conditions; and how commercial banks fared overall when exposed to different market conditions. The study employed a basic random sampling technique to gather data from all of Kenya's commercial banks. For this study, we used the central bank's 2011 list of licensed commercial banks in Kenya

as our sampling frame. According to the research, 72.2% of the variation in the performance of Kenya's commercial banks is caused by monetary policy. Assuming all other independent variables were set to zero, the performance of commercial banks was 10.365. Increasing the central bank rate by one unit will increase their performance by 0.025. Increasing the cash reserve ratio by one unit will decrease their performance by 1.053 times. Increasing the open market operation by one unit led to a 0.057 increase in performance, and increasing the discount window operation by one unit will decrease their performance by 0.61. The study concluded that the sole monetary policy variable increasing commercial banks' profitability was a rise in the central bank rate, hence the bank of Kenya should think about doing just that. The profit margins of Kenya's commercial banks have been shrinking as a result of the country's central bank's decision to impose a low and unsuitable cash reserve ratio on the banking sector.

Okoye and Udeh (2020) examine the effect of monetary policy on corporate profitability in the banking sector with a reflection on the Nigerian economy. The study employed regression analysis to carry out the investigations. The data for the study were secondary data. The study developed four models which are expected to serve the purpose of forecasting the future profit of the banks examined. The result of the findings indicated that monetary policy has constrained corporate profitability of banks in Nigeria. Owing to this, it recommended, among others, that the monetary authorities should adopt strict adherence to deregulation.

Younus and Akhta (2020) analyze the role of SLR in Bangladesh's monetary policy instruments. By employing descriptive research approaches, they discovered that adjustments to the statutory liquidity requirement have been rare, and that there is evidence that a decrease in SLR has a favorable effect on bank loan and investment,

particularly before the 1990s. Findings indicate that SLR and the CRR are effective instruments for lowering inflation; nevertheless, they are both used solely in cases of extreme imbalance caused by catastrophic shocks. According to their claims, the market-oriented strategy of the Bangladesh Bank has led it to rely more on open market operations (OMO) as a tool of monetary policy than on adjustments to the Bank Rate and SLR.

Ogbulu and Torbira (2012) investigated monetary policy indicators, the bank asset channel of the monetary transmission mechanism, and the direction of causation between the two. Statistically significant and positive long-run relationships were found between BKA, MNS, CRR and MRR utilizing data from 1970 to 2010 and studies employing variance decomposition, co-integration, and error correction techniques. Additionally, it discovered a positive and statistically significant association between BKA and MNS, as well as a uni-directional Granger causation from CRR to MNS. Own shocks continue to be the primary cause of overall changes in the forecast inaccuracy of variables, according to the results of the variance decomposition of BKA to shock originating from CRR, MRR, and MNS. According to the research, monetary policies should be well-crafted so that they achieve their economic goals.

By following the transmission mechanism, Olweny and Chiluwe (2012) investigate the link between Kenya's monetary policy and private sector investment, providing light on the ways in which investment reacted to shifts in monetary policy. In order to investigate the interplay between the variables' short- and long-term impacts as a result of an external shock, this study used quarterly macroeconomic data from 1996 to 2009 and relies on unit roots and co-integration testing using a vector error correction model. In line with the IS-LM model, the study found that private sector investment is

positively correlated with money supply and domestic savings, and negatively correlated with government domestic debt and Treasury bill rate, two monetary policy variables. A 1% tightening of monetary policy tends to reduce investment by 2.63%, according to the study's empirical conclusions, whereas a loosening of policy tends to raise investment by 2.63%.

The performance of commercial banks in Nigeria was investigated by Onodugo et al. (2014) via the prism of monetary policy regimes. The study's methodology was an ex-post facto analysis with descriptive components. The Bulletin of the CBN provided us with the time series data that we needed. The investigation began with the formulation of eight hypotheses and research questions. To analyze the data, we utilized regression and Pearson's product-moment correlation. To verify our hypothesis, we utilized a t-test. The total asset value, deposit mobilization, loans and advances, and private sector credit were the dependent variables in multiple regression models with the monetary policy rate as the independent variable. During the SAP Period, total asset value, deposit mobilization, loans and advances, and private sector credit were uncorrelated with monetary policy regimes. Private sector credit, total asset value, deposit mobilization, loans and advances, and monetary policy regimes after the SAPS era were significantly affected by the research. The research suggests that policymakers use the Monetary Policy Instruments to make sure the banking sector gets the desired amount of economic activity.

Akeem et al. (2022) investigated how monetary policies affected the profitability of publicly traded deposit money institutions in Nigeria. The study's data came from a wide range of places, such as CBN statistics bulletins and the annual reports of the participating companies (2012–2021). Multiple linear regression and Pearson product correlation analysis were used to examine the hypotheses and ascertain the acceptance

or rejection of the null hypothesis. Open market operations do not financially benefit listed deposit money institutions in Nigeria, according to research. The paper states that listed deposit money banks in Nigeria are greatly affected by cash reserve ratios when it comes to profitability. This study's main takeaway is that combined monetary policies have a substantial effect on the profitability of Nigeria's listed deposit money banks. An alternative to OMO, which failed to provide any noticeable results, is to expand the parameters of monetary policy. According to the report, banks should maintain a healthy cash reserve ratio since it has a substantial impact on performance.

Dang (2022) studied the conditioning effect of bank business models on the connection between monetary policy and bank performance in a multiple-instrument setting. Research using a one-of-a-kind dataset of Vietnamese commercial banks covering the years 2007–2019 found that when the central bank raises policy rates or conducts open market operations to inject funds into the economy, banks respond by lowering overall returns and heightening financial instability. Furthermore, in contrast to open market operations, bank outcomes are aided by the building of foreign exchange reserves. The results show that banks may reduce the impact of monetary policy on their performance by shifting their business models to generate more non-interest revenue or diversify their income sources. All functions of risk-taking behavior, earning-profit capability, and financial stability are consistent with this conclusion, as are all interest and quantitative-based monetary policy indicators. Additionally, the study found that banks whose business models rely largely on non-traditional sectors do not see any substantial marginal impacts of monetary policy when charting them.

2.4 Conceptual Framework

The link between dependent and independent variables can be visually represented by a conceptual framework (Nind, 2020). By providing a visual representation of the

2.5 Explanation of Variables

The section delves into the connection between the two variables, illuminating how they work together.

2.5.1 Liquidity Risk

According to Ogundipe et al. (2020), commercial banks face liquidity risk when there's a chance that they won't have enough money to pay their bills right away. This danger is particularly associated with funding in commercial banks. Inadequate planning and anticipation of changes in financing sources and financial demands is the root cause of the risk (Adusei, 2021). Keeping a healthy cash reserve and spending as much as feasible to optimize profits are the two pillars of effective liquidity management. There are two primary components of liquidity risk, as suggested by Goodhart (2022). There are two key factors to consider when analyzing a bank's financial position: maturity transformation, which refers to the age of the bank's obligations and assets, and inherent liquidity, which is the ability of an asset to be sold at a reasonable price regardless of market conditions. If a bank has liquid assets that can be sold without incurring a loss, then maturity transition is not an issue. On the other hand, banks with assets with a shorter maturity date may not need to hold onto their liquid assets as much (Kablay & Gumbo, 2021; Bw'auma, 2021).

The liquidity gap is a measure of the potential for liquidity risk to emerge as a result of a liquidity mismatch. One definition of a liquidity gap is the discrepancy between an institution's assets and liabilities (Hillowle & Warui, 2021). This difference could have a positive or negative sign. When the difference between the bank's income and its estimated liabilities is negative, it indicates that the bank is losing money. After paying off all of its debts, a positive gap indicates that the bank has excess liquid assets. This may be seen as a measure of the financial risk that the business faces (Nikhil &

Deene, 2023). In addition to the maturity mismatch mentioned above, liquidity risk can also occur from economic downturns that lead to reduced resource generation. Liquidity risk is created as a result of the increased demand from depositors. Because of the potential for a domino effect, this may bring down the whole financial system. Early project termination, a deterioration in borrower cashflow, or both might provide a liquidity risk (Kablay & Gumbo, 2021).

Commercial banks are unable to expand due to liquidity problems. When times go tough financially, a bank that has enough cash on hand can weather the storm. For banks, having just the right amount of liquidity may boost their bottom line, while having too much of it might hurt their profits (Arif & Anees, 2022). Having a healthy mix of short-term assets and long-term obligations is essential for every commercial bank. According to Galletta et al. (2021), if a bank runs out of operating funds, its short-term assets can be quickly turned into liquid assets. Asset quality, operating efficiency, capital sufficiency, and bank size are the components of liquidity risk.

Banking is a venerable and esteemed occupation. The principles and practices of banking have remained unchanged since the inception of the banking business. Essentially, there are two fundamental principles: asset-liability mismatch and liquidity risk management (Choudhry & Jain, 2021). Banks generate liquidity by transforming easily accessible short-term liabilities into less liquid long-term assets and by expanding their off-balance sheet lending commitments and agreements. Banks exist primarily for the purpose of liquidity creation, in addition to risk transformation (Gupta & Kashiramka, 2020). Liquidity risk, as defined as the probability of a bank being unable to meet its financial commitments within the specified timeframe. Liquidity risk, as defined by Chen et al. (2021) refers to the risk arising from market or bank-specific events. Hence, it is essential to evaluate the potential sources that

might decrease cash inflow and increase cash outflow in such situations. Under typical conditions, the amount of deposits and the financial institution's dedicated credit lines to other institutions may demonstrate remarkable consistency. Nevertheless, at a period of intense liquidity strain, depositors may initiate rapid withdrawals of cash, while institutions may access significant amounts from their facilities. Simultaneously, the bank's counterparties may attempt to terminate credit lines that they have already agreed to provide to the bank. The initial indication of a financial crisis can be detected by the volatility of liquidity risk (Waemustafa & Sukri, 2016). According to Beja (1972), liquidity can cause a financially stable bank to become insolvent because it is forced to sell its assets at a significantly lower price than their actual worth in order to meet its immediate financial commitments. Consequently, the core issue in recent episodes of financial instability and global banking crises is around the problem of insufficient liquidity. The insufficiency of available funds resulted in the collapse of several financial institutions, which in turn had a cascading effect on other banks and the overall economy. (Gupta & Kashiramka, 2020).

Liquidity refers to the ability of a bank to pay out its loans and depositors with the minimum capital requirements met. Banks with sufficient capital appear to have higher profitability (Dietrich & Wanzenried, 2022). A bank's capacity to generate profits makes the cash provided by shareholders an attractive investment. A solid reputation and enough cash inspire trust from all parties involved. When dealing with liquidity issues, banks are more cautious. According to Paleckova (2016) and Mahathanaseth and Tauer (2014), larger, better-capitalized banks that can pay their bills on time tend to be more lucrative and secure financially. You need a capital cushion to weather every storm, whether it's predicted or unanticipated (Githaiga, 2021). Capital sufficiency is best assessed using equity, solvency ratio, and internal capital; this is

especially true for low-leverage, profit-making banks (Klepczarek, 2015). When banks are certain they have enough capital, they take on more measured risk, which reduces the likelihood of default.

2.5.2 Credit Risk

A borrower's potential inability to repay a loan is known as credit risk. The failure or delay in payment by the counterparty causes this (Martens et al., 2008). Improved decision-making speed and reduced cost of controlling credit risk are two outcomes of technological advancements in banking that are essential to effective credit risk management. According to Uzah et al. (2021), this necessitates a whole network of contractors and partners. One of the biggest threats that banks confront is credit risk, which is related to the way they do business. Banks help keep the economy stable and capital flowing efficiently by minimizing their exposure to credit risk, which in turn helps their own bottom lines (Abdullah et al., 2020). "Banks can incur significant costs due to defaults made by a small number of customers" (Khalid et al., 2021). When the Basel Accords were first being discussed, the Basel Committee recognized it as a key concern. A study conducted by Cheng et al. (2020) examined the impact of credit risk and other risk indicators on banks' profitability. Banks' financial performance was shown to be strongly correlated with risk components. Credit risk is positively correlated with bank profitability, according to Afolabi et al. (2020).

Mwawasaa and Ali (2020) state that ineffective management of credit risk can lead to substantial monetary losses and even insolvency. Not all banks consider credit risk management as an independent operation; this hinders their ability to identify, evaluate, and mitigate credit risk effectively. Analyzing banks' financial performance is the greatest way to evaluate credit risk and reduce the impact of non-performing loans (Nikhil & Deene, 2023). Uncertainty surrounds the result on returns when banks

extend loans. When borrowers are able to keep their payments current, banks reap the benefits of their risk. The relationship between banks' financial performance and credit risk has been the subject of conflicting empirical findings in the past (Okoth & Muia, 2020). Lending only to people who can afford it and reducing default rates are two of the most important strategies that banks can use to control their risk appetite and credit risk (Karuri, 2022). Profits are reduced due to a high rate of non-performing loans; however, this might be reduced with adequate risk management (Aliu & Sahiti, 2022).

When bank performance declines, it is often linked to an increase in credit risk. Research conducted by various scholars has indicated a clear inverse relationship between credit risk and profitability. This finding is supported by the works of Al-shakrchy (2021), Sbaarcea (2022) and Seemule et al. (2022). Furthermore, Saheb and Reddy (2023) conducted a study on NPLs and discovered their negative impact on bank performance. It is essential for banks to adopt strategies such as debt factoring in order to effectively manage non-performing loans and achieve success. In a similar vein, Peric and Konjusak (2022) discovered a negative correlation between ROA and non-performing loans. Credit risk was identified as a crucial factor in determining a bank's bottom line.

One of the key challenges associated with credit risk for Kenyan banks is the high prevalence of NPLs. NPLs occur when borrowers fail to make scheduled payments for an extended period, leading to potential losses for the lending institution (Al Maani et al., 2021). In Kenya, factors such as economic volatility, regulatory issues, and weak credit assessment and monitoring practices contribute to the accumulation of NPLs within bank portfolios. The presence of a significant proportion of NPLs can erode banks' profitability, deplete their capital reserves, and undermine investor confidence, ultimately impacting their financial performance (Nguyen, 2022).

The composition and quality of banks' loan portfolios play a crucial role in determining their exposure to credit risk (Bekhet et al., 2020). Commercial banks in Kenya often face challenges related to the lack of diversification in their lending activities, with a substantial portion of their loans concentrated in specific sectors such as real estate, agriculture, and SMEs. According to Okoth and Muia (2020), this concentration risk increases banks' vulnerability to sector-specific economic downturns or shocks, amplifying the potential for credit losses. Moreover, inadequate credit risk management practices, including lax underwriting standards and ineffective monitoring mechanisms, further exacerbate the risks associated with concentrated loan portfolios (Yulianti & Pakata, 2023).

According to Nganga and Atheru (2020), Kenyan banks also grapple with systemic credit risk, stemming from broader macroeconomic factors and structural vulnerabilities within the financial system. Economic fluctuations, political instability, and regulatory changes can significantly impact borrowers' ability to honor their obligations, leading to widespread credit defaults across the banking sector. Moreover, interconnectedness among banks and other financial institutions can amplify the transmission of credit risk throughout the financial system, potentially triggering systemic crises that threaten overall financial stability (Manyaga et al., 2020).

Addressing credit risk effectively requires a multifaceted approach that encompasses robust risk management frameworks, enhanced credit assessment practices, and prudent lending policies (Walde & Makori, 2022). Ngaruiya et al. (2022) asserts that Kenyan banks must strengthen their credit risk management capabilities by adopting advanced credit scoring models, conducting comprehensive credit analysis, and implementing proactive monitoring and early warning systems to identify emerging risks promptly. Moreover, enhancing regulatory oversight and governance standards

can help mitigate systemic credit risk and promote a more resilient banking sector. By addressing these challenges and implementing sound risk management practices, commercial banks in Kenya can enhance their financial performance, strengthen their competitiveness, and contribute to sustainable economic growth and development (Anjom, 2021).

2.5.3 Inflation Rate

Kenyan commercial banks' operations, profitability, and risk management methods are all indirectly and directly impacted by the country's inflation rate (Jefferis et al., 2020). The loss of buying power of money due to a general increase in prices over an extended period of time is known as inflation (Kablay & Gumbo, 2021). The valuation of assets and liabilities, the cost of money, the quality of loan portfolios, and overall economic circumstances are all impacted by inflation, according to Mutai (2020), which in turn affects their performance.

Inflation impacts the valuation of assets and liabilities on commercial banks' balance sheets. As the general price level rises, the nominal value of assets such as loans, securities, and real estate properties may increase, providing banks with higher reported profits and asset values (Al-Ardah & Al-Okdeh, 2022). However, the purchasing power of these assets may decline in real terms, especially if their returns do not keep pace with inflation (Alrwashdeh et al., 2023). Conversely, liabilities such as deposits and debt securities may become relatively cheaper to repay in real terms, benefiting banks by reducing their real debt burden. Thus, commercial banks must carefully manage their asset-liability portfolios to mitigate the adverse effects of inflation on asset quality and profitability (Al-Manaseer, 2020).

Inflation affects the cost of funds for commercial banks, influencing their NIM and overall profitability. In an inflationary environment, interest rates tend to rise as central

banks tighten monetary policy to curb inflationary pressures (Muriithi & Waweru, 2017). Higher interest rates increase the cost of funds for banks, as they must offer higher returns to attract deposits and other sources of funding (Al-Ardah & Al-Okdeh, 2022). However, banks may not be able to fully pass on these increased costs to borrowers, especially if loan contracts are fixed or have long durations. Consequently, banks' NIMs may compress, reducing their profitability unless they can effectively manage interest rate risk and adjust their lending rates accordingly (Alta'ani & Dali, 2020).

Nderitu (2022) opined that inflation can impact the quality of commercial banks' loan portfolios and credit risk profiles. High inflation rates may erode borrowers' purchasing power and debt-servicing capacity, increasing the likelihood of loan defaults and NPLs. Economic instability and reduced consumer confidence during inflationary periods may also lead to higher credit risk, as businesses and individuals struggle to meet their financial obligations (Folajimi & Dare, 2020). To lessen the blow that inflation will deal to the quality of their loan portfolios and their exposure to credit risk, commercial banks should do comprehensive credit assessments, keep a careful eye on how their borrowers are doing, and apply conservative lending procedures.

Inflationary pressures can influence the overall economic conditions in which commercial banks operate, affecting loan demand, investment activities, and business profitability. High inflation rates may dampen consumer spending and investment, leading to lower loan demand and slower economic growth (Natufe & Evbayiro-Osagie, 2023). This can constrain banks' lending opportunities and revenue generation potential, hampering their financial performance. Conversely, moderate inflation rates may stimulate economic activity and loan demand, benefiting banks by expanding their lending opportunities and revenue streams. However, excessive inflation can fuel

economic instability, currency depreciation, and financial market volatility, posing systemic risks to commercial banks and the broader financial system (Alshirah et al., 2020).

Inflation impacts the regulatory environment and monetary policy decisions that govern commercial banks' operations and risk management practices. Central banks often respond to inflationary pressures by adjusting key monetary policy instruments such as the benchmark interest rate, reserve requirements, and open market operations (Bekhet et al., 2020). These policy measures influence banks' funding costs, liquidity positions, and lending activities, shaping their risk-taking behavior and profitability. Additionally, regulatory authorities may introduce measures to mitigate inflation-related risks in the banking sector, such as enhancing capital adequacy requirements, implementing loan classification and provisioning standards, and strengthening supervision and enforcement mechanisms (Al Maani et al., 2021).

According to Nguyen (2022), inflation rate plays a crucial role in shaping the financial performance of commercial banks in Kenya, affecting their asset and liability management, profitability, credit risk exposure, and overall business environment. Commercial banks must closely monitor inflation trends, assess their impact on key financial indicators, and adapt their strategies and risk management practices accordingly. By proactively managing inflation-related risks and aligning their operations with prevailing economic conditions, banks can enhance their resilience, competitiveness, and long-term sustainability in the dynamic and challenging environment of Kenya's banking sector (Suyanto, 2021).

2.5.4 Monetary Policy

The Indian central bank and its monetary policy council work together to formulate and oversee the country's monetary policy. The committee will convene every other

month to determine the monetary policy rates (Kablay & Gumbo, 2021). The committee and banks decide the credit system using the repo and repo rate, among other monetary policy instruments such as the cash reserve ratio, statutory liquidity ratio, repo and reverse repo rates, marginal standing facilities, and bank rates (BR). The committee has declared some quantitative tools, and all commercial banks in India, whether public or private, are required to use the rates that have been chosen. The committee's rate decisions will aid the economy in managing inflation and liquidity (Anjom, 2021).

Shakatreh (2020) states that expansionary and contractionary policies are the two main categories of monetary policy. In times of low liquidity, expansionary monetary policy can assist replenish the economy's funds supply by lowering interest rates. For that reason, it finds usage when times are tough. Reducing inflation and surplus liquidity is the goal of contractionary monetary policy, which entails raising interest rates to limit the money supply (Al Maani et al., 2021).

The central bank can affect some elements on commercial banks' balance sheets through direct monetary policy actions. Monetary authorities in such a system determine interest rates and distribute credits in line with the government's economic strategy. According to Odigie et al. (2022), this approach gives no weight to financial market circumstances when deciding on financial pricing, returns, or credit allocation. Conversely, financial (banking performance) and indirect monetary policy are causally related since they impact one another. Crucial stages towards the development of financial markets include the deregulation of interest rates and the implementation of indirect monetary policy. The financial sector was undeveloped and interest rates were intentionally kept low, making the adoption of market-based instruments impractical throughout the direct monetary policy era (1960–1985) (Alamri & Almazari, 2021).

The adoption of Structural Adjustment Program (SAP) in Nigeria as offering a sea of policy change in monetary policy development in Nigeria. The deregulation exercise in the financial system, led to the adoption of indirect monetary policy with the open market operation as the primary tool, which was complemented by reserve requirements, discount window operations, foreign exchange market intervention and injection/withdrawal of public sector deposits in and out of the Deposit Money Banks. Ghenimi et al. (2020) believed that in trying to strengthen the policy, the discount houses were established which served as the intermediary between the CBN and the banks in the sale and purchases of OMO instruments.

The goal of monetary policy, according to Ezenduyi (2022), is to maintain a macroeconomic environment free of inflation by manipulating the money supply (through various means), interest rates, exchange rates, and the expectation that these actions will have an effect on the level of economic activity and inflation. According to Ibeabuchi (2022), monetary policy is the set of tools used by monetary authorities to control the supply and demand for money and credit in order to maintain stable prices. Monetary policy is described by Onouorah et al. (2021) as the set of rules and regulations put in place by the central bank to regulate inflation and the money supply in order to achieve economic growth. A nation's pursuit of and formal articulation of how money impacts economic aggregate has been monetary policy, according to Onyeiwu (2022), a strategy of economic management that aims to bring about sustainable economic growth and development. Monetary policy, according to Chigbu and Okonkwo (2022), is the government's calculated attempt to achieve macroeconomic stability through influencing the level of economic activity through changes in the money supply, cost of credit, size of credit, and direction of credit. According to Ratemo and Ndede (2021), conventional and non-traditional quantitative

instruments are the two main groups into which monetary policy instruments fall. There are four main goals of Nigeria's monetary policies.

Monetary policy has a significant impact on the profitability of banks in two distinct ways. Firstly, lowering interest rates has a positive effect on the overall economy, benefiting banks by reducing their expenses and improving the creditworthiness of borrowers (Kemunto et al., 2020). Additionally, a more accommodative monetary policy could potentially result in a decrease in net interest income. Several studies have explored the correlation between monetary policy and bank profitability. Nevertheless, this area remains relatively unexplored (Borio et al., 2021) leading to a lack of consensus among researchers regarding the impact of monetary policy on bank performance.

According to Gbosi (2022), the goal of monetary policy is to manage the money supply in order to combat any unsavory economic tendencies, such as inflation, slow development, imbalance in the balance of payments, or unemployment. Both expansionary and restrictive monetary policies are possible. According to Fareso (2023), an expansionary monetary policy aims to boost aggregate demand by increasing the money supply, which in turn makes credit more accessible and lowers interest rates. The best course of action for the economy is an expansionary monetary policy when aggregate demand is low compared to its production capability. Conversely, restrictive monetary policy entails reducing aggregate investment by slowing the increase of money income, which in turn reduces consumer spending and makes it more difficult to acquire funds for investment (Imoisi et al., 2023).

2.5.5 Financial Performance of Commercial Banks

Risk and performance measures are associated with the profitability of banks (Abubakar et al., 2021; Afolabi et al., 2020; Cheng et al., 2020; Soyemi et al., 2021).

Distinct management businesses, in contrast, are in business to increase shareholder value. But other measures, such as gross profit margin, may be used to evaluate the financial well-being of DMBs. An important profitability statistic, net profit margin measures the amount of money that stays after deducting the direct costs (cost of products sold) that were utilized to produce revenue. One common way to express it is as a percentage. One measure of a company's profitability is its ROE, which indicates the rate at which shareholders' money was turned into profit over a certain reporting period (Hagel et al., 2020). Like ROE, ROA measures the profitability of an organization over a certain time period by taking into account all of its financing sources, not only equity investors' profits. Divide total assets by shareholders' equity to get the Equity Multiplier (EM), which is used to calculate ROE and then added to ROA (Clark et al., 2022; Lopez et al., 2022). Among the several measures used to assess a bank's financial health, ROE and ROA stand out as the most popular according to the available data (Kosmidou, 2021).

The performance of banks influences the decisions of shareholders. Profit maximization is said to be the most important goal of a business (Damilola, 2022). Under competitive market conditions, profit is one of the most appropriate measures of performance (Pandey, 2010). Profit is defined as the excess of a company's revenue over its associated costs for an accounting period. The wide variety of definitions makes profit an imprecise operational word. There are several different forms of profit, including pre-tax profit, post-tax profit, gross profit, net profit, profit per share, and return on assets (Pandey, 2020).

Understanding liquidity is crucial for assessing a bank's ability to fulfill its short-term obligations and support its lending operations without relying on external funding. Assessing a bank's liquidity position can be done through the use of liquidity ratios,

such as the LCR and the LDR (Almansour et al., 2021). Understanding the LCR is crucial for assessing a bank's resilience in the face of sudden liquidity shocks. It involves analyzing the bank's high-quality liquid assets and comparing them to net cash outflows within a specific timeframe. Meanwhile, the LDR indicates the proportion of loans funded by deposits, providing insights into the bank's reliance on customer deposits for lending activities. Maintaining adequate liquidity is essential for commercial banks in Kenya to manage liquidity risks, comply with regulatory requirements, and preserve depositor confidence (Ekinici & Poyraz, 2019).

A bank's asset quality, which reflects the credit risk in its loan portfolio, is an important indicator of its financial health and stability. Natufe and Evbayiro-Osagie (2023) state that the LLPR and NPLs are important metrics for evaluating the quality of assets. NPLs represent loans that are past due and not expected to be repaid in full, indicating potential credit losses for the bank. The LLPR measures the adequacy of loan loss reserves relative to the bank's total loan portfolio, providing insights into its provisioning practices for credit losses (Munangi & Sibindi, 2020). CBK employ robust credit risk management frameworks to identify, monitor, and mitigate credit risk exposures, thereby preserving asset quality and safeguarding their financial stability (Smarika & Sangeetha, 2021).

For a commercial bank to be solvent and able to withstand unforeseen losses, capital sufficiency is crucial (Mutai, 2020). Regulatory bodies like the CBK mandate the capital adequacy ratio (CAR) as a way to determine the capital adequacy of a bank in relation to its risk-weighted assets (RWAs). With higher ratios reflecting better capital levels, the CAR acts as a cushion to absorb losses and sustain depositor trust. According to Manyaga et al. (2020), commercial banks in Kenya must keep their

CARs above the legal levels in order to comply with prudential requirements and reduce systemic risks in the banking industry.

Another important component of a commercial bank's financial success, according to Nderitu (2022), is efficiency, which reflects the bank's skill in cost management and resource optimization. The operational efficiency and profitability of the bank may be assessed using efficiency ratios like the operating expense ratio (OER) and the cost-to-income ratio (CIR). The CIR shows how well the bank manages its costs by comparing operational expenses to total income. At the same time, the OER determines the cost structure and operational efficiency of the bank by calculating its operating expenditures as a proportion of total assets (Suyanto, 2021). According to Folajimi and Dare (2020), commercial banks in Kenya are always looking for ways to improve their efficiency, which includes using technology, optimizing processes, and implementing strategic cost management efforts. Their goal is to increase profitability and stay competitive.

Commercial banks in Kenya are highly influenced by their governance procedures and regulatory compliance when it comes to their financial success (Nderitu, 2022). It is the responsibility of regulatory compliance to guarantee that financial institutions follow all rules and regulations imposed by bodies like the CBK and the Banking Act (Moyo & Tursoy, 2020). Retaining public faith in the banking industry depends on institutions adhering to prudential rules, AML legislation, and consumer protection requirements. Independent board oversight, transparent disclosure practices, and robust risk management frameworks are all examples of effective governance practices that Kenyan commercial banks can implement to improve their long-term sustainability and financial performance (Munangi & Sibindi, 2020).

Kenyan commercial banks' bottom lines are affected by market forces and macroeconomic variables. Naja and Natsir (2023) found that banks' lending, deposit mobilization, and investment decisions are impacted by economic growth, inflation, interest rates, and volatility in exchange rates. Changes in government policies, regulatory frameworks, and industry competition also impact banks' profitability, risk profiles, and strategic priorities. Commercial banks in Kenya must navigate these external factors effectively, anticipate emerging trends, and adapt their business models and strategies to maintain resilience and competitiveness in the evolving banking landscape (Smarika & Sangeetha, 2021).

A thorough analysis of the financial performance of Kenyan commercial banks takes into account their responsiveness to market and macroeconomic dynamics, efficiency, profitability, capital sufficiency, asset quality, regulatory compliance, and governance procedures (Moyo & Tursoy, 2020). Commercial banks in Kenya can grow and develop their financial stability, profitability, and competitiveness by concentrating on these important indicators and putting effective risk management and business strategies into place (Yeasin, 2022).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlined the study design, model definition and implementation, target population, data sampling and sample size, as well as the data gathering and analysis methodologies that were utilized to address the previously mentioned research questions and evaluate the assumed hypothesis.

3.2 Research Design

Hennink et al. (2020) state that the configuration and structure upon which a research process is founded is known as a research design. To answer the research question clearly, the study design specifies the technique, data collecting type, and analysis type that will be needed. To provide a broad overview of the features of a specific instance, this study used a descriptive research strategy due to its emphasis on intricate analysis to reveal the correlation of variables. This is in line with the explanations provided by Adams and McGuire (2022) on descriptive designs. They state that this type of design is suitable for answering research questions such as “who,” “what,” “where,” and “how” by gathering information through questionnaires given to a select group of people. King (2022) states that the purpose of a descriptive research is to establish the “what,” “where,” and “how” of a phenomenon. When completed, this research will have the ability to apply its results to all commercial banks.

Summaries of data, including central tendency measures like the mean, median, mode, variance, percentage, and correlation between variables, are reported in descriptive research (Nind & Lewthwaite, 2020). Reports about measures of central tendency, variation, and correlation are produced by descriptive statistics through the use of data collecting and analysis procedures. Descriptive research stands itself from other forms

of research due to its summary and correlation statistics, as well as its emphasis on particular study topics, methodologies, and outcomes (Abu-Bader, 2021).

3.3 Target Population

In scientific research, a population is defined as all the entities (humans, units, events, etc.) in the study's target universe that share some observable trait or features (Hennink et al., 2020). The research population can be defined as any set of individuals, whether finite or infinite, and can include both the target population and the study population (Straub et al., 2022). The term "target population" is used by Zyphur and Pierides (2020) to describe the complete set of people or things that a researcher hopes to draw conclusions about.

Personnel working in the Nairobi, Kenya, headquarters of commercial banks were the intended subjects of this research. Specifically, it included individuals from three management tiers: senior management, middle management, and lower management. Senior management group comprises 47 individuals. They are at the top level of management within the commercial banks and are responsible for making strategic decisions and overseeing the overall operations of the banks. They occupy positions such as CEOs, CFOs, COOs, and other top executives.

There are 128 individuals in this category. Middle managers are positioned between senior management and lower-level employees. They supervise lower management staff and translate strategic goals set by senior management into actionable plans. Titles within this group may include department heads, branch managers, and regional managers.

The largest group, consisting of 303 individuals, comprises lower-level management staff. These employees are responsible for executing the day-to-day operations of the

bank, often under the supervision of middle managers. Titles within this group may include assistant managers, team leaders, and supervisors.

Table 3.1

Target Population

Category	Frequency	Percentage
Upper-Level Management	47	10
Mid-Level Management	128	27
Low-Level Management	303	63
Total	478	100

3.4 Sampling Frame

According to Hennink et al. (2020), the sampling frame is made up of all the units that might potentially be a part of the sample and serves as a physical representation of the target population. Lindner et al. (2020) state that the sampling frame specifies the population that was used to generate the sample and extrapolate the results. A sampling frame is a comprehensive inventory of all the units of the population that is used to draw random samples (Surucu & Maslakci, 2020). Managerial and administrative staff from all Nairobi-based commercial banks were a part of the sample frame for this study. It is the responsibility of the Kenya Bankers Association (KBA) to maintain the list of commercial banks in Kenya.

3.5 Sample Size and Sampling Technique

Choosing a subset of a population from a bigger one is called sampling. The goal of statistical sampling is to derive conclusions about a broader population by selecting a subset of that group that is statistically representative (Zyphur & Pierides, 2020). The research employed a stratified sampling method. To get the right mix of people from different categories, stratified random selection is used. Researchers divided the

population into similar-looking subgroups using stratified random sampling, according to Scuotto et al. (2020). In addition, Mohajan (2020) argues that stratified sampling guarantees the inclusion of subgroups in the sample that would have been completely excluded from other sampling procedures due to their tiny population numbers. To calculate the sample population, the Yamane formula was employed. Based on the data presented in the table, the sample for this research consisted of 218 participants.

$$n = \frac{N}{1+N(e^2)}$$

$$n = \frac{478}{1+478(0.05^2)}$$

$$n = 218$$

Table 3.2

Sample Size

Category	Sample Size	Percentage
Upper-Level Management	21	10
Mid-Level Management	59	27
Low-Level Management	138	63
Total	218	100

3.6 Data Collection Instruments

According to Halperin and Heath (2020), research methods such as interviews, questionnaires, observations, and surveys are examples of primary data, which is unique and authentic, while secondary data, although easily accessible, is not as solid as primary data since it has undergone multiple statistical treatments. This information was gathered from several online and offline sources, including journals, magazines, and websites. The research used primary sources to find out what factors influence interest rates and how well commercial banks are doing financially. Primarily, the

researcher collected data through surveys. Filled questionnaires were collected later from respondents.

3.7 Data Collection Procedures

Primary data was utilized in this investigation. A questionnaire, designed and made by the researcher, will be used to gather the main data. With the approval of the commercial banks' human resource managers, the researcher personally distributed the questionnaire to each responder. Drop and select was the method that was used. The response rate was enhanced through the use of human visits and phone calls for follow-up. Secondary data, on the other hand, came from banking-related periodicals, journals, and other written materials that help with things like staff counts and bank networks.

3.8 Pilot Study

A pilot study allows the researcher to spot possible issues that might impact the validity and quality of the results (Clark et al., 2021). In addition, they argue that it entails testing out specific research instruments to identify areas that need improvement in order to conduct the study efficiently and effectively. This provided early notice of potential problems with the primary research effort.

After the questionnaire is finished, Busetto et al. (2020) suggest testing it in the field. According to their argument, a sample size of 1–10% should be utilized for questionnaire pretesting. In addition, he states that the piloting sample should be comparable to the actual sample, and that participants from the actual sample should not be employed. Twenty-two participants served as pilots for the research instruments used in this study. In order to enhance surveys, piloting is crucial (Briggs & Coleman, 2021). This is because it identified issues such clustered questions, incorrect wording, inadequate room to write replies, and confusing directions. It also showed that some

of the questions are not clear or that people have diverse interpretations of them. The questions were refined throughout the pilot phase. Hence, questionnaires were fine-tuned following the pilot research before data collection.

3.8.1 Reliability

The term "reliability" describes how consistently the same person gets the same findings from the same instrument. The degree to which a research instrument consistently produces the same outcomes or data after several trials is defined by Blischke and Murthy (2021) as dependability. The reliability of the result's observation served as confirmation. Using Cronbach's alpha formula, the researcher subsequently calculated the reliability coefficient for the reliability test. According to Lo et al. (2020), the majority of researchers find a correlation coefficient of 0.70 at a significance level of 0.05 to be acceptable. This study utilized instruments that provide a coefficient greater than 0.7. This indicated a high level of data dependability, making the instruments suitable for the research.

3.8.2 Validity

Test validity refers to how well a test measures its intended constructs. Also, according to Surucu and Maslakci (2020), validity is the extent to which the outcomes of a data analysis truly depict the phenomena being studied. According to Mohajan (2020), validity is the extent to which the outcomes of data analysis are indicative of the variables being studied or the findings that were produced. Acceptance of both content and face validity were exhibited in this study. Content validity determined if the questions asked in the surveys are suitable and pertinent to the research. Whereas, according to Lindner et al. (2020), face validity guarantees that the questionnaire looks feasible, is easy to read, and uses clear language, consistent style, and structure overall.

3.9 Data Analysis and Presentation

According to Surucu and Maslakci (2020), data analysis entails sorting the study's acquired data into meaningful categories based on shared traits. Noted by McKinney (2022) are the steps of data analysis: collection, cleaning, processing, and presentation. In this study, the process included reviewing, revising, coding, and testing hypotheses before analysis. The quantitative data was analyzed with SPSS version 28, which allowed for the computation of the response rate and descriptive statistics and inferential analysis.

3.10.1 Statistical Measurement Model

The purpose of the multiple linear regression study was to determine which mathematical model best explained the correlation between the variables. Since multiple regression offers a comprehensive and flexible framework that many analysts find useful, it is often used (Zyphur & Pierides, 2020). Previous research has made advantage of this (Chweya et al., 2020).

Regression model

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

Y – Dependent Variable (Financial Performance of Commercial Banks)

‘ β_0 – is a constant, the results when all variables X_1 to X_4 are zero.

X_1 – Liquidity Risk

X_2 – Credit Risk

X_3 – Inflation Rate

X_4 – Monetary Policy

‘ $b_1 - b_4$ – Regression coefficients

ε – error term

3.11 Diagnostic Tests

Parametric tests, used in statistical analysis, make assumptions about the data based on several features (Zyphur & Pierides, 2020). When these assumptions are violated, the research's conclusion and interpretation of the results are affected. Therefore, all research must follow these assumptions for accurate interpretation. In this study the following, assumptions were considered, linearity, multicollinearity, normality and heteroscedasticity.

3.11.1 Linearity

Linearity is an assumption that the data collected would form a straight line when graphed (Garson, 2022). Linearity is a requirement for performing linear regression. A linear regression line for nonlinear data was not the line of best fit. In this study, linearity assumption was tested with scatter plots.

3.11.2 Multicollinearity

Multicollinearity refers to excessive correlation of the predictor variables. When correlation is excessive (using the rule of thumb, $r > 0.90$), standard errors and beta coefficients become large, making it difficult or impossible to assess the relative importance of the predictor variables. Multicollinearity test were done to determine whether there is any undesirable situation where the correlations among the independent variables were strong. Multicollinearity occurs when the independent variables are not independent from each other. In this study, VIF was used to determine the multicollinearity. The VIF is defined as $VIF = 1/T$. Similarly, with $VIF > 10$ there is an indication for multicollinearity to be present; with $VIF > 100$ there is certainly multicollinearity in the sample.

3.11.2 Normality

Normality means that the distribution of the test is normally distributed (or bell-shaped) with 0 mean, with 1 standard deviation and a symmetric bell-shaped curve. In this study, normality was tested using S-W test.

3.11.3 Heteroscedasticity

Heteroscedasticity means a situation in which the variance of dependent variable varies across the data. Homoscedasticity assumes that scores are normally distributed about a regression line (Garson, 2022). In this study, homoscedasticity was assessed by examination of a scatter plot of the squared residuals.

3.11.4 Linearity

Linear plots were used to explore the data for non-linearity, outliers, and missing values. The term "outlier" refers to data points that do not fit the statistical pattern of the sample (Garson, 2022). The consistency of a data point with its neighbors and the standardized residual are two necessary conditions that must be satisfied in order to classify a data point as an outlier. In order to mitigate the impact of the outlier, the accommodation strategy entailed making adjustments to the study or model (Rencher, 2002).

3.12 Ethical Considerations

Kenya Methodist University was consulted in order to get permission for the research to proceed. After this, we will apply for a research permission to conduct the study with the NACOSTI. In the end, the study used an authorization letter to get the go-ahead from the management teams of different publicly traded commercial banks (Appendix I). A letter of introduction was sent to each responder once the researcher had obtained authorization from the management of the commercial banks. The

purpose, general agreement, and willing expectations of the research participants were laid forth in this introductory letter. Confidentiality was key to the study especially identities of respondents. In addition, the researcher took precautions to safeguard and prevent tampering with the obtained data in order to keep it intact. To prevent accusations of plagiarism, the researcher provided proper citations for all sources consulted for the topic study. Acknowledging sources, using in-text citations, and creating a list of references were all part of the process.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

Both descriptive and inferential analysis were utilized in the present chapter to examine the data. The study's findings are influenced by the conceptual relationship outlined in the conceptual framework. This chapter covers topics such as response rate, validity, reliability, and assumptions related to regression analysis.

4.2 Response Rate

There were a total of 218 questionnaires sent, with a satisfactory return rate of 188. Even after several reminders and extensions, some respondents still did not return the full surveys, while others flat-out refused to do so. Table 4.1 displays the response rate as a consequence. As may be seen in Table 4.1, the response rate was at 86%. After determining that a response rate more than 50% is sufficient for a descriptive research, Garson (2022) deemed this an overall success. Also, according to Mohajan (2020), you may generalize the features of a research topic based on the opinions of a small number of respondents in the target population if the response rate is more than 30% of the entire sample size. Assuming these things to be true, the study's response rate of 86% was sufficient to collect data for analysis and draw conclusions.

Table 4.1

Response Rate

Response	Frequency	Percent
Returned	188	86
Unreturned	30	14
Total	218	100

4.3 Pilot Results

4.3.1 Reliability Analysis

Table 4.2 provides the results of a reliability test using Cronbach's alpha, which is a measure of internal consistency, to assess the reliability of various variables in a study. Liquidity Risk variable comprises 8 items and has a Cronbach's alpha of 0.701. In general, a Cronbach's alpha value above 0.70 is considered acceptable, indicating that the items within the liquidity risk variable consistently measure the underlying construct. Therefore, the internal consistency of the liquidity risk items is deemed acceptable for further analysis.

Credit risk also includes 8 items and has a slightly higher Cronbach's alpha value of 0.710. This value is also above the threshold of 0.70, signifying that the items related to credit risk have good internal consistency and reliability. This indicates that the items reliably measure the concept of credit risk. The inflation rate variable also consists of 8 items, with a Cronbach's alpha of 0.700, which is exactly at the acceptable threshold. Although it is on the lower end of acceptability, it still meets the criteria for reliability. This suggests that the items related to inflation rate are sufficiently consistent in measuring the intended construct.

With a Cronbach's alpha of 0.896, the 7-item Monetary Policy variable is significantly more reliable than the average. There is strong internal consistency among the questions assessing monetary policy, as shown by a Cronbach's alpha score of 0.896. This high level of dependability indicates that the items consistently evaluate the idea of monetary policy. The Cronbach's alpha for the financial performance variable is 0.871. Items used to measure financial performance are dependable and consistent, as indicated by this number, which suggests a high level of internal consistency. This variable's measurement is robust, as shown by the strong Cronbach's alpha value.

Overall, the Cronbach's alpha values for all variables range from 0.700 to 0.896, indicating acceptable to high levels of reliability. The comments section affirms that all the variables have been accepted based on their reliability scores, enabling their use in further statistical analyses. This level of reliability ensures that the constructs are being measured consistently, which is crucial for the validity of the study's findings.

Table 4.2

Reliability Test

Variables	No. of items	Reliability Cronbach's alpha	Comments
Liquidity Risk	8	0.701	Accepted
Credit Risk	8	0.710	Accepted
Inflation Rate	8	0.700	Accepted
Monetary Policy	7	0.896	Accepted
Financial Performance	8	0.871	Accepted

4.3.2 Validity

Table 4.3 provides crucial insights into the suitability of the data for factor analysis through the KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity. The KMO value obtained is 0.794, which falls within the range considered good for sampling adequacy. The KMO statistic, which varies between 0 and 1, indicates that values above 0.6 are acceptable for factor analysis. Specifically, values between 0.7 and 0.8 are deemed good, and values between 0.8 and 0.9 are considered great. Hence, a KMO value of 0.794 suggests that the sample size is adequate and the partial correlations among variables are relatively small. This implies that the variables share common factors and are well-suited for factor analysis.

The data are suitable for factor analysis, as further confirmed by Bartlett's Test of Sphericity. A 581.327-approximate chi-square value with 10 degrees of freedom and a 0.000 significance level was produced by the test. If the variables are unrelated and

not good candidates for structure identification, then this test will find out if the correlation matrix is an identity matrix. If the p-value is less than 0.05, which indicates a significant result, then the variables are sufficiently connected for component analysis, and the correlation matrix is not an identity matrix. Here, we can see that the variables are associated since the p-value of 0.000 indicates that the null hypothesis is strongly rejected.

Overall, the results from Table 4.3 strongly indicate that the data is appropriate for factor analysis. The KMO measure of 0.794 highlights good sampling adequacy, ensuring that the sample size is sufficient and the variables are appropriate for this analysis. The highly significant result from Bartlett's Test of Sphericity, with a p-value of 0.000, further confirms that the variables are adequately correlated. These findings collectively provide robust evidence that the dataset is suitable for factor analysis, ensuring that the extraction of factors will yield meaningful and reliable results.

Table 4.3

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.794
Bartlett's Test of Sphericity	Approx. Chi-Square	581.327
	df	10
	Sig.	.000

4.4 Demographics Characteristics

4.4.1 Level of Education

Table 4.4 presents the distribution of respondents based on their level of education, providing insights into the educational composition of the sample population. The total number of respondents is 188, with various educational qualifications ranging from College Diploma to PhD. The table shows that a significant proportion of the

respondents, 66 individuals or 35%, hold a Master's degree. This indicates that a substantial segment of the population has attained a high level of education, which may suggest a highly educated group that could influence the study's outcomes and insights significantly due to their advanced knowledge and expertise.

Following this, 52 respondents, making up 28% of the sample, have an Undergraduate degree. This sizeable group represents those who have completed a basic level of higher education, which is essential for understanding the foundational aspects of the subject matter being studied. The third largest group consists of those with a Postgraduate Diploma, accounting for 38 respondents or 20% of the sample. This level of education indicates a commitment to further education beyond the undergraduate level, often aimed at specialization in a specific field.

Individuals with a College Diploma make up 12% of the sample, with 22 respondents. This group represents those who have completed a shorter duration of higher education, typically focused on practical and vocational skills. Lastly, 10 respondents, constituting 5% of the sample, hold a PhD. This group represents the highest level of academic achievement and likely contributes a depth of knowledge and expertise to the study.

In summary, the educational distribution of the respondents in Table 4.4 is skewed towards higher levels of education, with the majority having attained at least an undergraduate degree. The largest group holds a Master's degree, followed by those with undergraduate degrees and postgraduate diplomas. A smaller proportion has either a college diploma or a PhD. This distribution indicates that the sample population is predominantly well-educated, which can have significant implications for the study's findings, given that educational background can influence perspectives, understanding, and responses to the research subject.

Table 4.4***Level of Education***

Level	Frequency	Percent (%)
College Diploma	22	12
Undergraduate	52	28
Postgraduate Diploma	38	20
Masters	66	35
PhD	10	5
TOTAL	188	100.0

4.4.2 Years of Experience

Table 4.5 outlines the distribution of respondents based on their years of experience, offering a detailed view of the professional experience within the sample population. The total number of respondents is 188, with their experience categorized into three groups: 0-10 years, 11-20 years, and above 20 years.

The largest group consists of respondents with over 20 years of experience, accounting for 76 individuals or 40% of the sample. This indicates that a substantial portion of the respondents has extensive professional experience, which may contribute significantly to the depth and reliability of the insights provided in the study. These individuals are likely to have a wealth of knowledge and a broad perspective on the subject matter due to their prolonged exposure and involvement in their respective fields.

Following this, 67 respondents, or 36% of the sample, have between 0-10 years of experience. This group represents those who are relatively early in their careers. Their perspectives might bring fresh insights and contemporary approaches to the study, reflecting recent trends and developments in their areas of expertise. The third group includes respondents with 11-20 years of experience, making up 45 individuals or 24%

of the sample. This cohort sits in the middle range of professional experience, combining elements of both early career enthusiasm and seasoned expertise. They are likely to offer balanced views, bridging the insights of both newer and more experienced colleagues.

In summary, the distribution of respondents based on years of experience, as presented in Table 4.5, shows a diverse range of professional backgrounds within the sample population. The largest segment, with over 20 years of experience, indicates a significant depth of knowledge and long-term perspective. The substantial number of respondents with 0-10 years of experience suggests a dynamic input from those newer to their professions. Meanwhile, those with 11-20 years of experience provide a critical middle ground of balanced insights. This varied distribution ensures a comprehensive range of perspectives, enhancing the robustness and depth of the study's findings.

Table 4.5

Years of experience

Operation Period	Frequency	Percent (%)
0-10 years	67	36
11 - 20 years	45	24
Above 20 years	76	40
TOTAL	188	100.0

4.5 Descriptive Results

The descriptive findings are presented in this section. Percentages, frequencies, means, and std dev were all used in the study's analysis.

4.5.1 Liquidity Risk

According to the data, "Banks with a higher Loan to Deposits Ratio are more exposed to liquidity risk" (std dev = 0.66168, average score = 4.1064). With a standard

deviation of 0.85937, the average score for the assessment of whether "The Loan to Deposits Ratio adequately captures the liquidity risk associated with lending activities" is 3.9309. With an average score of 4.2021, and a standard deviation of 0.58647, the statement "A higher Cash Position Indicator indicates better liquidity management by banks" is correct. A std dev of 0.63715 and an average score of 3.9787 indicate that the Cash Position Indicator is a reliable predictor of a bank's capacity to satisfy short-term obligations. Both the average and standard deviation for the statement "A higher Capacity Ratio indicates a stronger liquidity buffer against unexpected cash outflows" are 3.9255 and 0.74201, respectively. On average, the sentence "The Capacity Ratio provides a comprehensive assessment of a bank's liquidity risk exposure" had a score of 4.2606, and the standard deviation was 0.59512. With a standard deviation of 0.63078, the statement "A higher Liquid Assets to Total Assets Ratio indicates a more liquid balance sheet" holds an average score of 4.1383. Finally, the statement "Banks with a lower Liquid Assets to Total Assets Ratio are more likely to face liquidity constraints during economic downturns" shows an average score of 3.9043 and an std dev of 0.80199.

Table 4.6 shows that respondents are in agreement about the significance and efficacy of several liquidity risk indicators. Most statements have high mean scores, which means that most people agree on the concepts of liquidity risk. You can tell how much of a consensus there is by looking at the standard deviations. These results highlight the accepted validity of certain liquidity metrics for gauging a financial institution's liquidity risk management prowess.

The findings are supported by further recent studies. Aspal et al. (2019) found that liquidity risk negatively impacted the bottom lines of Indian commercial banks after analyzing its effects. Because a higher LTV indicates a higher liquidity risk, which

lowers financial stability and performance, this provides support for the notion that LTVs are extremely high (Aspal et al., 2019). Gitari and Musau (2023) also found that bigger cash reserves indicate better liquidity management, which in turn leads to better financial performance, while studying Kenyan banks. This result is in agreement with the high average score for the Cash Position Indicator; it shows that better liquidity management, specifically keeping large cash reserves, can improve a bank's ability to meet short-term obligations and overall financial performance.

Table 4.6

Liquidity Risk

Statements	N	Mean	Std. Dev
Greater liquidity risk affects banks with a higher Loan to Deposits Ratio	188	4.1064	.66168
The loan-to-deposit ratio is a good way to measure the financial risk that comes with banking	188	3.9309	.85937
There is better cash control by banks when the Cash Position Indicator is higher	188	4.2021	.58647
A bank's ability to meet short-term commitments can be accurately predicted by the Cash Position Indicator	188	3.9787	.63715
Higher Capacity Ratio means a larger financial buffer against sudden cash withdrawals	188	3.9255	.74201
A bank's cash risk can be fully evaluated by its capacity ratio.	188	4.2606	.59512
A balance sheet that is more liquid has a higher Liquid Assets to Total Assets Ratio.	188	4.1383	.63078
Banks that have a lower ratio of liquid assets to total assets are more prone to encountering liquidity difficulties when the economy is in a downturn.	188	3.9043	.80199
Valid N (listwise)	188		

4.5.2 Credit Risk

The statement "Non-performing loans significantly affect a bank's financial performance" has an average score of 3.8830 and a std dev of 0.81898. Based on this average score, it appears that most people think that non-performing loans significantly affect a bank's bottom line. Although most people agree that non-performing loans have an effect, the standard deviation shows that people's views on how much of an effect differ.

Regarding "Effective management of non-performing loans is crucial for financial stability," the average score is 3.9415 with a std dev of 0.86016. This score highlights a strong consensus among respondents on the critical role of managing non-performing loans in ensuring financial stability. However, the relatively higher standard deviation suggests differing views on how crucial this management is, indicating a spectrum of opinions on the strategies and their effectiveness.

The importance of "Cash flow stability for managing credit risk" is emphasized with average score of 4.0957 and a std dev of 0.76093. The high average score reflects strong agreement on the significance of stable cash flows in credit risk management. The standard deviation, while slightly lower than previous statements, still indicates some variability, suggesting that while most respondents agree on its importance, the extent to which they value cash flow stability may differ.

For the statement "Maintaining stable cash flows mitigates the impact of credit risk," the average score is 4.1436, with a std dev of 0.56228. Stable cash flows are considered as an effective way to minimize credit risk, as shown by the high average score, which indicates significant agreement among respondents. With such a small standard deviation, it's clear that most people think that stable cash flow is crucial for lowering credit risk.

The statement "High debt to equity ratio amplifies the impact of credit risk" has an average score of 3.9894 and a std dev of 0.68591. Credit risk is worsened by a high debt to equity ratio, as indicated by the average score. The standard deviation indicates a modest degree of agreement, showing that although most people are in agreement, their opinions on how much this amplification should be varied.

When considering "Monitoring debt to equity ratio is important for managing credit risk," the average score is 4.0266 with a std dev of 0.78375. This average score indicates that there is widespread agreement that tracking the debt-to-equity ratio is an important part of managing credit risk. The standard deviation, though somewhat higher, indicates that while there is broad agreement, there are varying perspectives on the criticality of this monitoring.

The statement "Maintaining low debt to assets ratio is important for managing credit risk" has an average score of 4.1064 and a std dev of 0.82693. A low debt-to-assets ratio is crucial for credit risk management, as indicated by the high average score. The standard deviation indicates a fair amount of variability, suggesting that while the majority concur on its importance, the intensity of their agreement varies.

Lastly, for the statement "Active management of debt to assets ratio helps mitigate credit risk," the average score is 3.8670 with a std dev of 0.78650. The consensus is that actively managing the debt-to-assets ratio helps reduce credit risk, as indicated by this score. Despite widespread agreement on its significance, views on its efficacy and methods for active management remain divided, as seen by the standard deviation of the replies.

Empirical evidence for these perspectives has been provided by recent research. Bhatt et al. (2023) looked at how commercial banks in Nepal fared in respect to credit risk

management and what factors influenced it. According to the research, banks' financial health and performance are directly correlated to how well they manage credit risk, especially when it comes to non-performing loans. Table 4.7 (Bhatt et al., 2023) shows that respondents strongly agreed on the vital function of managing non-performing loans (NPLs), which is in line with this. Banks must prioritize strong credit risk management strategies, as the study showed that NPLs, when handled correctly, reduce credit risk and improve financial performance.

Similarly, Siddique et al. (2021) looked at how South Asian commercial banks fared financially after implementing credit risk management strategies and taking bank-specific variables into account. Banks' bottom lines are heavily influenced by non-performing loans and the capital adequacy ratio, according to this research. According to the results, which back up the opinions expressed in Table 4.7, proper management of credit risk is crucial. The study linked better financial outcomes with better management of credit risk indicators, according to data analyzed from South Asian institutions.

Table 4.7***Credit Risk***

Statements	N	Mean	Std. Dev
NPL significantly affect a bank's financial performance	188	3.8830	.81898
Effective management of NPL is crucial for financial stability	188	3.9415	.86016
Cash flow stability is important for managing credit risk	188	4.0957	.76093
Maintaining stable cash flows mitigates the impact of credit risk	188	4.1436	.56228
High debt to equity ratio amplifies the impact of credit risk	188	3.9894	.68591
Monitoring debt to equity ratio is important for managing credit risk	188	4.0266	.78375
Maintaining low debt to assets ratio is important for managing credit risk	188	4.1064	.82693
Active management of debt to assets ratio helps mitigate credit risk	188	3.8670	.78650
Valid N (listwise)	188		

4.5.3 Inflation Rate

Table 4.8 provides an in-depth analysis of respondents' perceptions regarding the impact of inflation rate fluctuations on commercial banks. Each statement evaluates a specific aspect of how inflation affects banking operations and strategies, with mean scores and standard deviations reflecting the level of agreement and variability in responses.

The statement "Fluctuations in the inflation rate make it challenging for commercial banks to accurately forecast their financial performance" has an average score of 3.5798 and a std dev of 1.39863. Regarding the need for strategic adjustments, the

statement "Commercial banks should actively adjust their strategies in response to changes in the inflation rate to maintain financial stability" has an average score of 3.8989 and a std dev of 0.86240. The statement "High inflation rates lead to increased demand for loans from commercial banks in Kenya" has an average score of 3.6011 and a std dev of 1.20400.

In contrast, the statement "Customers are less likely to seek loans from commercial banks during periods of high inflation" has an average score of 4.3191 and a std dev of 0.62416. The impact of inflation on consumer behavior is highlighted by the statement "During times of high inflation, individuals tend to reduce their social spending, affecting commercial banks' revenue streams," which has an average score of 4.2128 and a std dev of 0.43564. The reliability of the CPI as an inflation measure is addressed in the statement "The Consumer Price Index accurately reflects the inflationary pressures faced by commercial banks in Kenya," with an average score of 4.1489 and a std dev of 0.42533.

For the statement "Commercial banks should use the Consumer Price Index as a key indicator when devising their inflation risk management strategies," the average score is 4.0638 with a std dev of 0.66716. Lastly, the statement "There is a correlation between changes in the Consumer Price Index and the financial performance of commercial banks in Kenya" has an average score of 3.9787 and a std dev of 0.81403.

In summary, Table 4.8 illustrates that there is a consensus on the significant impact of inflation on banking operations and the importance of strategic adjustments. The consistent high mean scores and varying standard deviations highlight the consensus on key issues while also reflecting differing perspectives on the specifics of inflation's impact. These insights underscore the need for banks to carefully monitor inflation

indicators like the CPI and adapt their strategies to maintain financial stability and performance.

Recent empirical research corroborates this. Moyo and Türsoy (2020) looked at how price increases and currency fluctuations affected the bottom lines of South African commercial banks. They discovered a strong negative correlation between inflation and return on equity (ROE), suggesting that banks' bottom lines take a hit when inflation rates rise.

This finding supports the respondents' view that inflation complicates financial forecasting and necessitates strategic adjustments to maintain stability. The study used advanced econometric models (ARDL, FMOLS, DOLS) to analyze data from the four largest commercial banks in South Africa, demonstrating that higher inflation rates reduce profitability by increasing costs and uncertainties, thereby affecting the banks' ability to forecast and strategize effectively.

The factors that affect the profitability of Kenya's commercial banks were also the subject of research by Ongore and Kusa (2013). Their research showed that banks' capacity to manage loans and stay profitable is severely affected by inflation. This underscores the importance of monitoring inflation indicators like the Consumer Price Index (CPI) and adapting strategies to mitigate the adverse effects of inflation (Ongore & Kusa, 2013). They found that high inflation rates lead to increased costs of operations and a reduction in the real value of loan repayments, which can deteriorate the banks' asset quality and profitability.

Table 4.8***Inflation Rate***

Statements	N	Mean	Std. Dev
Fluctuations in the inflation rate make it challenging for commercial banks to accurately forecast their financial performance.	188	3.5798	1.39863
Commercial banks should actively adjust their strategies in response to changes in the inflation rate to maintain financial stability.	188	3.8989	.86240
High inflation rates lead to increased demand for loans from commercial banks in Kenya.	188	3.6011	1.20400
Customers are less likely to seek loans from commercial banks during periods of high inflation.	188	4.3191	.62416
During times of high inflation, individuals tend to reduce their social spending, affecting commercial banks' revenue streams.	188	4.2128	.43564
The Consumer Price Index accurately reflects the inflationary pressures faced by commercial banks in Kenya.	188	4.1489	.42533
Commercial banks should use the Consumer Price Index as a key indicator when devising their inflation risk management strategies.	188	4.0638	.66716
Financial success is correlated with CPI variations.	188	3.9787	.81403
Valid N (listwise)	188		

4.5.4 Monetary Policy

The responses to each statement, summarized in mean scores and standard deviations, reflect the level of agreement and the variability in opinions among the respondents. The statement "Investing in government securities is a reliable strategy to mitigate the effects of inflation on our financial performance" has an average score of 3.6277 and a std dev of 1.29155.

Regarding the adequacy of current fund allocation towards government securities, the statement "Our current allocation of funds towards government securities adequately addresses the inflationary risks to our financial performance" has an average score of 3.9202 and a std dev of 0.88300. The influence of central bank reference rates is captured by the statement "Changes in the central bank reference rate significantly influence our lending and borrowing activities," which has an average score of 3.9840 and a std dev of 0.95052. The statement "Our engagement in open market operations has positively impacted our ability to maintain profitability in environments characterized by high inflation" has an average score of 4.1702 and a std dev of 0.39076.

Adjusting cash reserve levels is considered essential, as indicated by the statement "Adjusting cash reserve levels in response to inflationary pressures is essential for maintaining financial stability," which has an average score of 4.1596 and a std dev of 0.95686. The impact of compliance with cash reserve requirements is reflected in the statement "Compliance with the cash reserve requirement has a tangible impact on our ability to effectively manage inflationary risks," with an average score of 4.0532 and a std dev of 0.81912. Finally, the statement "Aligning our interest rates with the central bank reference rate effectively manages the impact of inflation on our financial performance" has an average score of 3.8298 and a std dev of 0.91498.

In conclusion, there is a consensus that the significance of different monetary policy instruments for controlling inflation and sustaining economic success. Strategies including investing in government securities, engaging in open market activities, and modifying cash reserves are widely agreed upon, as indicated by high mean ratings across statements. Different levels of agreement are shown by the standard deviations, which draw attention to the places where people's views differ. The importance of

monetary policy in avoiding inflation and maintaining financial stability is shown by these results.

In their study of how monetary policy affected the profitability of Kenyan commercial banks, Mdoe et al. (2019) came to a similar conclusion. The researchers' findings, which support the premise that monetary policy is vital in determining financial outcomes, show that changes in interest rate regulation have a substantial impact on banks' financial performance. The study examined how interest rate caps, introduced by the central bank, impacted the profitability of Kenyan banks. It revealed that such regulations could limit banks' interest income and alter their risk-taking behavior, ultimately affecting their overall financial health.

Another study by Gambacorta and Iannotti (2007) examined the impact of monetary policy on bank performance in the United States. They found that monetary policy shocks influence various measures of bank risk and return. This supports the notion that strategic adjustments in response to central bank rates and open market operations are essential for maintaining profitability during inflationary periods. Their research highlighted that changes in interest rates affect banks' net interest margins and risk profiles, suggesting that proactive adjustments to monetary policy shifts are crucial for optimizing financial performance and mitigating risks.

Table 4.9***Monetary Policy***

Statements	N	Mean	Std. Dev
Investing in government securities is a reliable strategy to mitigate the effects of inflation	188	3.6277	1.29155
Our current allocation of funds towards government securities adequately addresses the inflationary risks to our financial performance	188	3.9202	.88300
Changes in the central bank reference rate significantly influence our lending and borrowing activities.	188	3.9840	.95052
Our engagement in open market operations has positively impacted our ability to maintain profitability in environments characterized by high inflation	188	4.1702	.39076
Adjusting cash reserve levels in response to inflationary pressures is essential for maintaining financial stability.	188	4.1596	.95686
Compliance with the cash reserve requirement has a tangible impact on our ability to effectively manage inflationary risks.	188	4.0532	.81912
Aligning our interest rates with the central bank reference rate effectively manages the impact of inflation on our financial performance.	188	3.8298	.91498
Valid N (listwise)	188		

4.5.5 Financial Performance

The assertion that "Our bank's capacity to consistently generate profit from its assets is robust" has an average score of 4.1809 and a std dev of 0.87095. The high average score indicates that most people think the bank is doing a good job of turning its assets into profit, which is a good sign of how efficient the bank is with its use of those assets. There is a fair degree of variation in the answer data, as seen by the computed standard

deviation. This suggests that respondents' degrees of confidence in this talent vary, even though the overall attitude is favorable.

The average score for the statement "Our bank's ROA is competitive and satisfactory with respect to industry benchmarks" is 3.9309, with a std dev of 0.93677. Based on the mean score, there is a widespread consensus that the bank's ROA is competitive in the industrial sector. Nevertheless, the std dev reveals a certain degree of variation in the replies, suggesting that although a majority of respondents consider the ROA to be acceptable, there are differing views on the actual comparison of the bank to key industry standards.

With an average score of 4.2074 and a std devi of 0.62441, the statement "Our bank consistently delivers strong returns to shareholders relative to its equity" is presented. With such a high mean score, it's clear that most people think the bank is good at giving back to its shareholders. The low standard deviation shows that most people are in agreement, which means that many people have faith in the bank's capacity to reliably provide these returns.

"Our bank's ROE reflects efficient utilization of shareholder investments and resources" had an average score of 3.7234 with a std dev of 1.19181 in the category of efficient usage of shareholder investments. Based on the mean score, it appears that respondents are of the opinion that the ROE represents an effective use of assets. Some respondents may have doubts regarding the bank's effectiveness in employing shareholder money, as indicated by the large standard deviation, which shows a substantial amount of variety in opinions.

The average score for the statement "Our bank's market share and penetration are consistently expanding in the industry" is 4.1011 with a std devi of 1.05232. The

average score indicates that most people think the bank is doing a good job of increasing its portion of the market and its penetration. Although many respondents notice progress, others may regard it as inconsistent or less important, as indicated by the greater standard deviation, which suggests notable variety in replies.

"Our bank is effectively adapting to changing market dynamics and customer needs to sustain and improve market performance" had an average score of 3.9787 with a std dev of 1.20586 for the bank's adaptability. Agree that the bank is doing a good job of adjusting to new market conditions is the implication of the mean score. But there is a lot of variation in the replies (high standard deviation), showing that people have different views on how well the bank adjusts to changing market conditions.

With an average score of 4.3138 and a std dev of 0.52978, the statement "Cost management strategies implemented by our bank contribute positively to overall profitability" is supported. Cost management measures are positively influencing profitability, as indicated by the extremely high mean score. There appears to be a lot of agreement, as indicated by the small standard deviation, that these tactics work.

In conclusion, with an average score of 4.2181 and a std devi of 0.62076, the statement "Our bank's profitability is resilient against external economic shocks and fluctuations" is supported. With such a high average score, it's clear that most people think the bank's bottom line can weather any storm. The low standard deviation shows that most people agree, which is good since it means people trust the bank to weather economic storms.

The results of recent research support these assumptions. When it comes to commercial banks in Ghana, Von Tamakloe et al. (2023) looked at how risk management shapes their performance. Among the many factors affecting bank performance, operational risk was determined to account for 99.24% of the variation.

Complete risk management also accounted for 74.74 percent of the variation in banks' performance. Strong financial performance necessitates excellent risk management, especially operational risk. The results are consistent with the high average ratings in Table 4.10, which show that the business is very profitable and resilient. The research used a panel regression strategy to examine secondary data extracted from seven commercial banks' annual financial statements; these banks account for more than half of Ghana's financial sector. The study highlights the significance of strong risk management techniques for banks to maintain performance in the face of different operational obstacles.

The effect of credit risk management on the bottom lines of Tanzanian commercial banks was also investigated by Majondo et al. (2023). The research showed that financial stability and profitability are greatly improved with good credit risk management. Strong returns to shareholders and effective usage of resources were observed by respondents, as seen in Table 4.10. This validates such opinions. Credit risk reduction is crucial for strong financial performance, as Majondo et al. (2023) shown via their extensive study of credit risk management strategies and their effects on important financial measures including ROE and ROA.

Table 4.10***Financial Performance***

Statements	N	Mean	Std. Dev
Profitability has always been a strong suit of our bank	188	4.1809	.87095
ROA is both competitive and adequate.	188	3.9309	.93677
Shareholder ROE are high at our bank.	188	4.2074	.62441
The ROE of our bank shows how well we use the resources and capital of our shareholders	188	3.7234	1.19181
Our bank's market share and reach are growing	188	4.1011	1.05232
To maintain and increase market performance, our bank adapts to market conditions and client demands.	188	3.9787	1.20586
Cost management at our bank boosts profits	188	4.3138	.52978
Our bank's profitability tolerates economic shocks and swings.	188	4.2181	.62076
Valid N (listwise)	188		

4.6 Correlation Analysis

The links between Financial Performance and other important elements, such as Liquidity Risk, Credit Risk, Inflation Rate, and Monetary Policy, are highlighted in Table 4.11's correlation matrix. You can learn a lot about the direction and strength of these associations from the significance levels of the Pearson Correlation coefficients. At a significance level of $p < 0.01$ there is a correlation of 0.605 between Financial Performance and Liquidity Risk. As liquidity risk is better controlled, financial performance usually improves, according to this positive correlation, which indicates a moderate to strong association. This association is statistically relevant, as highlighted by the large p-value. Because improved liquidity levels lessen risks and add favorably to overall financial health, it follows that liquidity management methods are critical for improving a bank's financial performance.

Financial Performance shows a strong positive correlation with Credit Risk, with a Pearson Correlation coefficient of (0.785 and $p < 0.01$). This strong correlation indicates that effective management of credit risk significantly enhances financial performance. The robust relationship highlights that banks that manage their non-performing loans and credit exposures well are more likely to achieve better financial outcomes, reinforcing the importance of stringent credit risk management practices in maintaining financial stability and profitability.

The correlation between Financial Performance and Inflation Rate is (0.642, $p < 0.01$). This positive correlation suggests a strong relationship, indicating that banks' financial performance is significantly influenced by their ability to navigate inflationary pressures. The significant p-value signifies that this relationship is statistically significant. This underscores the importance of adaptive strategies and responsive measures to inflationary changes, which can help banks mitigate adverse effects and sustain robust financial performance.

Monetary Policy also shows a strong positive correlation with Financial Performance, with a Pearson Correlation coefficient of (0.637, $p < 0.01$). This relationship indicates that effective implementation of monetary policies, such as adjusting interest rates and maintaining appropriate reserve levels, plays a critical role in enhancing financial performance. The significant correlation emphasizes the importance of aligning bank strategies with broader monetary policies to achieve financial stability and growth.

In summary, the correlation matrix in Table 4.11 reveals significant positive relationships between Financial Performance and the factors of Liquidity Risk, Credit Risk, Inflation Rate, and Monetary Policy. The strength and significance of these correlations underscore the critical role that effective risk management and responsive strategies to economic conditions play in enhancing a bank's financial performance.

These findings highlight that managing liquidity and credit risks, adapting to inflationary pressures, and aligning with monetary policy are essential for maintaining robust financial performance in the banking sector.

Table 4.11

Correlation Matrix

		Financial Performance	Liquidity Risk	Credit Risk	Inflation Rate	Monetary Policy
Financial Performance	Pearson	1	.605**	.785**	.642**	.637**
	Correlation					
	Sig. (2-tailed)		.000	.000	.000	.000
	N	188	188	188	188	188
Liquidity Risk	Pearson	.605**	1	.397**	.682**	.664**
	Correlation					
	Sig. (2-tailed)	.000		.000	.000	.000
	N	188	188	188	188	188
Credit Risk	Pearson	.785**	.397**	1	.445**	.438**
	Correlation					
	Sig. (2-tailed)	.000	.000		.000	.000
	N	188	188	188	188	188
Inflation Rate	Pearson	.642**	.682**	.445**	1	.717**
	Correlation					
	Sig. (2-tailed)	.000	.000	.000		.000
	N	188	188	188	188	188
Monetary Policy	Pearson	.637**	.664**	.438**	.717**	1
	Correlation					
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	188	188	188	188	188

** . Correlation is significant at the 0.01 level (2-tailed).

4.7 Model Diagnostics

This section includes tests for both dependent and independent variables to determine the feasibility of conducting a regression analysis test. This encompasses the examination of normality, multicollinearity and linearity.

4.7.1 Normality Test using Kolmogorov-Smirnov

Financial Performance, Liquidity Risk, Credit Risk, Inflation Rate, and Kolmogorov-Smirnov and Shapiro-Wilk Tests of Normalcy are displayed in Table 4.12. In order to determine if these variables significantly differ from a normal distribution, several tests are used. The results of the K-S test for Liquidity Risk are 0.209 with a 0.000 level of significance. A statistical value of 0.902 at the 0.000 level of significance is produced by the Shapiro-Wilk test. The results of both tests show that there is a substantial deviation from normalcy ($p < 0.01$) in the distribution of Liquidity Risk. Further study involving Liquidity Risk may need non-parametric approaches or data processing due to the low significance values (p-values) from both tests, which demonstrate that the variable does not follow a normal distribution.

There are also notable outliers in Credit Risk. A significance level of 0.000 is associated with the Shapiro-Wilk test's statistic of 0.877, and the Kolmogorov-Smirnov test's statistic of 0.126. Both tests' p-values are less than the 0.01 level, suggesting that Credit Risk does not follow a normal distribution. Because this outlier violates the fundamental premise of normalcy, it shows how careful one must be when using parametric testing.

For inflation rate, the K-S test statistic is 0.171 with 0.000 significance. S-W test coefficient is 0.936 with 0.000 significance. Both tests show substantial deviation from normality in the distribution of the Inflation Rate ($p < 0.01$). The variable's substantial

p-values show it is not regularly distributed, which may affect tests that presume normality.

With a K-S test value of 0.177 and a significance level of 0.000, Monetary Policy demonstrates comparable results. An S-W statistic of 0.921 at the 0.000 level of significance is produced by the test. There are notable non-normalities ($p < 0.01$) in both tests. Thus, it appears that the distribution of Monetary Policy is not normally distributed, which calls for the exploration of non-normality-based analytical approaches. Lastly, when it comes to Financial Performance, the K-S test statistic is 0.162 and the S-W test gives a statistic of 0.956 with a $P < 0.000$. Both tests confirm significant deviations from normality ($p < 0.01$), indicating that the distribution of Financial Performance is not normal. This non-normality may necessitate the use of non-parametric techniques or data transformation in subsequent analyses.

Table 4.12

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Liquidity Risk	.209	188	.000	.902	188	.000
Credit Risk	.126	188	.000	.877	188	.000
Inflation Rate	.171	188	.000	.936	188	.000
Monetary Policy	.177	188	.000	.921	188	.000
Financial Performance	.162	188	.000	.956	188	.000

a. Lilliefors Significance Correction

4.7.2 Test for Autocorrelation

Table 4.13 provides the Durbin-Watson statistic for the regression model being analyzed. The Durbin-Watson test is used to detect the presence of autocorrelation (a relationship between values separated from each other by a given time lag) in the

residuals from a regression analysis. The value of the Durbin-Watson statistic ranges from 0 to 4, where: a value close to 2 indicates no autocorrelation, a value approaching 0 suggests positive autocorrelation and a value approaching 4 suggests negative autocorrelation.

In this case, the Durbin-Watson statistic is 2.362. This value is close to 2, which suggests that there is no significant autocorrelation in the residuals of the regression model. The lack of autocorrelation implies that the residuals (errors) are independent of each other, fulfilling one of the key assumptions of regression analysis.

The implication of having a Durbin-Watson value near 2 is significant for the validity of the regression results. When residuals are not autocorrelated, it suggests that the model's predictions are not systematically biased over time, thus enhancing the reliability of the regression coefficients. This, in turn, provides greater confidence in the inferences drawn from the model regarding the relationships between the independent variables and the dependent variable.

In summary, the Durbin-Watson statistic of 2.362 in Table 4.13 indicates that there is no significant autocorrelation in the residuals of the regression model. This supports the assumption of independence of errors, which is essential for the validity of the regression analysis. This finding enhances the credibility of the model's results and the conclusions drawn from the data.

Table 4.13

Durbin-Watson

Model	Durbin Watson
1	2.362

4.7.3 Test for Multicollinearity

The liquidity risk tolerance value is 0.469, and the related VIF is 2.134. High levels of multicollinearity are indicated by tolerance values below 0.1, while severe multicollinearity is suggested by VIF values above 10. Since the VIF is less than 10 and the tolerance is more than 0.1, we can conclude that Liquidity Risk does not display any serious multicollinearity in this configuration.

Credit Risk has a tolerance value of 0.767 and a VIF of 1.304. These values suggest that there is low multicollinearity for Credit Risk, as the tolerance is high and the VIF is well below the threshold of 10. This implies that Credit Risk is relatively independent of the other variables in the model.

The tolerance value for Inflation Rate is 0.399, with a VIF of 2.505. Although the tolerance is lower than the other variables, it is still above the critical value of 0.1, and the VIF is significantly below 10. This indicates that while there is some correlation between Inflation Rate and the other variables, it is not severe enough to cause significant multicollinearity issues.

Monetary Policy has a tolerance of 0.419 and a VIF of 2.385. Similar to Inflation Rate, these values indicate moderate multicollinearity but not to a level that would raise major concerns. The tolerance is above 0.1, and the VIF is well below 10, suggesting that Monetary Policy, while somewhat correlated with other variables, does not pose a severe multicollinearity problem.

The results from Table 4.14 suggest that multicollinearity is not a significant issue in this regression model. All tolerance values are well above the critical threshold of 0.1, and all VIF values are comfortably below 10. This indicates that the independent variables—Liquidity Risk, Credit Risk, Inflation Rate, and Monetary Policy—are

sufficiently independent of each other to provide stable and reliable estimates of their effects on Financial Performance.

In summary, the multicollinearity test results in Table 4.14 demonstrate that the regression model's independent variables do not suffer from problematic multicollinearity. This enhances the credibility of the regression analysis, allowing for more confident interpretation of the relationships between the variables and their impact on Financial Performance.

Table 4.14

Multicollinearity Test

		Collinearity Statistics	
Model		Tolerance	VIF
1	Liquidity Risk	.469	2.134
	Credit Risk	.767	1.304
	Inflation Rate	.399	2.505
	Monetary Policy	.419	2.385

a. Dependent Variable: Financial Performance

4.7.4 Test for Linearity

Liquidity Risk vs Financial Performance scatter plot shows a positive linear relationship. The relationship between liquidity risk and financial performance is inversely proportional. The correlation matrix shows that managing liquidity risk positively correlates with financial performance.

A robust positive linear relationship is seen by the scatter plot of Credit Risk vs Financial Performance. The data points indicate a clear rising trend, indicating that there is a strong correlation between enhanced Credit Risk management and Financial

Performance. This high degree of linearity agrees with the high degree of correlation seen in the previous study.

There is a moderately positive linear link between inflation rate and financial performance, according to the scatter plot. The data points tend to go up, which means that managing inflation rates better is linked to greater financial results. This is in line with the positive connection that was noticed, even though the points are scattered apart, so there must be some relationship fluctuation.

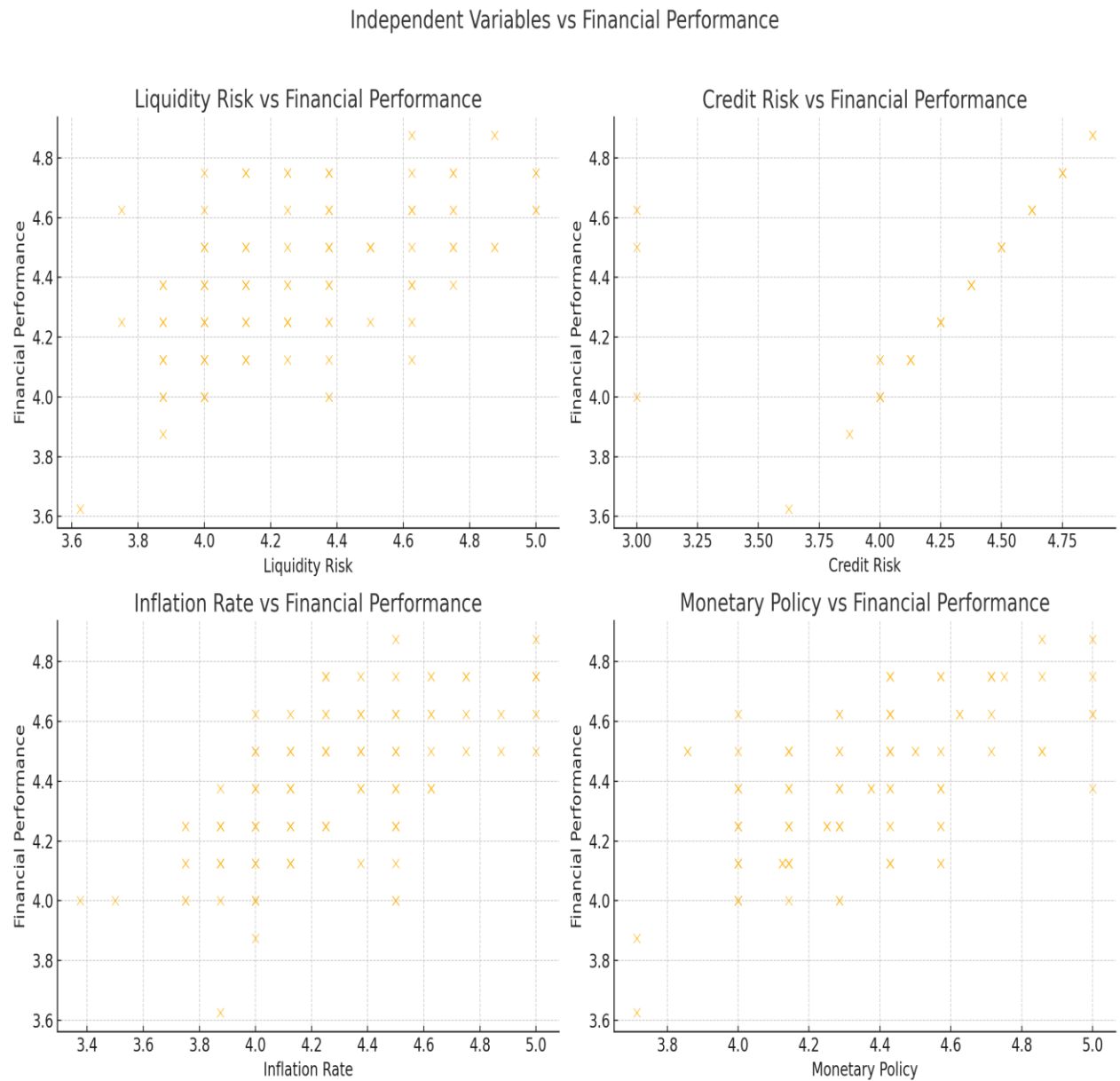
The scatter plot for Monetary Policy vs Financial Performance also displays a positive linear relationship. The data points trend upwards, indicating that effective monetary policy management correlates with improved financial performance. The relationship is consistent with the positive correlation, though some dispersion in the points suggests variability in how monetary policy impacts financial performance.

The scatter plots show that Monetary Policy, Inflation Rate, Liquidity Risk, and Credit Risk are all independent factors that are positively and linearly related to Financial Performance. Generally, the data points in each plot show an increasing trend, which lends credence to the assumption of linearity in the regression model. The linearity assumption seems to be reasonably met, which supports the validity of applying linear regression to study the impact of these factors on Financial Performance. This visual confirmation concurs with that assessment.

These scatter plots help ensure that the linear regression model is appropriate for this analysis, as the relationships between the independent variables and Financial Performance exhibit linear trends.

Figure 4. 3

Combined Scatter Plot



4.8 Regression Analysis

4.8.1 Model Summary

The R value, or the correlation coefficient, is 0.870. This value indicates a very strong positive relationship between the combination of the independent variables (Monetary

Policy, Credit Risk, Liquidity Risk, and Inflation Rate) and the dependent variable (Financial Performance). An R value close to 1 suggests that the model's predictions are highly correlated with the actual values of Financial Performance.

Ratio of determination, or R Squared, is 0.757. By this measure, the independent variables account for around 75.7% of the variance in Financial Performance. With such a high R Squared score, it's clear that the model does a good job of capturing the link between the predictive variables and financial performance.

Value of 0.751 is the Adjusted R Square. An improved way to compare models with varying numbers of predictors is to use this adjusted metric, which takes the model's predictor count into consideration. Verifying that the model maintains its robustness even after accounting for the number of predictors, an Adjusted R Square of 0.751 still signifies a very strong match.

The estimate's standard error is 0.11493. The standard deviation of the observed data from the regression line is represented by this value. Indicative of a more accurate model, a smaller standard error implies that the data points are in closer proximity to the regression line. Model predictions are fairly accurate with a standard error of 0.11493 in this instance.

The model summary in Table 4.15 indicates that the regression model is highly effective in explaining the variation in Financial Performance based on the independent variables Monetary Policy, Credit Risk, Liquidity Risk, and Inflation Rate. The high R and R Square values suggest a strong relationship and high explanatory power. The Adjusted R Square value confirms the model's robustness, even when adjusting for the number of predictors. Finally, the low Standard Error of the Estimate indicates that the model's predictions are precise.

These findings suggest that the strong fit of the model supports the validity of using these variables to predict Financial Performance, reflecting the importance of effective management of liquidity risk, credit risk, inflation, and monetary policy in achieving strong financial outcomes.

Table 4.15

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870 ^a	.757	.751	.11493

a. Predictors: (Constant), Monetary Policy, Credit Risk, Liquidity Risk, Inflation Rate

4.8.2 Analysis of Variance (ANOVA)

The ANOVA results in Table 4.16 indicate that the regression model is statistically significant. The high F-statistic of 142.343 and the very low p-value (0.000) demonstrate that the independent variables (Monetary Policy, Credit Risk, Liquidity Risk, and Inflation Rate) collectively explain a significant portion of the variance in Financial Performance.

The significant results suggest that the regression model is robust and that the included predictors are important in understanding and predicting Financial Performance. These findings reinforce the value of managing monetary policy, credit risk, liquidity risk, and inflation to achieve better financial outcomes in the banking sector.

Table 4.16***ANOVA^a***

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.521	4	1.880	142.343	.000 ^b
	Residual	2.417	183	.013		
	Total	9.938	187			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Monetary Policy, Credit Risk, Liquidity Risk, Inflation Rate

4.8.3 Regression Coefficients

The Constant (Intercept) has an unstandardized coefficient of 0.685 and a standard error of 0.158. At a value of zero, the four independent variables—liquidity risk, credit risk, inflation rate, and monetary policy indicate the baseline level of financial performance. It basically stands for the predicted financial performance without the impact of the predictors. The accuracy of this coefficient estimate is demonstrated by the standard error of 0.158.

An unstandardized coefficient of 0.125 is associated with Liquidity Risk, with a standard error of 0.042. This coefficient indicates that with one unit of rise in Liquidity Risk, Financial Performance is projected to increase by 0.125 units, provided all other variables stay same. This link suggests that the bank's financial performance may be positively influenced by the efficient management of liquidity risk, which guarantees the availability of enough liquid assets to fulfill short-term commitments. A smaller value of the standard error implies a more exact estimate, as it reveals the variability in this estimate.

A standard error of 0.034 is associated with the unstandardized coefficient of 0.470 for credit risk. Assuming all other variables remain constant, this statistically significant coefficient indicates that there is a 0.470 rise in Financial Performance for every one unit increase in Credit Risk. Effective credit risk management is of the utmost significance, as this strong positive link shows. The bottom line will benefit greatly from a decrease in non-performing loans and the maintenance of safe credit standards. This estimate is quite precise, as seen by the small standard error, which shows that the link between credit risk and financial performance is strong and stable.

The unstandardized coefficient for Inflation Rate is 0.118, with a standard error of 0.043. This suggests that a one-unit increase in the Inflation Rate leads to a 0.118 increase in Financial Performance, assuming other variables are held constant. This positive relationship indicates that banks that effectively adapt to inflationary pressures can improve their financial outcomes. The precision of this estimate, as indicated by the standard error, reflects a reasonable level of confidence in this coefficient.

Monetary Policy has an unstandardized coefficient of 0.142, with a standard error of 0.049. This coefficient indicates that each one-unit increase in the effectiveness of Monetary Policy is associated with a 0.142 increase in Financial Performance, assuming all other factors remain constant. This positive impact suggests that strategic alignment with monetary policy, such as adjusting interest rates and maintaining appropriate cash reserves, can enhance a bank's financial performance. The standard error provides a measure of the estimate's precision, with a lower value indicating greater confidence in the relationship.

In summary, the unstandardized coefficients highlight the direct effects of Liquidity Risk, Credit Risk, Inflation Rate, and Monetary Policy on Financial Performance. Each

predictor contributes positively to financial performance, with Credit Risk showing the most substantial impact. The precision of these estimates, indicated by the standard errors, underscores the reliability of the model in explaining variations in Financial Performance based on these key factors.

Table 4.17

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.685	.158		4.326	.000
	Liquidity Risk	.125	.042	.156	2.937	.004
	Credit Risk	.470	.034	.580	13.928	.000
	Inflation Rate	.118	.043	.159	2.763	.006
	Monetary Policy	.142	.049	.165	2.922	.004

a. Dependent Variable: Financial Performance

$$Y = 0.685 + 0.125X_1 + 0.470X_2 + 0.118X_3 + 0.142X_4 + \varepsilon$$

Y – Financial Performance of Commercial Banks

‘ β_0 ’ – is a constant, the results when all variables X_1 to X_4 are zero.

X_1 – Liquidity Risk

X_2 – Credit Risk

X_3 – Inflation Rate

X_4 – Monetary Policy

‘ $b_1 - b_4$ ’ – Regression coefficients

ε – error term

4.9 Hypotheses Test

To comprehensively understand the effect of interest rate drivers on financial performance of commercial banks in Kenya, an in-depth analysis was conducted using multiple regression models. These models included key predictors such as liquidity risk, credit risk, inflation rate and monetary policy. The analysis aimed to test several hypotheses related to these predictors and their significance in explaining the variance in financial performance. Table 4.18 presents the summary of decisions regarding these hypotheses based on the statistical significance of the predictors in the regression models.

Table 4.18

Summary of Hypotheses Tested

S/No	Hypothesis	Decision
H ₀₁	There is no significant relationship between liquidity risk and financial performance of commercial banks in Kenya.	Reject (Significant: $p < 0.05$)
H ₀₂	There is no significant relationship between credit risk and financial performance of commercial banks in Kenya.	Reject (Significant: $p < 0.05$)
H ₀₃	There is no significant relationship between inflation rate and financial performance of commercial banks in Kenya.	Reject (Significant: $p < 0.05$)
H ₀₄	There is no significant relationship between monetary policy and financial performance of commercial banks in Kenya.	Reject (Significant: $p < 0.05$)

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a concise overview and final analysis of the study, aligning with the established objectives and hypotheses. Additionally, it includes recommendations based on the study's findings and concludes by identifying potential topics for additional exploration.

5.2 Summary

The main objective of the study was to assess the effect of interest rate drivers, liquidity risk, credit risk and inflation rate on financial performance of commercial banks in Kenya.

5.2.1 Effect of Liquidity Risk on Financial Performance

The first objective of the study was to establish the effect of liquidity risk on financial performance of commercial banks in Kenya. As far as describing the financial performance of Kenyan commercial banks is concerned, liquidity risk was determined to be sufficient. Additionally, commercial banks' financial performance could be well predicted by liquidity risk. There was a positive and statistically significant relationship between liquidity risk and the financial performance of commercial banks, according to the correlation study. The coefficient regression analysis showed that commercial banks' financial performance was positively and significantly correlated with liquidity risk. This suggests that commercial banks' bottom lines might benefit from a reduction in liquidity risk.

5.2.2 Effect of Credit Risk on Financial Performance

The second objective of the study was to establish the effect of credit risk on financial performance of commercial banks in Kenya. The financial performance of Kenyan commercial banks was satisfactorily explained by credit risk. In addition, the findings demonstrated that credit risk served as a reliable indicator of commercial banks' financial success. A favorable and statistically significant relationship between credit risk and commercial banks' bottom lines was found in the correlation analysis. The coefficient regression analysis showed that commercial banks' financial performance was positively and significantly correlated with credit risk. This suggests that commercial banks' bottom lines improve when credit risk is reduced.

5.2.3 Effect of Inflation Rate on Financial Performance

The third objective of the study was to establish the effect of inflation rate on financial performance of commercial banks in Kenya. A suitable explanation for the financial performance of Kenya's commercial banks was determined to be the inflation rate. Along with that, the data demonstrated that the rate of inflation was a reliable indicator of the financial health of commercial banks. According to the results of the correlation analysis, the profitability of commercial banks was positively and strongly correlated with the inflation rate. Coefficient regression analysis showed a positive and statistically significant correlation between inflation and commercial banks' bottom lines. A lower inflation rate is associated with better financial results for commercial banks, according to this.

5.2.4 Effect of Monetary Policy on Financial Performance

The fourth objective of the study was to establish the effect of monetary policy on financial performance of commercial banks in Kenya. The results of the analysis of the financial performance of Kenyan commercial banks showed that monetary policy

adequately explains their situation. Moreover, the findings demonstrated that monetary policy effectively forecasted the financial success of commercial banks. The results of the correlation study showed that there was a positive and statistically significant relationship between monetary policy and the profitability of commercial banks. A positive and statistically significant correlation between monetary policy and commercial banks' financial performance was shown by the regression of the coefficient. What this means is that commercial banks' bottom lines improve when monetary policy is tightened.

5.3 Conclusions

5.3.1 Liquidity Risk

The research found that liquidity risk significantly affects the bottom lines of Kenya's commercial banks. Liquidity risk is positively and significantly correlated with financial performance, highlighting the critical need of sound liquidity management strategies. To better handle short-term obligations and financial uncertainty, banks should keep sufficient liquidity on hand. To fulfill financial commitments like loan payments and withdrawal requests, it is crucial to be able to swiftly turn assets into cash without suffering a huge loss in value. Both the availability of liquid assets and the development and execution of plans to control cash flow are components of liquidity management. Some examples of such tactics include balancing short-term assets and liabilities, putting money into low-risk, highly-liquid securities, and setting up consistent credit lines. Hence, a large liquidity buffer is crucial, and better liquidity risk management can improve financial performance.

5.3.2 Credit Risk

Credit risk emerged as a significant predictor of financial performance, with the analysis revealing a strong positive correlation. The findings indicate that banks that

manage their credit risk effectively, by minimizing non-performing loans and implementing sound credit policies, can significantly improve their financial outcomes. Effective credit risk management not only enhances profitability but also contributes to overall financial stability. This involves rigorous credit evaluation processes, regular monitoring of the credit portfolio, and proactive management of non-performing loans through strategies such as restructuring, recovery, and write-offs. The study underscores the necessity for banks to prioritize robust credit risk assessment and mitigation strategies to safeguard their financial performance. Effective credit risk management practices help in maintaining asset quality, reducing the likelihood of defaults, and ensuring a stable revenue stream from lending activities.

5.3.3 Inflation Rate

The inflation rate was found to significantly influence the financial performance of commercial banks. The positive correlation between inflation management and financial performance suggests that banks that adeptly handle inflationary pressures can sustain and enhance their profitability. Effective strategies to mitigate the adverse effects of inflation, such as adjusting interest rates and aligning lending practices with economic conditions, are crucial. Inflation impacts the purchasing power of money, the cost of funds, and the repayment capacity of borrowers. Banks need to adopt flexible interest rate policies that can be adjusted in response to inflationary trends, diversify their portfolios to spread risk, and use hedging instruments to protect against inflation. The study highlights the need for banks to continuously monitor and adapt to inflationary trends to maintain their financial stability and performance. By doing so, banks can safeguard their margins, protect their loan portfolios from deteriorating, and ensure a stable financial footing in varying economic conditions.

5.3.4 Monetary Policy

Monetary policy also plays a pivotal role in shaping the financial performance of commercial banks. The study's results indicate that aligning bank strategies with monetary policy, such as adhering to central bank reference rates and maintaining appropriate reserve levels, significantly enhances financial performance. The positive impact of monetary policy on profitability emphasizes the importance of strategic responsiveness to policy changes. Central banks' decisions on interest rates, reserve requirements, and open market operations influence the cost of funds, lending rates, and overall liquidity in the banking system. Banks that effectively align their operations with monetary policy directives can better navigate economic fluctuations and achieve sustained financial success. This involves closely monitoring central bank policies, adjusting interest rates on loans and deposits, managing reserve requirements efficiently, and participating in open market operations. By doing so, banks can optimize their funding costs, enhance their interest margins, and maintain liquidity, thereby improving their financial performance and resilience against economic shocks.

5.4 Recommendations

5.4.1 Managerial Recommendations

1. **Strong Liquidity Monitoring Systems Should Be Installed:** Financial institutions ought to put money into state-of-the-art liquidity monitoring systems that reveal their liquidity levels in real-time. In the event of a liquidity deficit or surplus, this will allow banks to react swiftly and make decisions in a timely manner. During times of liquidity crisis, it is important to have a thorough plan in place for obtaining emergency funds. Some examples of this can include access to central bank facilities, asset sales, or prearranged lines of credit.

2. Conduct regular reviews of the loan portfolio and perform stress tests to identify potential vulnerabilities. This proactive approach can help in detecting early signs of credit deterioration and taking corrective actions. Improve Credit Scoring and Underwriting Standards: Utilize advanced analytics and machine learning to enhance credit scoring models and underwriting standards. This will improve the accuracy of credit assessments and reduce the likelihood of non-performing loans.
3. Develop flexible pricing and interest rate strategies that can be adjusted quickly in response to changes in the inflation rate. This will help maintain profitability and competitiveness during inflationary periods. Invest in inflation-hedged assets and diversify the bank's investment portfolio to protect against the eroding effects of inflation. This can include inflation-linked bonds and other real assets.
4. Monitor Central Bank Policies Closely: Stay informed about changes in central bank policies and adjust the bank's strategies accordingly. This includes aligning interest rates, reserve requirements, and lending practices with central bank directives. Financial Products: Create financial products that can be quickly adjusted in response to monetary policy changes, such as variable rate loans and deposits. This flexibility will help maintain financial performance in a dynamic policy environment.

5.4.2 Policy Recommendations

1. To guarantee that banks have enough liquid assets to satisfy their short-term obligations, regulators should implement more stringent liquidity standards. These requirements could include net stable funding ratios and higher liquidity

coverage ratios. In order to gauge their resilience to economic shocks, banks should be required to undergo liquidity stress tests on a regular basis. These tests need to mimic a range of situations, such as unexpected withdrawals and market disturbances.

2. Develop and enforce standardized guidelines for credit risk management, including requirements for credit scoring, loan provisioning, and non-performing loan management. These guidelines will help banks implement best practices in credit risk management. Provide regulatory incentives for banks that successfully reduce their non-performing loan ratios. These incentives could include lower capital reserve requirements or reduced regulatory fees for banks with low NPL ratios.
3. Implement capital requirements that are adjusted for inflation to ensure banks remain adequately capitalized in real terms. This will help maintain financial stability during periods of high inflation. Issue detailed guidelines on managing inflation risk, advising banks on best practices for adjusting interest rates, loan pricing, and investment strategies in response to inflationary pressures.

5.5 Areas for Further Research

The results of this study can serve as a foundation for future research into the elements that affect commercial banks' financial performance, however there are a number of important areas that need further investigation. Banks' bottom lines could use some more research into how other macroeconomic variables like unemployment rates, GDP growth, and exchange rates affect their bottom lines. For a more complete picture of the external factors influencing bank performance, it is helpful to understand how these variables interact with liquidity risk, credit risk, inflation rate, and monetary policy.

Banks' financial health and performance as a result of regulatory changes and compliance requirements is another interesting topic that needs more investigation. We can learn more about the efficacy of regulatory policies by studying the effects of various regimes on the risk-taking behavior and financial results of banks. The most effective ways to promote financial stability and growth can be better understood through cross-national or cross-regional comparative studies.

Environmental, social, and governance (ESG) factors are becoming increasingly important, therefore future study might examine the impact of ESG policies on bank performance. The potential long-term gains from integrating ESG factors into banking operations can be better understood by examining the connection between sustainability efforts, CSR, and financial conclusions.

Future study should aim to fill in these gaps in our knowledge so that we may better understand the elements that impact commercial banks' financial performance. This will lead to better banking sector policies and strategic planning.

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APPENDICES

Appendix I: Letter of Introduction to Respondents

Dear Respondent

RE: DATA COLLECTION

I am a graduate student at Kenya Methodist University studying for a Master's degree in Business Administration with a focus on Finance (MBA, Finance Option). I am performing a research titled "Interest rate drivers and financial performance of commercial banks in Kenya" as part of my degree requirements.

This research is a necessary component for my degree completion. Please take some time to answer a questionnaire that I will offer. Your cooperation is appreciated.

All information you submit is for academic reasons only, and all replies will be kept strictly secret. We really cherish and appreciate your collaboration. I appreciate your prompt completion and submission of the questionnaire in advance.

Kind Regards.

Derebina Nyagah

Researcher,

KeMU.

Appendix II: Questionnaire

The purpose of this questionnaire is to collect data on relationship between asset securitization and financial performance of listed commercial banks in Kenya. The data will be confidential and used for the purpose of this research only.

SECTION A: DEMOGRAPHICS

1. How many years have you worked in the bank

0-10 [] 11-20 [] above 20 years []

2. For how long has your bank been in operation?

0-10 [] 11-20 [] above 20 years []

3. What is your highest level of formal education

a) Diploma [] b) First Degree [] c) Master's Degree [] d) Postgraduate
Diploma [] h) PhD []

If you agree or disagree with the following assertions, please indicate your position using the checkboxes below.

Strongly Agree=5, Agree=4, Uncertain=3, Disagree=2, Strongly Disagree=1

	SECTION B: LIQUIDITY RISK	1	2	3	4	5
B1	Banks with a higher Loan to Deposits Ratio are more exposed to liquidity risk					
B2	The Loan to Deposits Ratio adequately captures the liquidity risk associated with lending activities					
B3	A higher Cash Position Indicator indicates better liquidity management by banks					
B4	The Cash Position Indicator is a reliable predictor of a bank's ability to meet short-term obligations					
B5	A higher Capacity Ratio indicates a stronger liquidity buffer against unexpected cash outflows					
B6	The Capacity Ratio provides a comprehensive assessment of a bank's liquidity risk exposure					
B7	A higher Liquid Assets to Total Assets Ratio indicates a more liquid balance sheet					
B8	Banks with a lower Liquid Assets to Total Assets Ratio are more likely to face liquidity constraints during economic downturns					
	SECTION C: CREDIT RISK	1	2	3	4	5
C1	Non-performing loans significantly affect a bank's financial performance					
C2	Effective management of non-performing loans is crucial for financial stability					
C3	Cash flow stability is important for managing credit risk					
C4	Maintaining stable cash flows mitigates the impact of credit risk					
C5	High debt to equity ratio amplifies the impact of credit risk					
C6	Monitoring debt to equity ratio is important for managing credit risk					

C7	Maintaining low debt to assets ratio is important for managing credit risk					
C8	Active management of debt to assets ratio helps mitigate credit risk					
	SECTION D: INFLATION RATE	1	2	3	4	5
D1	Fluctuations in the inflation rate make it challenging for commercial banks to accurately forecast their financial performance.					
D2	Commercial banks should actively adjust their strategies in response to changes in the inflation rate to maintain financial stability.					
D3	High inflation rates lead to increased demand for loans from commercial banks in Kenya.					
D4	Customers are less likely to seek loans from commercial banks during periods of high inflation.					
D5	During times of high inflation, individuals tend to reduce their social spending, affecting commercial banks' revenue streams.					
D6	The Consumer Price Index accurately reflects the inflationary pressures faced by commercial banks in Kenya.					
D7	Commercial banks should use the Consumer Price Index as a key indicator when devising their inflation risk management strategies.					
D8	There is a correlation between changes in the Consumer Price Index and the financial performance of commercial banks in Kenya.					
	SECTION E: MONETARY POLICY	1	2	3	4	5
E1	Investing in government securities is a reliable strategy to mitigate the effects of inflation on our financial performance					
E2	Our current allocation of funds towards government securities adequately addresses the inflationary risks to our financial performance					

E3	Changes in the central bank reference rate significantly influence our lending and borrowing activities.					
E4	Our engagement in open market operations has positively impacted our ability to maintain profitability in environments characterized by high inflation					
E5	Adjusting cash reserve levels in response to inflationary pressures is essential for maintaining financial stability.					
E6	Compliance with the cash reserve requirement has a tangible impact on our ability to effectively manage inflationary risks.					
E7	Aligning our interest rates with the central bank reference rate effectively manages the impact of inflation on our financial performance.					
	FINANCIAL PERFORMANCE OF COMMERCIAL BANKS	1	2	3	4	5
F1	Our bank's ability to generate profit from its assets is consistently strong					
F2	Compared to industry benchmarks, our bank's ROA is competitive and satisfactory					
F3	Our bank consistently delivers strong returns to shareholders relative to its equity.					
F4	Our bank's ROE reflects efficient utilization of shareholder investments and resources.					
F5	Our bank's market share and penetration are consistently expanding in the industry					
F6	Our bank is effectively adapting to changing market dynamics and customer needs to sustain and improve market performance					
F7	Cost management strategies implemented by our bank contribute positively to overall profitability					
F8	Our bank's profitability is resilient against external economic shocks and fluctuations					

Thank you very much for your patience, cooperation and support in my research

Appendix III: List of Commercial Banks

1	Absa Bank	25	Gulf African Bank
2	ABC Bank	26	Habib Bank A.G. Zurich
3	Access Bank (K)	27	HF Group
4	Bank of Africa (K)	28	I & M Bank (K)
5	Bank of India(K)	29	KCB Bank Kenya (K)
6	Bank of Baroda (K)	30	Kenya Women Microfinance Bank
7	Caritas Microfinance Bank	31	Kingdom Bank
8	Choice Microfinance Bank	32	Maisha Microfinance Bank Limited
9	Citibank N.A.	33	Middle East Bank (K)
10	Consolidated Bank	34	M Oriental Bank (K)
11	Co-operative Bank	35	NBK
12	CIB Kenya Ltd	36	NCBA Bank(K)
13	Credit Bank	37	Paramount Universal Bank
14	Development Bank	38	Prime Bank
15	Diamond Trust Bank (K)	39	Postbank
16	DIB Kenya Bank	40	Rafiki Microfinance Bank
17	Ecobank (K)	41	Salaam Microfinance Bank
18	Spire Bank	42	Sidian Bank
19	Equity Bank(K)	43	Stanbic Bank
20	Family Bank	44	Standard Chartered Bank (K)
21	Faulu Micro-Finance Bank	45	SBM Bank (K)
22	First Community Bank	46	UBA Kenya Bank
23	Guaranty Trust Bank (K)	47	Victoria Commercial bank
24	Guardian Bank		

APPENDIX IV: KEMU APPROVAL LETTER



KENYA METHODIST UNIVERSITY

P. O. Box 267 Meru - 60200, Kenya

Fax: 254-64-30162

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DIRECTORATE OF POSTGRADUATE STUDIES

Our Ref: KeMU/NACOSTI/BUS/44/2024

August 16, 2024

Commission Secretary

National Commission for Science, Technology and Innovations

P.O. Box 30623-00100

NAIROBI

Dear Sir/Madam,

RE: DEREKINA NYAGAH (REG. NO. BUS-3-1651-1/2023)

This is to confirm that the above named is a bona fide student of Kenya Methodist University, in the Department of Business Administration, undertaking a Master's Degree in Business Administration. She is conducting research on: "Interest Rate Drivers and Financial Performance of Commercial Banks in Kenya".

We confirm that her research proposal has been defended and approved by the University.

In this regard, we are requesting your office to issue a research license to enable her collect data.

Any assistance accorded to her will be highly appreciated.

Yours sincerely,



Dr. John M. Muchiri (PhD)

Dean, Postgraduate Studies

Cc: Dean, KeBS

CoD, Business Administration

Postgraduate Coordinator - BA

Supervisors

APPENDIX V: NACOSTI PERMIT

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
RefNo: 821453	Date of Issue: 22/August/2024
RESEARCH LICENSE	
	
This is to Certify that Mr. Muisrael Nyagah Derebia of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: INTEREST RATE DRIVERS AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA for the period ending : 22/August/2025.	
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