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THE RELATIONSHIP BETWEEN CREDIT RISK MANAGEMENT AND FINANCIAL PERFORMANCE OF LISTED COMMERCIAL BANKS IN KENYA

BY

CAROLINE MUKASIA MADEGWA

ST. PAUL'S UNIVERSITY

A DISSERTATION PRESENTED TO THE SCHOOL OF BUSINESS AND LEADERSHIP STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION DEGREE OF ST. PAUL'S UNIVERSITY (FINANCE OPTION)

NOVEMBER, 2024

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DECLARATION

I declare that this study is my own work . It has not been previously presented to any other institution for examination I agree that it may be available for reference with my permission or that of St. Paul's University.

Signed…..……Date…… …….

Caroline Mukasia Madegwa

MBADIST403721

Word Count:22,451

We confirm that the work reported in this dissertation was carried out under our supervision as university supervisors

Signed…..……Date…… ……..

Dr. Stephen Kanini Ndung'u
Lecturer
School of Business and Leadership Studies
St. Paul's University

Signed…..……..Date…….. ……..

Mr. Peter Ontere Nyamira
Lecturer
School of Business and Leadership Studies
St. Paul's University

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DEDICATION

I dedicate this dissertation to my husband, Alex Magwi, whose unwavering support and encouragement have been my constant source of strength throughout my masters course Your belief in my aspirations has fuelled my determination to pursue knowledge and contribute to meaningful research. I am grateful for your sacrifices, love, and inspiration. This project is a tribute to the collective efforts and contributions of my family, may our shared commitment to education and growth continue to inspire us in our academic and personal endeavours.

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ABSTRACT

The financial sector in Kenya, particularly commercial banks, is a cornerstone of the country's economy. Over the years, these institutions have played a pivotal role in the economy however, listed commercial banks in Kenya face several financial performance issues that threaten their stability, profitability, and overall contribution to economic development. One of the most significant issues affecting the financial performance of Kenyan banks is credit risk management issues. NPLs are loans in default or close to being in default therefore the study seeks to assess the influence of credit risk management and financial performance of listed commercial banks in Kenya. Specifically, the study sought to determine the influence of capital adequacy, loan loss provision, liquidity and management efficiency and financial performance of commercial banks Listed in NSE, Kenya. The study was anchored on the Capital buffer theory, Liquidity preference theory, Modern portfolio theory and Agency theory. The study adopted explanatory research study. The study targeted 11 listed commercial banks in Kenya for a period of five (5 years) covering between 2019 and 2023. The study conducted census of all the 11 listed commercial banks in Kenya. The researcher used data collection sheet to extract and compile the required secondary data. The study used both inferential and descriptive statistics. Descriptive statistics involved the use of standard deviation and mean. Inferential statistics involved the use of correlation and regression analysis to identify the influence of independent on the dependent variable. All inferential statistics were tested at $\propto = 0.05$ significance level. The findings revealed that listed commercial banks in Kenya for the last 5 years have maintained a strong capital base for last five years (2019-2023). In addition, the findings indicated that listed commercial banks are setting aside a reasonable amount for loan losses relative to their total loans. Furthermore, the study found out that majority of listed commercial banks in Kenya has sufficient liquidity. Finally, the findings revealed that listed commercial banks are managing their operations with moderate efficiency. From the findings the study concluded that there is a weak negative and statistically significant correlation between capital adequacy and the financial performance of listed commercial banks in Kenya. In addition, the study concluded that that there is a strong negative and statistically significant correlation between liquidity and financial performance of listed commercial banks in Kenya. Furthermore, the study concluded that there is a weak negative correlation between loan loss provision and financial performance of listed commercial banks in Kenya. Finally, the study concluded that there is a moderate negative correlation exists between management efficiency ratio and financial performance of listed commercial banks in Kenya. From the findings the study recommended that commercial banks in Kenya should aim to maintain a well-balanced Capital Adequacy Ratio (CAR) that aligns with regulatory requirements while also considering their income-generating activities. Banks should also implement robust risk assessment and credit evaluation processes that reduce the likelihood of non-performing loans. Commercial banks should also strike a balance between maintaining adequate liquidity and pursuing higher-yielding investment opportunities.

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ABBREVIATIONS AND ACRONYMS

BOT	The Bank of Tanzania
CAPM	Capital Asset Pricing Model
CAR	Capital Adequacy Ratio
CBE	Central Bank of Egypt
CBN	Central Bank of Nigeria
CDS	Credit Default Swaps
CRB	Credit Reference Bureau
CRMS	The Credit Risk Management System
DT- SACCOs	Deposit taking SACCOs.
FICO	Fair Isaac Corporation
GAAP	Generally Accepted Accounting Principles
HQLAs	High-quality liquid assets
IBC	Insolvency and Bankruptcy Code
IFRS	International Financial Reporting Standard
LCR	Liquidity Coverage Ratio
MFIs	Microfinance Institutions
MPT	Modern Portfolio Theory
NACOSTI	National Commission for Science, Technology, and Innovation
NPAS	Non-Performing Assets
NPLs	Non-Performing Loans
NSE	Nairobi Securities Exchange
NSFR	Net Stable Funding Ratio
PSBS	Public Sector Banks
RBI	Reserve Bank of India
ROA	Return on Assets
ROE	Return on Equity
SACCOS	Savings and Credit Cooperative Society

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OPERATIONAL DEFINITION OF TERMS

Capital Adequacy	A measure of a bank's capital, ensuring that it is sufficient to absorb potential losses and meet regulatory requirements. It is typically assessed through ratios like the Capital Adequacy Ratio, which compares a bank's capital to its risk-weighted assets.
Credit Risk Management	The process of identifying, assessing, and mitigating the risk of loss due to a borrower's failure to repay a loan or meet contractual obligations. It involves the establishment of credit policies, monitoring of credit exposure, and maintaining provisions for potential losses.
Financial Performance	A measure of a company's financial health and profitability, typically assessed through metrics such as revenue, profit, return on assets, return on equity and other key financial ratios.
Liquidity	The ability of a bank to meet its short-term financial obligations as they come due, without incurring unacceptable losses. It involves maintaining sufficient liquid assets, such as cash and marketable securities, to cover liabilities.
Listed Commercial Banks	Commercial banks whose shares are traded on a stock exchange. These banks are publicly owned and must adhere to regulatory and reporting requirements of the stock exchange.
Loan Loss Provision	An expense set aside by banks to cover potential losses from defaulted loans. This provision acts as a buffer to protect the bank's financial health in case borrowers fail to repay their loans.
Management Efficiency	The effectiveness with which a bank's management utilizes its resources to generate profits and maintain operational performance. This can be measured using ratios like the cost-to-income ratio and asset utilization ratio.

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Globally listed commercial banks are recording different levels of financial performance as of 2023 (Liu, 2023). In China listed banks have experienced substantial growth, reflecting the rapid expansion of the country's economy. The liberalization of the financial sector and the opening of banking services to private and foreign entities have been pivotal in driving this growth. Major banks such as Industrial and Commercial Bank of China (ICBC), China Construction Bank (CCB), and Bank of China (BOC) have consistently reported strong financial performance, characterized by increased assets, deposits, and loan portfolios (Liu, 2023). Listed banks in China have benefited from relatively high net interest margins due to the country's interest rate environment and the significant market share held by major banks. However, profitability has faced pressure from increased competition, both from traditional financial institutions and emerging fintech companies. Banks have responded by diversifying their revenue streams, focusing on wealth management, insurance, and investment banking services to bolster their profitability (Twum et al., 2022).

South Africa's listed banks, including major players such as Standard Bank, FirstRand, Absa, and Nedbank, have demonstrated significant growth and market positioning within the region (Munangi & Sibindi, 2020). Historically, these banks have benefitted from a relatively well-developed financial infrastructure and a diverse range of banking products and services. Since 2020-2023, financial performance is driven by several factors including technological innovation, expansion into other African markets, and increased focus on retail and corporate banking segments. The expansion into sub-Saharan Africa has allowed South African banks to tap into emerging markets with high growth potential, thus enhancing their revenue streams and diversifying their risk profiles.

Today, profitability trends among listed commercial banks in Kenya have exhibited variability, influenced by diverse factors including economic growth rates, interest rate fluctuations, and regulatory changes. Following a period of robust growth and

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high returns, the Kenyan banking sector has faced challenges such as increased competition, high non-performing loans (NPLs), and regulatory constraints on interest rates (Central Bank of Kenya, 2020). Despite these challenges, banks have adapted by diversifying their revenue streams, investing in technology, and enhancing operational efficiencies. For instance, the implementation of digital banking platforms and mobile money services has enabled banks to reach a broader customer base and reduce costs, contributing to improved profitability for some institutions.

The financial performance of Kenyan commercial banks is measured using various indicators, including profitability, asset quality, and capital adequacy. According to the CBK, the return on assets (ROA) for Kenyan banks was 2.3% in 2020, indicating a moderate level of profitability (Central Bank of Kenya, 2020). The return on equity (ROE) was 13.2%, reflecting the efficiency of banks in generating profits from shareholders' equity (Central Bank of Kenya, 2020). The capital adequacy ratio (CAR) for Kenyan banks stood at 18.5%, well above the regulatory minimum of 14.5%, indicating a strong capital base (Central Bank of Kenya, 2020). The asset quality of Kenyan banks, as measured by the NPL ratio, remains a significant concern, highlighting the need for effective credit risk management strategies. In this study financial performance of listed commercial banks will be measured through return on assets and return on equity.

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1.1.1 Credit Risk Management

Credit risk management is a critical aspect of financial risk management employed by financial institutions to mitigate losses due to borrowers' failure to repay loans. It involves identifying, measuring, monitoring, and controlling credit risk exposures, ensuring the stability and profitability of financial institutions (Berger & DeYoung, 2020). It encompasses practices like setting credit limits, conducting credit assessments, managing credit portfolios, and provisioning for loan losses (Saunders & Allen, 2020). For commercial banks, credit risk management is vital since loans constitute a significant portion of their assets. Effective credit risk management helps banks maintain asset quality, manage capital adequacy, and achieve sustainable growth (Altman & Saunders, 2021).

As banks primarily deal in lending and borrowing, managing the risk of borrower default is paramount. Effective credit risk management not only safeguards a bank's assets but also fosters trust among investors and regulators (Crouhy, et al., 2022). According to the Basel Committee of Banking Supervision (BCBS) monitoring report (2021), credit risk is the possibility of losing the outstanding loan partially or totally, due to credit events. Credit events could be bankruptcy, failure to pay a due obligation, repudiation or moratorium or credit rating change and restructure. The New Basel Capital Accord explicitly places the onus on banks to adopt sound internal credit risk management practices to assess their capital adequacy requirements (Chen et al., 2019).

Commercial banks adopt various credit risk management strategies, which includes risk-based pricing, diversification, loan covenants, capital adequacy, loan loss provision, collateral requirement, credit derivatives and securitization, liquidity, management efficiency, regular monitoring and review, stress testing and scenario analysis, portfolio management tools and regulatory compliance (Duffie & Singleton, 2021). The current study focuses on capital adequacy, loan loss provision, liquidity, and management efficiency.

1.1.1.1 Capital Adequacy

Capital adequacy is a critical strategy in credit management that ensures banks have enough capital to absorb potential losses, thereby safeguarding their solvency and protecting depositors, (Allen, et al., 2020). Regulatory frameworks such as the Basel Accords mandate specific capital requirements for banks, emphasizing the importance of maintaining a buffer against unexpected financial stress. By adhering to these regulations, banks can enhance their resilience against economic downturns and financial crises, (Cecchetti, et al., 2021). The significance of capital adequacy lies in its role in fostering financial stability. Adequate capital levels enable banks to withstand credit losses, which are particularly pronounced during periods of economic turbulence, (Herring et al., 2020). For instance, during the 2008 financial crisis, banks with higher capital reserves were better positioned to manage losses and continue lending activities, thereby supporting economic recovery.

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Furthermore, capital adequacy influences a bank's credit rating, which affects its ability to raise funds. Higher capital levels generally result in better credit ratings, reducing the cost of borrowing and enhancing the bank's competitiveness, (Bair, 2021). Investors and stakeholders also view well-capitalized banks as safer investments, promoting investor confidence and financial stability. Maintaining capital adequacy requires a strategic balance between risk and return. Banks must assess their risk-weighted assets and determine the appropriate level of capital to hold, (Glenn, & Hubbard, 2020). This involves sophisticated risk management practices, including stress testing and scenario analysis, to anticipate potential losses and ensure sufficient capital buffers are in place.

1.1.1.2 Loan Loss Provision

Loan loss provision is a key credit management strategy that involves setting aside funds to cover potential losses from non-performing loans. This practice is crucial for maintaining the financial health of banks because it ensures that they are prepared for defaults and can absorb losses without severely impacting on their capital base, (Gary, et al., 2020). By proactively managing loan loss provisions, banks can stabilize their earnings and protect themselves against credit risk. The process of determining loan loss provisions requires a thorough assessment of the credit risk associated with the loan portfolio. Banks use various models and methodologies to estimate potential losses, considering factors such as borrower creditworthiness, economic conditions, and historical loss experience, (Stambaugh, 2019). This allows banks to make informed decisions about the amount to provision, ensuring that they are adequately prepared for potential defaults.

Regulatory frameworks, such as the International Financial Reporting Standards (IFRS) and the Generally Accepted Accounting Principles (GAAP), provide guidelines for loan loss provisioning. These standards aim to ensure consistency and transparency in financial reporting, enabling stakeholders to assess the financial health of banks accurately, (Goldstein & Pauzner, 2021). Compliance with these regulations is essential for maintaining investor confidence and meeting regulatory requirements. Effective loan loss provisioning also involves regular monitoring and updating of provisions to reflect changes in the loan portfolio and economic environment. This dynamic approach ensures that provisions remain adequate over

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time, allowing banks to respond promptly to emerging risks, (Oliver & Moore, 2020). Regular reviews and stress testing are integral components of this process, enabling banks to adjust their provisions in response to evolving credit conditions.

1.1.1.3 Liquidity

Liquidity management is essential for ensuring that banks can meet their short-term obligations and continue operations without disruption. Its management involves maintaining sufficient liquid assets to cover withdrawals and other immediate liabilities, thereby preventing liquidity crises that could lead to insolvency, (Asli, & Levine, 2020). This strategy is critical for sustaining the trust of depositors and other stakeholders with a key aspect of liquidity management asthe maintenance of a diversified portfolio of liquid assets, such as cash, government securities, and other high-quality liquid assets (HQLAs). These can be quickly converted to cash with minimal loss in value, providing banks with the necessary liquidity to meet their obligations. Additionally, banks must manage their funding sources to ensure a stable and diversified funding base which reduces reliance on volatile short-term funding, (Acharya, et al., 2020).

Liquidity ratios, such as the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), are important tools for measuring and managing liquidity risk. The LCR requires banks to hold enough HQLAs to cover net cash outflows over a 30-day stress period, while the NSFR ensures that banks maintain a stable funding profile over a one-year horizon, (Fan, & Sheridan, 2019). These ratios help banks assess their liquidity position and take corrective actions when necessary. Stress testing and contingency planning are also crucial components of liquidity management. Stress tests simulate various adverse scenarios to assess the bank's ability to withstand liquidity shocks, while contingency plans outline the steps to be taken in response to liquidity crises, (Stijn & Feijen, 2021). These practices enable banks to prepare for unexpected events and maintain operational stability under adverse conditions.

1.1.1.4 Management Efficiency

Management efficiency is a crucial credit management strategy that involves optimizing the use of resources to maximize profitability and minimize risks. Efficient management practices enable banks to achieve better financial performance, enhance

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customer satisfaction, and maintain competitive advantage, (Raghuram & Rajan, 2020). This strategy encompasses various aspects, including operational efficiency, risk management, and strategic planning. Operational efficiency involves streamlining processes, reducing costs, and improving productivity. By leveraging technology and automation, banks can enhance their operational efficiency, leading to faster processing times, reduced errors, and lower operational costs. Efficient operations also contribute to better customer experiences, as services are delivered more quickly and accurately (Mian & Amir, 2020). Risk management is another critical component of management efficiency. Effective risk management practices involve identifying, assessing, and mitigating risks to minimize their impact on the bank's financial performance (Kristian et al., 2020).

1.1.2 Financial Performance

Financial performance is a measure of how well an organization can use its assets to generate revenues and profits. It is an essential aspect of business management, indicating the overall financial health and efficiency of an organization (Baharratai, 2019). It is typically evaluated using various financial ratios and metrics, such as profitability ratios, liquidity ratios, and leverage ratios. These provide insights into an organization's ability to generate income, manage its debts, and sustain its operations over the long term (Waweru & Kalani, 2019).

In the context of commercial banks, financial performance is crucial as it directly impacts their ability to attract investors, secure funding, and expand their operations. Commercial banks must allocate funds for loan loss provisions to cover expected defaults. A higher provision for loan losses reduces net income, which directly impacts profitability metrics such as Return on Assets (ROA) and Return on Equity (ROE). While these provisions are essential for safeguarding against potential losses, they can detract from reported earnings, especially during economic downturns (Ongore & Kusa, 2020). Credit risk affects the interest rates banks charge on loans. In response to higher perceived credit risk, banks may increase interest rates to compensate for potential defaults, which can lead to decreased loan demand. This can result in reduced interest income, impacting overall profitability. Conversely, effective credit risk management can enable banks to offer competitive rates while maintaining a healthy loan portfolio.

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The perception of credit risk influences a bank's cost of capital. Higher credit risk can lead to increased borrowing costs, as investors demand higher returns for taking on additional risk. This can squeeze profit margins and make it more difficult for banks to achieve their financial performance targets (Nzotta & Okereke, 2021). Additionally, higher funding costs can lead banks to adopt more conservative lending practices, further impacting growth and profitability. The level of non-performing loans is a critical indicator of credit risk and asset quality. A rising NPL ratio signals deteriorating credit quality, which can result in increased loan loss provisions and lower profitability. High NPL levels can also erode capital ratios, affecting a bank's ability to meet regulatory requirements and potentially leading to liquidity issues. Banks must assess the risk-adjusted returns on their loan portfolios. Loans with higher potential returns often come with increased credit risk (Moyer, et al., 2020).

Regulatory frameworks impose capital requirements based on the riskiness of a bank's loan portfolio. Banks with higher credit risk must hold more capital to absorb potential losses, which can affect their financial performance (Ross, et al., 2021). Compliance with these regulations is essential for maintaining stability and can influence lending strategies. Effective credit risk management can lead to lower capital charges, thereby enhancing profitability. Economic conditions significantly impact credit risk. During periods of economic growth, default rates typically decline, improving financial performance (Brigham & Houston, 2020). Conversely, during economic downturns, the likelihood of defaults increases, adversely affecting profitability. Banks must remain agile, adjusting their credit risk management strategies in response to changing macroeconomic conditions to mitigate potential negative impacts.

In commercial banks, financial performance is measured using a combination of profitability, asset quality and capital adequacy metrics. Profitability is assessed using ratios such as ROA and ROE, which indicate the efficiency of banks in generating profits from their assets and equity (Pinto, 2019). Asset quality is measured using the non-performing loan (NPL) ratio, which indicates the proportion of loans that are in default or close to being in default, (Bhadury & Pratap, 2019) hence alower NPL ratio signifies better asset quality and effective credit risk management.

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1.1.3 Listed Commercial Banks in Kenya

A listed commercial bank is a financial institution whose shares are publicly traded on a stock exchange. In Kenya, these banks are listed on the Nairobi Securities Exchange (NSE), making their shares available for purchase by the public. This listing status comes with stringent regulatory requirements and high standards of transparency and corporate governance. By 2022 there wre 11 listed commercial banks in Kenya, each playing a significant role in the country's financial system (CBK, 2022). These banks operate under a dual regulatory framework overseen by the Central Bank of Kenya (CBK) and the Capital Markets Authority (CMA). The CBK ensures compliance with banking regulations and financial stability, while the CMA enforces securities regulations and corporate governance standards. This regulatory oversight requires listed banks to disclose detailed financial information, including quarterly and annual reports. Such transparency is crucial for investors and stakeholders, as it provides an accurate picture of the banks' financial health, risk management practices, and operational efficiency (Morsman, 2019).

Capital adequacy is a critical measure of a bank's financial health and its capacity to absorb losses. Listed banks in Kenya must maintain specific capital adequacy ratios as mandated by the CBK, and these are publicly reported. These ratios indicate the proportion of a bank's capital to its risk-weighted assets, reflecting its ability to handle financial stress and support its lending activities (IFSB, 2015). Investors and analysts closely monitor them along with other performance metrics such as return on equity (ROE) and return on assets (ROA).

Liquidity management is another essential aspect for listed commercial banks. They must ensure they have enough liquid assets to meet short-term obligations and support daily operations. Effective liquidity management is vital for maintaining operational stability and minimizing financial risk. Listed banks benefit from their access to public capital markets, which allow them to raise funds through equity offerings or bond issuances (Pandley, 2019). This access enhances their liquidity position and supports their ability to manage fluctuations in market conditions and customer demands.

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Credit risk management is a key focus for listed commercial banks, because they are required to manage and mitigate risks associated with lending. The CBK mandates that banks maintain provisions for loan losses, which are publicly disclosed and scrutinized. Effective credit risk management practices are crucial for maintaining asset quality and ensuring the financial stability of the bank (Morsman, 2019). Listed banks often employ advanced risk management strategies, including thorough credit assessments and diversified loan portfolios, to mitigate potential losses and maintain financial health.

Efficient management practices encompass effective operational strategies, resource utilization, and decision-making processes (Halkos & Petrou, 2019). Listed banks are under constant scrutiny from investors and analysts, who evaluate the effectiveness of management in achieving financial goals and driving performance. The competitive nature of the banking sector in Kenya drives listed banks to continually improve their management practices to enhance operational efficiency and adapt to changing market conditions (Nyabaga & Wepukhulu, 2020).

Targeting listed commercial banks for this study is ideal for several compelling reasons. Firstly, listed commercial banks are subject to rigorous regulatory and reporting standards mandated by stock exchanges and financial regulators (Ongore & Kusa, 2023). These requirements ensure that their financial statements and disclosures are comprehensive, accurate, and regularly updated. Such transparency provides a reliable basis for evaluating how various aspects of credit risk management, like capital adequacy and loan loss provisions, correlate with financial performance (Onsongo et. al, 2020).

Secondly, the public nature of listed banks means their financial performance and risk management practices are under constant scrutiny by analysts, investors, and the media (Ochung, 2022). This increased visibility not only ensures that detailed data on loan loss provisions, liquidity, and management efficiency are readily accessible but also reflects the real-world implications of these factors on the banks' financial outcomes. For example, loan loss provisions are often reported with high granularity, allowing for an in-depth assessment of how these provisions affect financial

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performance, particularly in terms of profitability and asset quality (Omware et. al, 2020).

Moreover, the need for listed banks to maintain high levels of transparency and corporate governance translates into more reliable and detailed data on management efficiency (Grove et al., 2021). This efficiency, encompassing how effectively the banks utilize their resources and manage operational processes, can significantly influence their financial performance. By focusing on listed banks, the study benefits from a clearer view of how management practices impact financial results within a framework of accountability and oversight (Musa & Nasieku, 2019). Additionally, listed banks typically have greater access to capital markets, which can affect their liquidity and financial performance. They are better positioned to raise capital through public offerings, which can influence their liquidity management strategies and overall financial stability. Analyzing these banks provides valuable insights into how liquidity management practices relate to financial performance in a context where access to capital is a significant factor.

1.2 Problem Statement

The financial performance of commercial banks in Kenya is a subject of concern in due to various challenges impacting the sector (Ongore & Kusa, 2023). Despite efforts to enhance stability and profitability, Kenyan banks continue to face significant issues related to non-performing loans, regulatory compliance, and economic volatility. One of the primary issues affecting the financial performance of Kenyan commercial banks is the high level of non-performing loans (NPLs). According to the Central Bank of Kenya (CBK, 2020), the NPL ratio for Kenyan banks was 14.1%, significantly higher than the recommended threshold of 5%. In 2021, the NPL ratio improved slightly to 12.8%, although it remained above the recommended levels (CBK, 2021). In 2022 the NPL ratio saw a slight decrease to 11.5%. In 2023 the NPL ratio for Kenyan banks continued to decline to 10.3%. This high NPL ratio indicates poor asset quality and ineffective credit risk management, leading to reduced profitability and financial instability, (CBK, 2023).

The financial performance of Kenyan commercial banks has shown mixed trends over the past few years. In 2020, the return on assets (ROA) for Kenyan banks was

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reported at 2.3%, indicating a moderate level of profitability. The return on equity (ROE) for the same year stood at 13.2%, reflecting the efficiency of banks in generating profits from shareholders' equity. The capital adequacy ratio (CAR) for Kenyan banks in 2020 was 18.5%, well above the regulatory minimum of 14.5%, indicating a strong capital base (CBK, 2020). In 2021 the ROA increased to 2.5%, the ROE was reported at 14.5%, the CAR remained robust at 18.8%, (CBK, 2021). In 2022, the ROA increased marginally to 2.7%, the ROE for 2022 stood at 15.2%, the CAR remained strong at 19.2%, (CBK, 2022). In 2023, the ROA further increased to 2.9%, signalling continued growth in profitability, the ROE improved to 16.0%, highlighting banks' enhanced efficiency in utilizing shareholders' equity. The CAR remained stable at 19.0%, maintaining the sector's strong capital adequacy position (CBK, 2023). Despite these positive indicators in profitability and capital adequacy, the persistently high NPL ratio remains a significant challenge, impacting the overall financial performance and stability of the Kenyan banking sector.

Scholarly work around the influence of credit risk management has produced mixed results. Ashraf et al. (2021) posited that effective credit risk management was important for the competitiveness and survival of banks during uncertainties and financial crises faced by the world. Bwire and Omagwa (2019), assessed credit management practices on performance of deposit taking SACCOs. This study found that credit monitoring had significant influence on performance of DT-SACCOS. The study was limited to non-bank specific factors like credit monitoring. A study by (Siddique, et al., 2021), noted that most commercial banks did not follow the requirements for liquidity ratio thus affecting the performance of the banks. However, results by Ferdmer & Zanic, (2023) found a negative influence between credit risk management and financial performance.

Studies such as Njanike (2014) examined the general impact of credit risk on financial performance but did not differentiate specific factors like capital adequacy, loan loss provisions, or management efficiency. This study addressed the conceptual gap by focusing on individual components of credit risk management, such as capital adequacy and loan loss provisions, and their distinct relationships with financial performance. Kioko (2018) used descriptive analysis which did notfully account for causal relationships between variables like capital adequacy and financial

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performance. This study aimed to fill this gap by employing an explanatory analysis to establish the direct influence of credit risk management indicators on financial outcomes in listed commercial banks. Kithinji (2021) focused on microfinance, limiting the application of findings to listed commercial banks in Kenya. This study aimed to at addressing this contextual gap by focusing on listed commercial banks, to provide relevant data for Kenyan financial institutions. The varied results from the studies thus underpinned the need for the study to assess the influence of credit risk management of financial performance by focusing on capital adequacy ratio, liquidity ratio, loan loss provision , management efficiency , return on equity and return on assets.

1.3 Objectives of the Study

The general objective of the study was to assess the relationship between credit risk management and financial performance of listed commercial banks in Kenya.

1.3.1 Specific Objectives

The specific objectives were to determine the relationship between

i. Capital adequacy and financial performance of listed commercial banks in Kenya.

ii. Loan loss provision and financial performance of listed commercial banks in Kenya.

iii. Liquidity and financial performance of listed commercial banks in Kenya.

iv. Management efficiency and financial performance of listed commercial banks in Kenya.

1.4 Hypotheses of the Study

$H0_1$: There is no relationship between capital adequacy and financial performance of listed commercial banks in Kenya.

$H0_2$: There is no relationship between loan loss provision and financial performance of listed commercial banks in Kenya.

$H0_3$: There is no relationship between liquidity and financial performance of listed commercial banks in Kenya.

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$H0_4$: There is no relationship between management efficiency and financial performance of listed commercial banks in Kenya.

1.5 Justification of the Study

The magnitude of non-performing loans in the banking system is a cause for concern to different stakeholders including bank management which grant the loans, depositors whose funds are misappropriated and trapped and regulatory agencies responsible for protecting the banking system. Kenyan banks have continued to invest huge sums of funds to credit risk management modelling with a view of maximizing returns and minimizing bank's risk exposure through provision for potential loan losses.

Meanwhile, empirical studies that examine the actual impact of credit risk management on bank's financial performance in Kenya have not captured capital adequacy in a unified framework according to Basel I, II and III accord. This notwithstanding, the results and findings from these studies produced mixed results thereby leaving the academia and policy makers in predicament when sourcing for a base for decision making. Some studies on this topic show that credit risk management impact on banks financial performance, but the impacts are of highly uncertain magnitude and conflicting direction. The implication that emerges from these studies is that the impacts of credit risk management on banks performance are theoretically ambiguous. This necessitates a studies that may bring recent development on the influence of credit risk management on financial performance of commercial banks.

1.6 Significance of the Study

The findings of this study will be significant to various stakeholders affected by credit risk management and the financial performance of listed commercial banks in Kenya. In terms of practice, the study provides valuable insights to commercial banks on how to effectively manage credit risk to enhance their financial performance. The results indicated that maintaining balanced capital adequacy, optimizing loan loss provisions, and improving management efficiency were crucial in enhancing profitability. Banks can apply these insights to improve their credit risk management practices and achieve better financial outcomes.

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For policy, the study offers useful recommendations for financial regulators and policymakers. The findings emphasized the importance of crafting policies that promote balanced credit risk management practices without stifling profitability. Policymakers may use the findingsto review macroeconomic and fiscal policies aimed at ensuring the financial health and stability of listed commercial banks. Additionally, insights from this study may inform regulations for other lending institutions like SACCOs, microfinance institutions, and digital lenders, helping to mitigate risks associated with credit management.

In theory, the study contributes to the existing body of knowledge on the influence of credit risk management on financial performance. The findings supported the idea that credit risk management practices, such as capital adequacy, liquidity management, and efficient loan loss provisioning, directly affect the financial performance of banks. This research may serve as a reference for scholars seeking to explore further the dynamics of credit risk management in different financial contexts, within the Kenyan banking sector.

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1.7 Scope of the Study

Data was acquired from banks published annual reports (Annual Audited Reports, 2019-2023) of the 11 listed commercial banks in Kenya. Secondary data relating to capital adequacy, liquidity, loan loss provision, management efficiency and financial performance of commercial banks listed in NSE, Kenya. The study focused on the influence of credit risk management on financial performance. The independent variable was credit risk management were capital adequacy, loan loss provision, liquidity ratio and management efficiency formed the constructs . Dependent variable was financial perfomance with Return on Assets (ROA) as the indicator of the variation that occurred in the period under investigation. The source of data was from Central bank of Kenya financial reports, published annual reports of the eleven banks, investors guide and banks newsletters.

1.8 Limitations and Delimitation of the Study

Collecting secondary data from publicly available sources such as listed commercial banks' websites may pose limitations to the study. Some of the limitations encountered included quality and reliability concerns where there were

inconsistencies, errors, or outdated information on the banks' websites. To address the limitation on the quality and reliability concerns, data points were cross-checked from multiple reputable sources of CBK reports and financial market reports. Comparing information across different sources helped identify discrepancies and inconsistencies. To address the limitation on standardization issues, the study put into consideration that a banks may adhere to different accounting standards or reporting frameworks. Thus, the study adjusted data analysis techniques accordingly in order to ensure comparability and consistency across different banks.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explores the literature review based on the variables previous relevant studies. The literature is divided into two main parts: theoretical and empirical literature review on various aspects of credit risk management and financial performance of listed commercial banks. This is followed by a summary of the empirical literature review and a presentation of the conceptual framework.

2.2 Theoretical Review

This section discusses theories that explain the influence of credit risk management on financial performance of commercial banks. The study was anchored on capital buffer theory, liquidity preference theory, modern portfolio theory and agency theory.

2.2.1 Capital Buffer Theory

The Capital buffer theory was developed by Diamond and Dybvig in 1983 and it focuses on the role of banks in managing liquidity and mitigating the risk of bank runs through capital reserves. The theory asserts that banks maintain a buffer of capital to absorb unexpected losses and depositor withdrawals during times of financial stress. Acharya and Naqvi (2012) argue that adequate capital buffers reduce the likelihood of bank failures and systemic risk in financial systems. They emphasize that higher capital requirements enhance the stability and resilience of banks during economic downturns. In contrast, Kashyap and Stein (2004) suggest that excessively stringent capital requirements can restrict lending activities, potentially stifling economic growth. They advocate for a balanced approach that considers both financial stability and economic expansion.

The capital buffer theory's strengths lie in its ability to promote financial stability by safeguarding banks against unexpected losses and external shocks. By maintaining sufficient capital reserves, banks can enhance investor confidence, reduce the probability of bank runs, and protect depositors' funds, (Berger & Bouwman, 2013). This theory underscores the importance of prudential regulation and risk management practices in maintaining a resilient banking system capable of weathering financial crises.

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Critics argue that the Capital buffer theory may overlook the complexities of modern financial markets, where interconnectedness and rapid transmission of risks can amplify systemic vulnerabilities. Haldane (2009) contends that while capital buffers are essential, they alone may not prevent systemic crises if banks engage in risky behaviours or if market conditions deteriorate sharply. Moreover, some economists, such as Merton (2011), question whether traditional capital adequacy measures adequately capture the true risk exposures of banks, particularly in complex financial instruments.

In the context of commercial banks listed on the Nairobi Securities Exchange (NSE), adherence to Capital Buffer Theory influences capital adequacy ratios (CAR). Banks with robust capital buffers are better positioned to comply with regulatory requirements, maintain investor confidence, and sustain financial performance amidst economic fluctuations. The theory highlights the delicate balance between capital adequacy, financial stability, and banks' ability to support economic growth through lending. Therefore, the theory helps in explaining the influence of capital adequacy on financial performance of listed commercial banks in Kenya.

2.2.2 Liquidity Preference Theory

The liquidity preference theory was formulated by Keynes in 1936 and its proposition is based on the demand for liquid assets as a function of uncertainty and the preference for certainty. It posits that individuals and investors prefer holding cash and liquid assets (money) rather than illiquid assets due to the uncertainty of future needs and the cost of converting assets into money. Tobin (1958) introduced the concept of liquidity preference to understand how interest rates adjust to equate money supply and demand. He argued that monetary policy can influence interest rates to manage economic stability.

The strengths of liquidity preference theory lie in its explanatory power regarding individuals' and investors' behaviour in holding liquid assets. It provides insights into how changes in monetary policy, such as interest rate adjustments by central banks, impact the demand for money and overall economic activity, (Kahneman, & Tversky, 2014). The theory underscores the importance of liquidity management in financial

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markets and highlights the role of central banks in maintaining economic stability through monetary policy tools.

Critics argue that liquidity preference theory oversimplifies the complexities of modern financial markets and investor behaviour. Gilt (2014) suggested that factors beyond liquidity preferences, such as expectations about future inflation and economic conditions, also influence asset demands. Moreover, the theory's reliance on interest rate adjustments as the primary tool for managing economic activity may not adequately address financial market dynamics characterized by global interconnections and non-traditional monetary policy measures. Barrett (2016) critiqued aspects of liquidity preference theory, suggesting that the velocity of money and expectations about future interest rates are more critical in determining asset demands than the current interest rate alone.

For commercial banks listed on the NSE, liquidity preference theory influences their liquidity management strategies. Banks must balance the demand for liquid assets, such as cash and short-term securities, with profitability considerations. High liquidity preferences among depositors and investors may necessitate banks to hold higher reserves, affecting their liquidity ratios and profitability margins. Central bank policies, influenced by liquidity preference theory, impact banks' cost of funds and lending rates, thereby shaping their overall financial performance and ability to meet regulatory liquidity requirements. Therefore, the theory helps in explaining the influence of liquidity on financial performance of listed commercial banks in Kenya.

2.2.3 Modern Portfolio Theory

Modern portfolio theory (MPT) was developed by Harry Markowitz in 1952 and it underpins the principles of diversification and risk management in constructing investment portfolios. It proposes that investors can optimize returns by allocating assets in a diversified portfolio that balances risk and return based on each asset's correlation with others. Sharpe (1964) extended MPT by introducing the Capital Asset Pricing Model (CAPM), which links the expected return of an asset to its systematic risk (beta). He argued that investors can achieve optimal portfolios by considering the risk-return trade-offs across different asset classes. Fama and French (1992), however, critiqued MPT by suggesting that other factors beyond beta, such as size and value

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characteristics, also influence asset returns, challenging the simplicity of MPT's assumptions.

The strengths of modern portfolio theory lie in its systematic approach to portfolio construction, emphasizing diversification to reduce risk without sacrificing returns. By quantifying risk through statistical measures like variance and covariance, MPT provides a framework for investors to make informed decisions based on their risk tolerance and investment goals, (Duffie, 2010). The theory has practical applications in asset allocation, portfolio management, and risk management practices adopted by institutional investors and financial advisors worldwide.

Critics argue that Modern portfolio theory may oversimplify market dynamics and fail to account for extreme market events and behavioural biases. Lipsky (2019) introduced the concept of "black swan" events to highlight the limitations of MPT in predicting rare but impactful events that can disrupt portfolio performance. Moreover, behavioural economists, such as Meijaard, Sheil, & Moeliono, (2020), contend that investors may not always act rationally as assumed by MPT, leading to suboptimal investment decisions based on emotional biases rather than statistical probabilities.

For commercial banks listed on the Nairobi Securities Exchange (NSE), Modern Portfolio Theory influences their approach to managing loan loss provisions and overall financial performance. Banks apply diversification principles to their loan portfolios, spreading credit risk across different sectors and borrower profiles to mitigate potential losses. By diversifying their loan portfolios, banks aim to optimize risk-adjusted returns while maintaining adequate provisions for expected credit losses. Therefore, the theory helps in explaining the influence of loan loss provision on financial performance of listed commercial banks in Kenya.

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2.2.4 Agency Theory

Agency theory was developed by Jensen and William Meckling in 1976 it explains the basis of principal-agent relationship within organizations. It addresses the inherent conflicts of interest that arise when principals delegate authority to agents who act on their behalf. It emphasizes the divergence in goals between these parties and the impact of information asymmetry on decision-making within firms.

Mehran (1995) explores how Agency Theory can be applied in the context of banking regulation, highlighting its relevance in shaping regulatory policies aimed at reducing agency costs and enhancing financial stability. The literature discusses the implications of Agency theory on regulatory practices and the design of incentives to align bank management with shareholder interests. Agency theory has been widely applied in corporate governance practices, guiding policies on executive compensation, board composition, and shareholder rights. Its ability to predict behaviors and outcomes in principal-agent relationships across various industries enhances its utility in organizational management. Scholars have refined and adapted Agency Theory to address diverse organizational contexts and regulatory environments, enhancing its relevance over time (Eisenberg, 1999).

Ross (1973) criticizes the theory's assumption of rational behavior, contending that it oversimplifies managerial decision-making and organizational dynamics. He argues that human behavior is often influenced by irrational factors and emotions that are not adequately addressed by Agency Theory. Adams (2009) critiques the theory for its limited consideration of socio-cultural factors that influence managerial behavior and decision-making. Arguements are presented that Agency Theory often overlooks the broader social and cultural contexts within which organizations operate, thereby neglecting important influences on managerial actions.

The theory is applicable to the current study because in the context of Kenyan banks, a higher level of capital adequacy can mitigate agency problems by reducing the risk of managerial misbehaviour and ensuring that managers act more prudently in the interest of shareholders. Adequate capital can limit excessive risk-taking by managers, thereby improving the bank's financial performance and safeguarding shareholders' interests. Therefore, the theory helps in explaining the influence of management efficiency on financial performance of banks.

2.3 Empirical Literature Review

An empirical literature review is a critical assessment of existing research. This section reviews the past literature studies on capital adequacy, loan loss provision, liquidity and management efficiency.

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2.3.1 Capital Adequacy and Financial Performance

Osei, et al., (2023) conducted a study on the impact of capital adequacy on bank stability in Ghana. A longitudinal research design was adopted to examine how variations in capital adequacy ratios influenced measures of bank stability over a five-year period. Using regulatory data from the Bank of Ghana, a sample of 20 commercial banks was selected based on stratified random sampling. Data on capital ratios and stability metrics were collected annually, totalling 100 observations. Statistical techniques including panel regression analysis were applied to analyse the data and findings revealed a significant positive relationship between higher capital adequacy ratios and improved bank stability, supporting regulatory efforts to enhance capital requirements for financial institutions. However, this study focused on Ghana's banking sector, specifically examining the impact of capital adequacy on bank stability rather than financial performance. While the current study encompasses financial performance metrics for Kenyan banks, differing regulatorycontext limits direct comparisons.

Pandey and Reddy (2022) explored the impact of capital adequacy on financial performance in Indian banks. Adopting a cross-sectional design, the study examined how variations in Tier 1 capital ratios affected profitability metrics across a sample of 30 banks. The sample was selected using systematic and random sampling from publicly available financial statements. Data on capital adequacy and financial performance indicators were collected and analysed using correlation and regression analysis. The findings indicated a positive correlation between higher Tier 1 capital ratios and profitability measures such as return on assets (ROA) and return on equity (ROE), underscoring the importance of robust capital structures in enhancing financial performance amidst economic uncertainties. However, the study was conducted in India, involving a cross-sectional design to assess the impact of Tier 1 capital ratios on profitability metrics. In contrast, to the current study adopting a longitudinal approach covering multiple years, provides different temporal perspective that may yield distinct insights. While both studies explore capital adequacy's impact on financial performance, the use of Tier 1 ratios differs from the broader approach, which considers capital adequacy alongside other credit risk management factors, such as loan loss provisions and liquidity.

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In Kenya, Gitonga and Wanjohi (2021) investigated the relationship between capital adequacy and lending behavior in commercial banks. Employing a quantitative approach, the study utilized data from 15 banks operating in Nairobi. A purposive sampling method was employed to select banks based on their market share and asset size. Data was collected from annual reports and analysed using descriptive statistics and multiple regression analysis. The findings indicated that banks with higher capital adequacy ratios tended to exhibit more conservative lending behaviour, focusing on high-quality loans with lower default risks, thereby promoting financial stability and sustainable growth. Gitonga and Wanjohi's focused on lending behaviour diverges from the current study which emphasized on overall financial performance. They used a different sample size and selection criteria based on market share and asset size, whereas the current study analysed 11 listed banks, potentially resulting in different findings related to financial performance.

A study by Oliveira, and Sousa (2023) in Brazil explored the impact of Basel III capital adequacy requirements on bank risk-taking behaviour. Using a qualitative research design, the study interviewed senior bank officials from 10 major banks in Sao Paulo. Snowball sampling was employed to select interview participants, ensuring representation from diverse banking backgrounds. Qualitative data analysis techniques, including thematic analysis, were utilized to identify patterns and themes in risk management practices. The findings highlighted that adherence to Basel III requirements encouraged banks to adopt more prudent risk management strategies, thereby enhancing overall financial stability in the Brazilian banking sector. However, the qualitative study in Brazil concentrated on the adherence to Basel III capital adequacy requirements and their influence on risk management practices rather than financial performance, creating a contextual divergence from aquantitative focus. The qualitative nature of the research, focused on interviews with bank officials, contrasts sharply with the quantitative approach using secondary data, making it difficult to draw direct comparisons regarding financial performance impacts.

Namugambe, and Rwomushana (2020) investigated the impact of capital adequacy on financial resilience in Ugandan microfinance institutions (MFIs). Employing a mixed-methods approach, the study collected quantitative and qualitative data on capital

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adequacy ratios through interviews with MFI managers. A purposive sampling technique was used to select 12 MFIs across Uganda. Quantitative data was analysed using correlation analysis, while qualitative data was thematically analysed to explore managers' perceptions regarding capital adequacy and resilience. The findings indicated that MFIs with higher capital adequacy ratios were better equipped to withstand financial shocks and maintain operational continuity, highlighting the importance of capital buffers in enhancing resilience within the microfinance sector. However, the study was conducted within Uganda's microfinance sector, which targeted a different segment of the banking industry compared to this study which focused on commercial banks listed in Kenya, involving distinct regulatory frameworks and operational challenges.

2.3.2 Loan Loss Provision and Financial Performance

Pereira and Ferreira (2023) examined the determinants of loan loss provisions in Portuguese commercial banks. Using a quantitative research design, the study investigated the relationship between macroeconomic variables such as GDP growth and inflation rates, and loan loss provisions across a sample of 25 banks. Data was collected from annual reports and regulatory compliance databases, utilizing purposive sampling to ensure representation across different bank sizes. Regression analysis was employed to assess the impact of macroeconomic factors on provisioning levels. The findings showed that economic downturns and higher inflation rates were associated with increased provisions, underscoring the proactive risk management strategies adopted by Portuguese banks to mitigate credit risk during adverse economic conditions. However, the research in Portugal examined macroeconomic factors affecting loan loss provisions without considering the broader financial performance context. This differs from the this current study with because it has opted an integrated approach that examines multiple variables related to financial performance.

Mishra and Gupta (2021) investigated the effect of loan loss provisions on financial stability in Indian public sector banks (PSBs). Employing a longitudinal research design, the study analysed data over a ten-year period to explore how variations in provisioning levels influenced measures of financial stability as capital adequacy and asset quality. A sample of 15 PSBs was selected using stratified and random

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sampling, with data sourced from annual financial statements and regulatory reports. Statistical techniques including panel data analysis were employed to examine the dynamic relationship between loan loss provisions and financial stability indicators. The findings indicated that higher provisioning levels contributed to enhanced resilience and reduced systemic risk in the Indian banking sector during economic downturns. The study focused on Indian public sector banks over a ten-year period, which differs from commercial banks. The study explored financial stability, rather than financial perfomamce which is the focus of the study.

In Kenya, Kimani et al., (2022) explored the impact of loan loss provisions on profitability in listed commercial banks. Adopting a quantitative approach, the study analysed data from 10 banks listed on the Nairobi Securities Exchange (NSE). The independent variable was the level of loan loss provisions, while the dependent variables included profitability metrics such as return on assets (ROA) and return on equity (ROE). A purposive sampling method was employed to select banks based on their market capitalization and financial performance. Data was collected from annual reports and analysed using correlation and regression analysis. The findings indicated a negative relationship between higher provisioning levels and profitability, suggesting the trade-off banks face between risk management and financial performance. The study targeted listed commercial banks in Kenya, creating some overlap; however, it only investigates loan loss provisions without a comprehensive view of other credit risk management factors you address.

Silva, et al., (2023) in Brazil investigated the determinants of loan loss provisions in private sector banks. Using a mixed-methods research design, the study combined quantitative analysis of financial data with qualitative interviews of bank executives. The independent variables included loan portfolio characteristics and economic indicators, while the dependent variable was the level of provisions set aside for credit losses. A sample of 12 private banks was selected using purposive sampling, ensuring representation across different regions of Brazil. Quantitative data was analysed using statistical techniques, while qualitative data was thematically analysed to understand the rationale behind provisioning decisions. The findings highlighted that loan portfolio quality and economic conditions significantly influenced provisioning levels, guiding banks in managing credit risk and maintaining financial stability. The

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Brazilian study incorporated qualitative insights alongside quantitative data, whereas the current research exclusively employed secondary data analysis.

A study by Nyaga, et al., (2020) conducted a study on loan loss provisioning practices in Kenyan microfinance institutions (MFIs). Employing a qualitative approach, the study collected data through interviews and focus group discussions with MFI managers and credit officers. The independent variables included internal credit risk assessments and regulatory requirements, while the dependent variable was the adequacy of provisions for loan losses. Purposive sampling was used to select 10 MFIs operating in different regions of Kenya. Thematic analysis was applied to identify patterns and themes related to provisioning practices. The findings revealed that MFIs with robust risk management frameworks and proactive provisioning policies were better able to maintain asset quality and financial sustainability, underscoring the importance of effective credit risk management in microfinance operations. Microfinance institutions operate under different regulatory frameworks and target markets, leading to potential differences in findings.

Ombwacha (2019), investigated the effect of change in loan provisioning policy and financial performance of commercial banks in Kenya. Descriptive statistics was used on secondary data extracted from audited financial statements of banks for the period of 2014-2018. The study found a very strong relationship (R=0.844) between financial performance of banks and loan loss provisioning. The study noted that most commercial banks did not recognize loan loss provision which affected their financial performance. While the study addresses commercial banks in Kenya, it analyzed a different time frame (2014-2018) and focused solely on the effects of provisioning policies, which may not encompass the breadth of factors considered in the research.

Zulfikar & Sri (2019) investigated the role of discretionary loan loss provision of sharia financing on the financial performance of Islamic commercial banks in Indonesia. The study used partial Least Squares-Structural Equation modelling (PLS-SEM) to examine the relationship between loan loss provisions and financial performance. The sample size used was 13 Islamic commercial banks for a period of 4.5years. This study measured loan loss provision using probability of default and loss given default. Financial performance was determined using return on assets, non-

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performing financing, net operating margin, and operating costs on operating income. The results indicated that loan loss provisions have a direct effect on financial performance. The study on Islamic banks in Indonesia offers insights that are contextually different from the current study which focused on conventional banks in Kenya, presenting distinct regulatory and operational environments. The focus on discretionary provisions within the framework of sharia financing presents a different perspective on loan loss provisions compared to the current study which integrated approach, limiting direct comparisons.

2.3.3 Liquidity and Financial Performance

In South Africa, Khumalo and Ndaba (2023) examined the determinants of bank liquidity management strategies. Adopting a quantitative approach, the study analysed data from 15 commercial banks using regression analysis. The independent variables included liquidity ratios and market liquidity conditions, while the dependent variable was banks' liquidity positions. A stratified and random sampling technique were employed to ensure representation across different bank sizes and ownership structures. The findings indicated that banks with proactive liquidity management policies, including holding higher liquid assets, were more resilient to liquidity shocks and market volatility. However, the primary emphasis was on proactive liquidity management policies and market conditions affecting liquidity positions. The gap in comparison to the current wasthat while it investigated liquidity management, it does not address the broader context of credit risk management or include capital adequacy and loan loss provisions as additional variables impacting financial performance.

Chowdhury et al. (2022) investigated the impact of liquidity risk on financial performance in Bangladeshi banks. Employing a longitudinal research design, the study analysed data over five years to examine how variations in liquidity risk affected profitability metrics such as ROA and net interest margins. A sample of 20 banks was selected using systematic random sampling from publicly available financial statements. Statistical techniques, including regression analysis, were applied to assess the relationship between liquidity risk and financial performance indicators. The findings showed that effective liquidity risk management strategies were crucial for maintaining profitability and stability in the Bangladeshi banking sector. However, the study lacks an analysis of capital adequacy and loan loss

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provisions, which are crucial components of credit risk management. In contrast, the this research integrated these elements, providing a more comprehensive framework to assess how various credit risk management strategies collectively affected financial performance in Kenyan commercial banks.

Ouedraogo et al. (2021) studied on the determinants of liquidity management practices in Burkina Faso's banking sector. Using a qualitative research design, the study conducted interviews with senior bank managers and regulators. The independent variables included regulatory requirements and internal liquidity policies, while the dependent variable was the adequacy of banks' liquidity buffers. Purposive sampling was employed to select 10 banks representing different ownership structures and market shares. Qualitative data analysis techniques were used to identify themes and patterns in liquidity management strategies. The findings underscored the importance of regulatory compliance and proactive liquidity planning in enhancing banks' resilience to financial shocks. However, the findings emphasized the importance of regulatory frameworks but do not include quantitative measures or the impact of loan loss provisions and management efficiency on financial performance. This study addressed these factors, enabling a more detailed understanding of how the components influenced overall financial performance in listed commercial banks in Kenya.

Odunga (2019) examined liquidity and the influence of adequate capital on Kenyan commercial banks. Liquidity was emphasized for customer deposits as an adequacy factor on buffer levels. The study found that both liquidity and adequacy of capital had a positive and significant influence on the performance of banks. However, the study only addressed commercial banks in general and not listed ones; hence, the current study focuses on listed banks. Also, the study emphasized the positive relationship between liquidity and capital adequacy but does not consider the role of management efficiency or specific credit risk management practices. The current study expanded on this by including a comprehensive analysis of management efficiency, which is crucial for understanding how various aspects of credit risk management collectively affect financial performance.

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Muthoga (2019), carried out a study on liquidity risks and profitability of commercial banks listed in Nairobi Securities Exchange. This study analysed the effect of net loan holdings, asset quality, and liquid assets holdings on the profitability of listed commercial banks at the Nairobi Securities Exchange, Kenya. The research adopted a descriptive research design where the study population comprised all the 11 listed commercial banks at the Nairobi Securities Exchange, Kenya, as of December 2018. The panel regression analysis indicated that net loans holdings have a negative and significant effect on the profitability of commercial banks. Similarly, with respect to asset quality and profitability of commercial banks, the regression output revealed that the effect of asset quality on profitability is negative and significant. While this study provided insights into liquidity risks, there was no incorporation of capital adequacy and loan loss provisions, which are critical in assessing credit risk management. The current research addressed this oversight by exploring these factors and their combined effect on the financial performance of listed banks in Kenya.

A study by Muchiri, (2023) determined the effect of liquidity capacity on the financial performance of commercial banks in Kenya. The study analysed the effect of net stable funding, liquidity coverage, liquidity gap, and provisioning for non-performing loans on the financial performance of banks in Kenya. An explanatory research design was used and data analysied by appllying panel data models (random effects) based on the outcome of Hausman specification tests to determine the effect of liquidity capacity on the financial performance of commercial banks in Kenya. The prediction findings indicated that net stable funding and liquidity coverage had a significant positive effect on financial performance. Provisioning for non-performing loans liquidity gap and provisioning for non-performing loans had a significant negative effect on the financial performance of commercial banks in Kenya. This research integrated apital adequacy and loan loss provisions, allowing for a more nuanced understanding of how liquidity interacts with other risk management strategies to impact financial performance in listed Kenyan banks.

2.3.4 Management Efficiency and Financial Performance

Adewale et al. (2023) conducted a study on the impact of management efficiency on the financial performance of commercial banks in Nigeria. Using a quantitative approach, the study employed financial ratios (independent variables) such as cost-to-

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income and asset utilization ratios to measure management efficiency. The dependent variables included profitability metrics like return on assets (ROA) and return on equity (ROE). A sample of 25 banks was selected using stratified random sampling to ensure representation across different bank sizes. Data was collected from annual reports and analysed using regression analysis. The findings indicated that banks with higher management efficiency ratios tended to exhibit better financial performance, highlighting the role of effective management practices in enhancing profitability and operational efficiency. The study focused on Nigerian banks and primarily examined management efficiency using specific financial ratios, without considering other factors like capital adequacy or loan loss provisions. The current study, however, included a broader range of factors, such as capital adequacy and liquidity, and focused specifically on listed commercial banks in Kenya.

Tran et al. (2022) explored the determinants of management efficiency in Vietnamese commercial banks. Adopting a mixed-methods approach, the study combined quantitative analysis of financial data with qualitative interviews of bank executives. The independent variables included organizational structure, leadership styles, and technological adoption, while the dependent variable was operational efficiency measured through cost-efficiency ratios. A purposive sampling method was used to select 15 banks representing different ownership structures and operational scales. Quantitative data was analysed using statistical techniques, while qualitative data was thematically analysed to identify factors influencing management efficiency. The findings highlighted that bank with proactive leadership and efficient organizational structures achieved higher levels of operational efficiency and competitive advantage in the Vietnamese banking industry. The study used a mixed-methods approach, focusing on factors such as leadership and technology in the Vietnamese context. In contrast, the current study was purely quantitative, based on financial data from listed Kenyan commercial banks, and it did not explore qualitative factors like leadership or technology.

In Kenya, Mwangi et al. (2021) conducted a study on the impact of management efficiency on customer satisfaction in commercial banks. Using a quantitative research design, the study examined how management practices such as service quality and responsiveness influenced customer satisfaction scores across a sample of

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20 banks. The sample was selected using systematic random sampling to ensure representation across different banking segments. Data was collected through customer surveys and analysed using regression analysis. The findings indicated a positive relationship between effective management practices and higher customer satisfaction levels, underscoring the importance of management efficiency in enhancing service delivery and customer loyalty. The study focused on customer satisfaction as a dependent variable, which was different from the current study, where financial performance was the main outcome of interest. Additionally, while the study examined service quality, this research did not incorporate customer satisfaction as a measure of management efficiency.

Kumar and Singh (2023) in Brazil investigated the impact of management efficiency on innovation in financial services. Employing a qualitative approach, the study interviewed senior executives from 12 leading banks in Sao Paulo. The independent variables included management strategies and organizational culture, while the dependent variable was innovation measured through the introduction of new financial products and services. Snowball sampling was used to select interview participants, ensuring diverse perspectives from the banking sector. Qualitative data analysis techniques were employed to identify themes and patterns related to management efficiency and innovation. The findings highlighted that banks with proactive management practices and a supportive organizational culture were more likely to innovate and adapt to changing market demands, thereby gaining a competitive edge in the Brazilian financial services industry. The study took a qualitative approach and focused on innovation in financial services, which was not a focus of this study. Additionally, the study examined management strategies and organizational culture in Brazil, while the current study focused on financial performance and used quantitative methods in a Kenyan context.

Mugabe, et al., (2020) investigated the impact of management efficiency on operational performance in Zimbabwean commercial banks. Using a quantitative research design, the study analysed data from 15 banks over a five-year period. The independent variables included management effectiveness indicators such as cost management and employee productivity, while the dependent variables included operational performance metrics like cost-to-income ratio and asset utilization. A

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stratified and random sampling method was employed to select banks based on their market share and operational scale. Data was collected from annual reports and analysed using descriptive statistics and regression analysis. The findings indicated that banks with higher management efficiency ratios achieved better operational performance outcomes, demonstrating the importance of effective management practices in optimizing resource allocation and operational effectiveness. The study focused on operational performance metrics, such as cost management and productivity, in Zimbabwean banks. In contrast, thisresearch centered on the relationship between management efficiency and financial performance, specifically in listed commercial banks in Kenya, and included additional variables like liquidity and capital adequacy.

2.4 Summary of the Gaps

The empirical literature on capital adequacy and financial performance consistently demonstrates a positive influence of higher capital adequacy ratios on various measures of financial stability and performance. Osei, et al., (2023) in Ghana, Pandey, and Reddy (2022) in India, Gitonga and Wanjohi (2021) in Kenya, Oliveira and Sousa (2023) in Brazil, and Namugambe and Rwomushana (2020) in Uganda show that robust capital structures enhance bank stability, promote conservative lending practices, and improve resilience against financial shocks, highlighting the significance of regulatory efforts to bolster capital requirements.

Research on loan loss provisions (LLPs) and financial performance illustrates the critical role of LLPs in managing credit risk and maintaining financial stability. Pereira and Ferreira (2023) in Portugal, Mishra, and Gupta (2021) in India, Kimani, et al., (2022) in Kenya, Silva, et al., (2023) in Brazil, and Zulfikar and Sri (2019) in Indonesia indicate that higher LLPs are associated with proactive risk management, reduced systemic risk, and financial stability, despite the trade-offs with profitability. Effective provisioning policies are crucial for sustaining asset quality and financial sustainability, especially in economic downturns.

Studies on liquidity and financial performance underscore the necessity of effective liquidity management in ensuring bank resilience and profitability. Khumalo and Ndaba (2023) in South Africa, Chowdhury, et al., (2022) in Bangladesh, Ouedraogo,

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et al., (2021) in Burkina Faso, and Kamau, Odhiambo, and Muthoni (2021) in Kenya show that proactive liquidity strategies, regulatory compliance, and optimizing liquidity levels help banks withstand shocks and maintain stable financial performance. The importance of liquidity coverage and net stable funding in enhancing financial outcomes is particularly emphasized.

Research on management efficiency and financial performance reveals that effective management practices significantly enhance profitability and operational efficiency. Adewale et al., (2023) in Nigeria, Tran, et al., (2022) in Vietnam, Mwangi, et al., (2021) in Kenya, Kumar, and Singh (2023) in Brazil, and Mugabe, et al., (2020) in Zimbabwe highlight that higher management efficiency ratios, proactive leadership, and supportive organizational cultures lead to better financial performance, innovation, and customer satisfaction. These studies underscore the critical role of efficient management in optimizing resource allocation and achieving competitive advantage.

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Table 1:Summary of the Reviewed Literature and Gaps

Author	Topic of the Study	Findings of the Study	Gaps in the Study	How to address the Gaps
Osei, et al., (2023)	Impact of Capital Adequacy on Bank Stability in Ghana	Higher capital adequacy ratios positively influence bank stability over a five-year period in Ghana.	However, the study used longitudinal design, and was limited to Bank Stability in Ghana.	The study adopted a descriptive research design to assess the influence of capital adequacy on financial performance of listed commercial banks in Kenya.
Pandey & Reddy (2022)	Impact of Capital Adequacy on Financial Performance in Indian Banks	Higher Tier 1 capital ratios correlate positively with profitability metrics (ROA, ROE) in Indian banks.	However, the study used a cross-sectional design and focused on financial performance of Indian banks.	The study sought to address the gaps by adopting a descriptive research design to assess the influence of capital adequacy on financial performance of listed commercial banks in Kenya.
Gitonga & Wanjohi (2021)	Relationship between Capital Adequacy and Lending Behavior in Kenyan Commercial Banks	Higher capital adequacy ratios lead to more conservative lending practices in Nairobi-based banks.	However, the study used a quantitative research design and focused on the lending behavior in Kenyan Commercial Banks.	The study used a descriptive research design to assess the influence of capital adequacy on financial performance of listed commercial banks in Kenya.
Oliveira & Sousa (2023)	Impact of Basel III Capital Adequacy Requirements on Bank Risk-Taking Behavior in Brazil	Basel III compliance encourages Brazilian banks to adopt prudent risk management strategies.	However, the study used qualitative research design and focused on the impact of Basel III Capital Adequacy Requirements on Bank Risk-Taking Behavior in Brazil	The current study used a descriptive research design to focus on the influence of capital adequacy on financial performance of listed commercial banks in Kenya.
Namugambe & Rwomushana (2020)	Impact of Capital Adequacy on Financial Resilience in Ugandan Microfinance	Higher capital adequacy ratios enhance resilience to financial shocks and operational continuity in	However, the study focused on Financial Resilience in Ugandan Microfinance Institutions and used mixed-	The study sought to address the gaps by assessing the influence of capital adequacy on financial performance of listed commercial

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	Institutions	Ugandan MFIs.	methods approach.	banks in Kenya.
Pereira & Ferreira (2023)	Determinants of Loan Loss Provisions in Portuguese Commercial Banks	Economic downturns and higher inflation rates correlate with increased loan loss provisions in Portuguese banks.	However, the study used a quantitative research design and focused on determinants of loan loss provisions in Portuguese Commercial Banks	The study used a descriptive research design and will focus on the financial performance of listed commercial banks in Kenya.
Mishra & Gupta (2021)	Effect of Loan Loss Provisions on Financial Stability in Indian Public Sector Banks	Higher provisioning levels contribute to enhanced resilience and reduce systemic risk in Indian PSBs.	However, the study focused on the effect of loan loss provisions on financial stability in Indian Public Sector Banks using a longitudinal design.	The study used a descriptive research design and targeted all the eleven (11) listed commercial banks in Kenya for a period of five (5 years) covering between 2019 and 2023
Silva, et al., (2023)	Determinants of Loan Loss Provisions in Brazilian Private Sector Banks	Loan portfolio quality and economic indicators significantly influence provisioning levels in Brazilian private banks.	However, the study was focused on determinants of loan loss provisions in Brazilian Private Sector Banks.	The study used a descriptive research design and will target all the eleven (11) listed commercial banks in Kenya for a period of five (5 years) covering between 2019 and 2023
Nyaga, et al., (2020)	Loan Loss Provisioning Practices in Kenyan Microfinance Institutions	Robust risk management frameworks and proactive provisioning policies maintain asset quality in Kenyan MFIs.	The study used a qualitative research design and focused on loan loss provisioning practices in Kenyan Microfinance Institutions	The study adopted descriptive research study and will focus on the influence of loan loss provision on financial performance of listed commercial banks in Kenya.
Zulfikar & Sri (2019)	Role of discretionary loan loss provision of Sharia Financing on Financial Performance of Indonesian Banks	Discretionary provisioning impacts financial performance positively in Indonesian Islamic banks.	However, the study focused on the role of discretionary loan loss provision of Sharia financing on financial performance of Indonesian Banks	The study sought to address the gaps by influence of loan loss provision on financial performance of listed commercial banks in Kenya.

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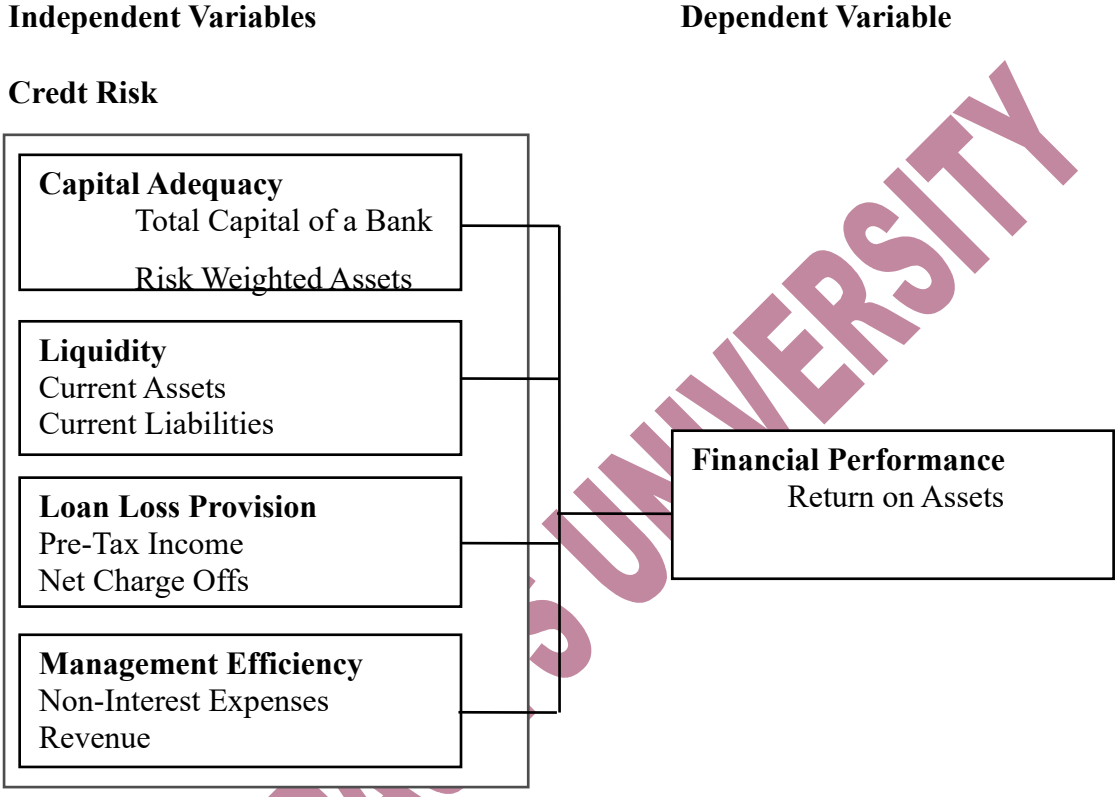
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Chowdhury, et al., (2022)	Impact of Liquidity Risk on Financial Performance in Bangladeshi Banks	Effective liquidity risk management is crucial for maintaining profitability and stability in Bangladeshi banks.	However, the study used a longitudinal design to assess the impact of liquidity risk on financial performance in Bangladeshi Banks.	The study used a descriptive research design and will target all the eleven (11) listed commercial banks in Kenya for a period of five (5 years) covering between 2019 and 2023
Ouedraogo, et al., (2021)	Determinants of Liquidity Management Practices in Burkina Faso's Banking Sector	Regulatory compliance and proactive liquidity planning enhance resilience to financial shocks in Burkina Faso banks.	However, the study used qualitative research design and focused on determinants of liquidity management practices in Burkina Faso's Banking Sector.	The study adopted descriptive research study to assess the influence of liquidity on financial performance of listed commercial banks in Kenya.

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2.5 Conceptual Framework

The conceptual framework is a system of concepts showing the relationship between the dependent variables and the independent variables. The independent variables of the study are capacity adequacy, liquidity, loan loss provision and management efficiency. The dependent variable of the study will be financial performance. Figure 1 shows the conceptual framework for the study.



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Figure 1: Conceptual Framework

Source: Researcher, (2024)

2.5.1 Capital Adequacy

Capital adequacy refers to the measure of a bank's financial strength and stability, specifically its ability to absorb potential losses and support its ongoing operations. It is primarily assessed through regulatory requirements and financial ratios that indicate the bank's capacity to withstand financial stress and maintain sound operations. The primary components used in calculating capital adequacy are total capital and risk-weighted assets (RWAs), both of which are essential to regulatory frameworks like the Basel Accords. Total capital comprises Tier 1

and Tier 2 capital. Tier 1 capital, also known as core capital includes equity capital and disclosed reserves, which are critical as they are readily available to absorb losses. Tier 2 capital consists of subordinated debts, hybrid capital instruments, and other resources that are less immediately accessible. This hierarchical structure ensures that banks have a solid base of high-quality capital to withstand financial distress. Risk-weighted assets, on the other hand, adjust the value of a bank's assets according to their risk profile. Different asset classes carry different risk weightswhich reflect their likelihood of default.

2.5.2 Liquidity Ratio

Liquidity ratio is a financial metric used to evaluate a bank's ability to meet its short-term obligations and manage its day-to-day operations without facing liquidity shortages. It hinges significantly on its current assets and current liabilities, both of which play pivotal roles in assessing its ability to meet short-term financial obligations. Current assets encompass cash, marketable securities, receivables, and other liquid holdings that can be converted into cash within a year. These assets are crucial for maintaining operational liquidity and ensuring the bank can promptly satisfy demands from depositors and other creditors. On the other side, current liabilities include short-term debts, accrued expenses, and deposits that must be settled within the same timeframe. The liquidity ratio is computed by dividing total current assets by total current liabilities, providing a clear measure of whether the bank has sufficient liquid resources to cover its short-term financial commitments. This ratio serves as a critical indicator of the bank's financial health, influencing depositor confidence, regulatory compliance, and strategic decision-making.

2.5.3 Loan Loss Provision

In the context of listed commercial banks, loan loss provisions refer to the reserves set aside to cover potential losses from loans that may become uncollectible. Determining the loan loss provision of a commercial bank relies significantly on pre-tax income and net charge-offs, crucial financial metrics that reflect both profitability and credit risk management. Pre-tax income serves as the financial basis from which banks allocate funds to cover potential losses from non-performing loans and other credit exposures. It indicates the bank's capacity to absorb financial shocks and maintain operational resilience. Higher pre-tax income allows for greater provisions, strengthening the bank's ability to manage risks effectively and comply with regulatory requirements. Net charge-offs, on the other hand, represent loans that the

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bank has deemed unlikely to be recovered, impacting profitability directly. They provide insights into the effectiveness of the bank's lending practices and credit risk management strategies. Managing net charge-offs is essential for maintaining asset quality and ensuring accurate provisioning for future credit losses. The interaction between pre-tax income and net charge-offs influences the adequacy of the loan loss provision, with banks needing to balance profitability goals with the necessity of maintaining sufficient reserves to mitigate credit risks. Effective management of these factors is crucial for sustainable financial performance and regulatory compliance in commercial banking, fostering stability and resilience in the face of economic uncertainties.

2.5.4 Management Efficiency

Management efficiency refers to the ability of the bank's leadership and organizational processes to effectively utilize resources, streamline operations, and achieve strategic objectives while maintaining or improving financial performance. Efficient management of expenses ensures that resources are allocated effectively, minimizing waste and enhancing operational efficiency. Management efficiency in commercial banking is often measured by various financial ratios that assess the relationship between non-interest expenses, revenue, and overall profitability. One key ratio is the efficiency ratio, calculated by dividing non-interest expenses by revenue and then getting the percentage. A lower efficiency ratio indicates that a bank is more efficient in managing its expenses than its revenue generation. It reflects how well the bank controls costs and maximizes revenue streams to achieve profitability. Banks strive to lower their efficiency ratio by reducing unnecessary expenses, improving operational processes, and increasing revenue through strategic initiatives.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology that was used in the study. It included the research design, study population, sample size, and sampling procedure, data and data collection, and data analysis.

3.2 Research Design

The study adopted longitudinal explanatory research design that allowes tracking changes in the variables across multiple time points (2019–2023) and observing how these changes affect financial performance. This was crucial in understanding the temporal nature of credit risk management strategies and their long-term impact on financial performance, providing a more nuanced understanding. In addition the design helped to better establish causality between credit risk management practices and financial performance. Since financial performance (ROA) is influenced by long-term strategies like capital adequacy management and loan loss provisioning, a longitudinal design help to show whether changes in these credit risk management strategies lead to corresponding changes in financial outcomes, reinforcing the explanatory nature of the study.

3.3 Target Population

This study targeted listed commercial banks in NSE, Kenya for a period of five (5 years) covering between 2019 and 2023. As of 31st December 2023, eleven (11) commercial banks were listed in the Nairobi Securities Exchange; the study targeted 11 banks which are Absa Bank Kenya, CFC Stanbic of Kenya Holdings Ltd, Diamond Trust Bank Kenya Ltd, Equity Bank Ltd, Housing Finance Co. Kenya Ltd, I & M Holdings Ltd, Kenya Commercial Bank Ltd, NCBA group PLC, Bank of Kigali, Standard Chartered Bank Kenya Ltd, the Co-operative Bank of Kenya Ltd

3.4 Census

The study conducted a census of all the eleven (11) listed commercial banks in NSE, Kenya with justification that there were only eleven listed commercial banks, and therefore, there was no need to sample since the population was manageable. Census also enhances the accuracy and reliability of a study. According to Hair et al. (2018), conducting a census in research, especially when the population is small and well-defined, enhances accuracy and

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reliability. It ensures that researchers have access to all relevant data points without the potential biases introduced by sampling techniques.

3.6 Data Collection Instrument

The researcher used data collection sheet to extract and compile the required secondary data. The study collected secondary data relating to capital adequacy, liquidity, loan loss provision, management efficiency and financial performance of commercial banks Listed in NSE, Kenya. Secondary data entails information gathered from already existing sources (Mugenda & Mugenda, 2012). This set of data was acquired from published annual reports (Annual Audited Reports, 2019-2023) of the 11 listed commercial banks in Kenya. The study was limited to a time scope of 5 years starting 2019 to the year 2023. The time scope is considered adequate since it is possible to monitor credit risk management trends within this period and evaluate how they affect financial performance of commercial banks listed in NSE. The financial statements from which the data was extracted included income statement, of financial position, cash flow statements and notes to the accounts.

3.7 Data Analysis

Data analysis involves reduction of accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. The study used both inferential and descriptive statistics and computation conducted by use of statistical software. Inferential statistics involved the use of correlation to determine whether there was linear regression analysis to identify the relationship between independent and dependent variables. All inferential statistics were tested at $\propto = 0.05$ significance level. Descriptive statistics involved the use of standard deviation and mean. The results were presented in tables, graphs, and charts.

3.7.1 Statistical Model

A statistical model is a formal representation of relationships between variables in the form of mathematical equations or rules. It is used to describe, understand, and predict behaviors or outcomes based on data collected through observation or experimentation, (Agresti & Finlay, 2019). The following model guided the study.

$$Y_{it} = \beta 0 + \beta 1 X_{1it} + \beta 2 X_{2it} + \beta 3 X_{3it} + \beta 4 X_{4it} + e \quad \ldots\ldots 3.1$$

Where.

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Y_{it}= Financial Performance (ROA)

X_{1it}= Capital adequacy Ratio

X_{2it}= Liquidity Ratio

X_{3it} = Loan Loss Provision (Loan loss, Provision Ratios

X_{4it} = Management efficiency (Operational Efficiency & Employee Efficiency)

3.7.2 Operationalization and Measurement of Variables

Table 2:Operationalization and Measurement of Variables

Variable Type	Variable	Measurement
Independent	Capital Adequacy	Capital Adequacy Ratio. CAR= Total Capital of the Banks / Risk-Weighted Assets
Independent	Liquidity	Current Assets Ratio CAR= Current Assets / Current Liabilities
Independent	Loan Loss provision	Loan Loss Provision Ratio Loan Loss Provision Coverage Ratio = Pre-Tax Income + Loan Loss Provision / Net Charge Offs
Independent	Management efficiency	Efficiency Ratio ER= Non-Interest Expenses / Revenue
Dependent	Financial Performance	Financial Performance ROA = Net Income / Average Total Assets

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3.8 Hypothesis Testing

The summary of the hypothesis testing is as shown in Table 3.

Table 3: Summary of the Hypotheses Testing

Objective	Hypotheses	Results interpretation (at 5%significance level)
Objective 1 Analyse the relationship between capital adequacy and financial performance for listed commercial banks in Kenya	H_{01} Capital adequacy has no relationship with financial performance of listed commercial banks in Kenya	If P-value< 0.05(Accept $H0_1$) but if P-value>0.05 reject H_{01})
Objective 2 To examine the relationship between Loan loss provision and financial performance for listed commercial banks in Kenya	H_{02} Loan Loss Provision has no relationship with financial performance of listed commercial banks in Kenya	If P-value< 0.05(Accept $H0_2$) but if P-value>0.05 reject $H0_2$)
Objective 3 To establish the relationship between liquidity and financial performance of listed commercial banks in Kenya .	H_{03} Liquidity has no relationship with financial performance of listed commercial banks in Kenya	If P-value< 0.05(Accept $H0_3$) but if P-value>0.05 reject H_{03})
Objective 4 To analyse the relationship between management efficiency and financial performance of listed commercial banks in Kenya	H_{04} Management efficiency has no relationship with financial performance of listed commercial banks in Kenya	If P-value< 0.05(Accept $H0_4$) but if P-value>0.05 reject H_{04})

3.9 Ethical Considerations

Ethical considerations encompass the principles guiding research conduct, serving as a framework for responsible inquiry. To ensure all the ethical issues were considered the permission was obtained to collect data in accordance with the regulations set forth by the National Commission for Science, Technology, and Innovation (NACOSTI). Before data collection informed consent to use data was obtained from central bank and NSE websites. Proper data handling procedures were utilized to ensure data privacy and security during and after the study.

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CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.1 Descriptive Statistics

The study sought to ascertain the relationship between credit risk management and financial performance of listed commercial banks in Kenya. The references included Annual Audited Reports of listed commercial banks in Kenya for a period of five (5 years) covering between 2019 and 2023.

4.1.1 Capital Adequacy

Capital adequacy was assessed through capital adequacy ratio calculated by dividing total capital of a bank by risk-weighted assets. it refers to the amount of capital a commercial bank needs to hold as a buffer against its risk exposures and compares a bank's capital to its risk-weighted assets (RWAs) to ensure that the bank can absorb potential losses and continue operating effectively. According to the Central Bank of Kenya, (2023), banks that are already operating are required to maintain 10.5% core capital to total risk-weighted assets and 14.5% total capital to risk-weighted assets. The research sought to establish the mean, maximum and minimum capital adequacy ratio of the 11 listed commercial banks in Kenya. The findings are indicated in Table 4 below.

Table 4:Capital Adequacy

Capital Adequacy Ratio		
N	Valid	55
	Missing	0
Mean		17.4654288
Std. Deviation		3.73059604
Minimum		.17286
Maximum		22.64370

Source: Research Data, 2024

From the findings the average Capital Adequacy Ratio for the 11 listed commercial banks was 17.47% which indicated that commercial banks in Kenya for the 5 years had maintained a strong capital base. The range of CAR values, from 0.17% to 22.64%, shows substantial variability among commercial banks, with some being very well-capitalized while others were barely meeting or potentially falling short of regulatory requirements. The standard deviation of 3.73 suggested a moderate dispersion around the mean, indicating that while several commercial banks had a robust CAR, there weresignificant differences among them.

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The findings matched those of Namugambe and Rwomushana (2020), who concluded that the average core capital among listed commercial banks in Kenya had been on a steady rise over a 5-year period. A declining trend was observed in supplementary capital over the same period. However, supplementary capital does not had a significant effect on financial performance among commercial banks listed on the NSE.

4.1.1.2Trend of the Capital Adequacy Ratio of Listed Commercial Banks for 5 years (2019-2023)

The study further sought to establish the trend of the capital adequacy ratio of the 11 listed commercial banks for the 5 years (2019-2023). The findings are indicated in figure 2.

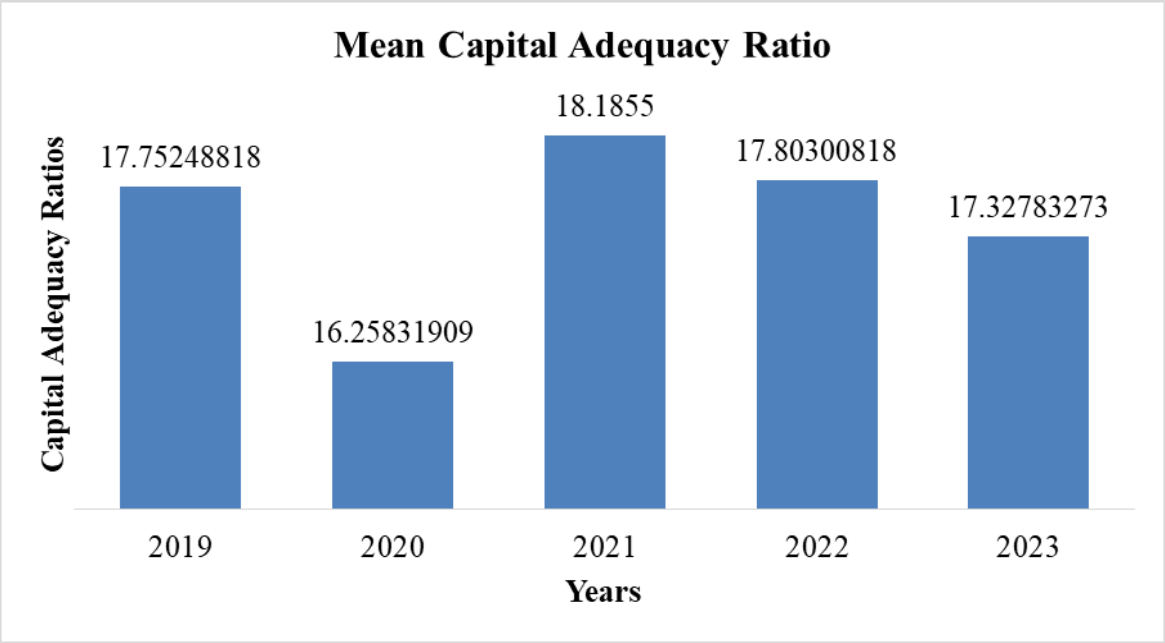


Figure 2: Mean Capital Adequacy Ratio

In 2020, the capital adequacy ratio (CAR) of the 11 listed commercial banks decreased to 16.26 percent, down from 17.75 percent in the preceding year. In 2022, the capital adequacy ratio also dropped to 17.8 percent from 18.19 percent in 2021. The shrinking indicated a slight decrease in the banking sector's ability to withstand a financial downturn. The CAR measures the ratio between capital volume and risk-weighted credit exposures. The higher the ratio, the more likely that the banks can handle losses before being at risk of insolvency.

4.1.2 Liquidity Ratio

Liquidity ratio was calculated by dividing current assets by current liabilities. Liquidity refers to the ability of a bank to meet its short-term financial obligations without having to sell off assets at a significant loss. Commercial banks are required to maintain a minimum liquidity ratio of 20%. This ratio is calculated as the proportion of a bank's liquid assets (such as cash, reserves, and highly liquid securities) to its short-term liabilities. The research sought to establish the mean, maximum and minimum liquidity ratio of each of the 11 listed commercial banks in Kenya. The findings are indicated in Table 5 below.

Table 5: Liquidity Ratio

Liquidity Ratio		
N	Valid	55
	Missing	0
Mean		.9940614
Std. Deviation		.52978033
Minimum		.01380
Maximum		1.88893

Source: Research Data, 2024

According to the findings of the study, the average Liquidity Ratio of the listed commercial banks was approximately 0.99, which suggests that, on average, commercial banks have near equilibrium between their liquid assets and short-term liabilities. The significant standard deviation of 0.53 indicates considerable variation in liquidity among the commercial banks. The range from 0.01 to 1.89 shows that while some commercial banks are close to having sufficient liquidity, others may have liquidity ratios that are either barely adequate or considerably higher. According to Nyaga et al. (2020), some commercial banks in Kenya are presently facing liquidity challenges, such as the National Bank, Consolidated Bank, and Development Bank of Kenya. To facilitate commercial banks' liquidity management, commercial banks are currently required to maintain their CRR based on a daily average level from the 15th of the previous month to the 14th of the current month and not to fall below a CRR of 3 percent on any day.

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4.1.2.1 Trend of the Liquidity Ratio of Listed Commercial Banks for 5 years (2019-2023)

In addition, the study sought to determine the trend of the liquidity of the 11 listed commercial banks in Kenya for 5 years. The findings are indicated in Figure 3.

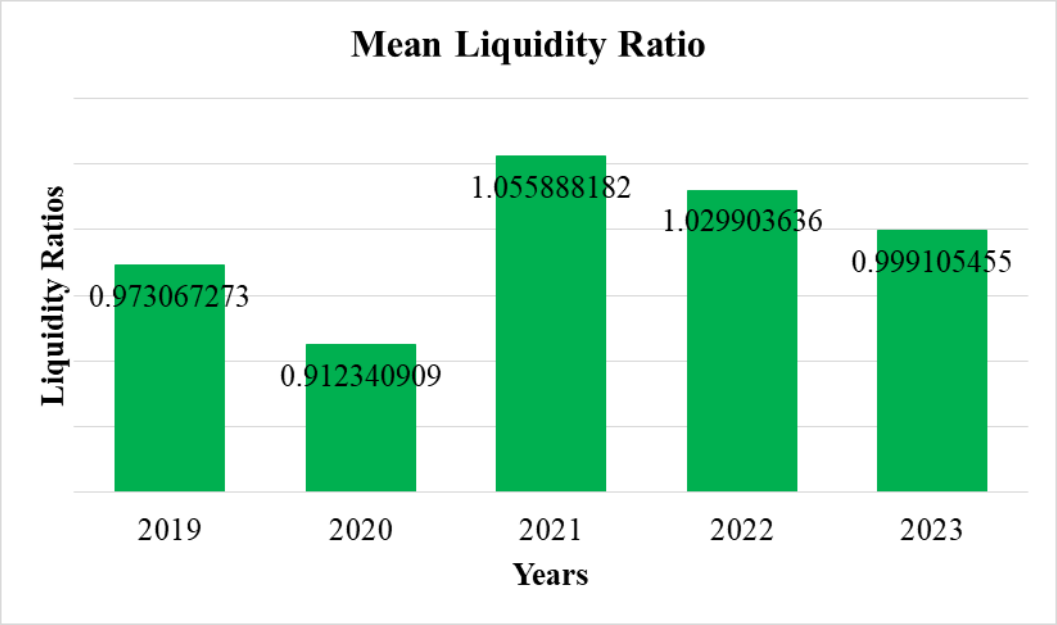


Figure 3: Mean Liquidity Ratio

From the findings, in 2021, the liquidity ratio of the 11 listed commercial banks in Kenya increased to 1.05 percent from 0.91 percent in the preceding years (2019 and 2020). In 2023, the liquidity ratio decreased to approximately 0.99 percent from 1.03 percent in 2022. The shrinking indicated a slight reduction in the proportion of liquid assets held by the commercial banks in Kenya relative to their short-term liabilities, suggesting a potential decline in their ability to meet immediate financial obligations.

4.1.3 Loan Loss Provision

Loan loss provision was assessed through loan loss provision coverage ratio and calculated by dividing pre-tax income by net charge offs. The loan loss provision ratio is a financial metric used to assess the adequacy of a bank's provisions for potential loan losses. It measures the proportion of loan loss provisions to the total loans or advances on the bank's balance sheet. This ratio helps evaluate how well a bank is prepared for potential defaults and credit losses. The CBK requires banks to make provisions for loan losses based on the

classification of their loans. Maintaining a high Loan Loss Provision Ratio relative to NPLs helps banks manage potential credit losses effectively and supports overall financial stability. The research sought to establish the mean, maximum and minimum loan loss provision ratio of the 11 listed commercial banks in Kenya. The findings are as indicated in table 6 below.

Table 6: Loan Loss Provision

Loan Loss Provision Ratio		
N	Valid	55
	Missing	0
Mean		1.4231400
Std. Deviation		.14623130
Minimum		1.23350
Maximum		1.75630

Source: Research Data, 2024

From the findings of the study, the average Loan Loss Provision Ratio was approximately 1.42. This indicates that, on average listed commercial banks in Kenya were setting aside a reasonable amount for loan losses relative to their total loans. The standard deviation of 0.15 suggested that there was a relatively low variability in this ratio among the institutions. The range from 1.23 to 1.76 showed that all institutions maintained provisions within a similar range, indicating a generally consistent approach to managing potential loan losses. These results of the thesis agree with the ones of Nyaga, et al., (2020), which indicated that the relationship between provisions and capital will become positive (negative) if general provisions make up only a smaller (bigger) portion of total loan-loss provisions (recall that total provisions are made up of general and specific provisions), particularly if this ratio is less (more) than one minus the tax rate.

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4.1.3.1Trend of the Loan Provision Ratio of Listed Commercial Banks for 5 years (2019-2023)

The research further sought to establish the trend of loan provision ratio of 11 listed commercial banks for the 5 years. The findings are indicated in figure 4

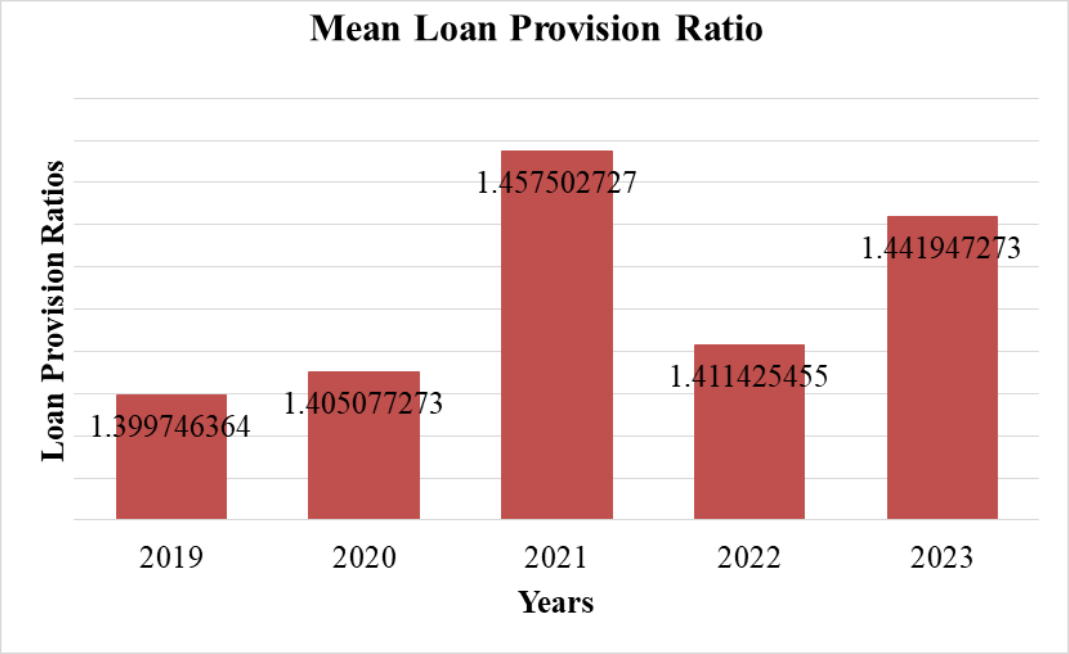


Figure 4 : Mean Loan Loss Provision

In 2021, the loan loss provision ratio of the 11 listed commercial banks in Kenya increased drastically to 1.46 percent from 1.41 percent in the previous years. In 2022, the loan loss provision ratio further dropped to 1.41 percent from 1.46 percent in 2021. This indicated a reduction in the proportion of provisions set aside by the banks for potential loan losses, reflecting a possible improvement in their expectations of loan repayment or a reduction in perceived credit risk.

4.1.4 Management Efficiency Ratio

Management efficiency Ratio was assessed by dividing non-interest expenses by revenue and it measures how effectively a bank is managing its operating expenses relative to its revenue. It provides insight into the operational efficiency of the bank, indicating how well it is controlling costs while generating income. A management efficiency ratio below 50% was an indicator of strong operational efficiency for commercial banks. Banks aim to achieve and maintain a low ratio through effective cost management and revenue generation strategies. The study further sought to determine the mean, maximum and minimum management

efficiency of each of the 11 listed commercial banks in Kenya for the 5 years. The findings are indicated in table 7.

Table 7: Management Efficiency Ratio

Management Efficiency Ratio		
N	Valid	55
	Missing	0
Mean		34.1170898
Std. Deviation		25.90736339
Minimum		2.37919
Maximum		99.79138

Source: Research Data, 2024

The findings of the study showed that the average management efficiency ratio of was approximately 34.12 indicating that, on average, institutions were managing their operations with moderate efficiency. However, the large standard deviation of 25.91 suggested a significant variability on how efficiently institutions manage their resources. The broad ranges from 2.38 to 99.79 highlights that some listed commercial banks were highly efficient, while others were significantly less so. The findings of Khumalo and Ndaba (2023), showed that management efficiency has no significant influence on the financial performance of savings and credit societies in Kenya. The regression analysis showed that management efficiency had no significant influence on the financial performance of savings and credit societies.

4.1.4.1 Trend of the Management Efficiency Ratio Listed Commercial Banks for 5 years (2019-2023)

The study further sought to establish the trend of the management efficiency ratio of the 11 listed commercial banks in Kenya for the 5 years. The findings are indicated in Figure 5

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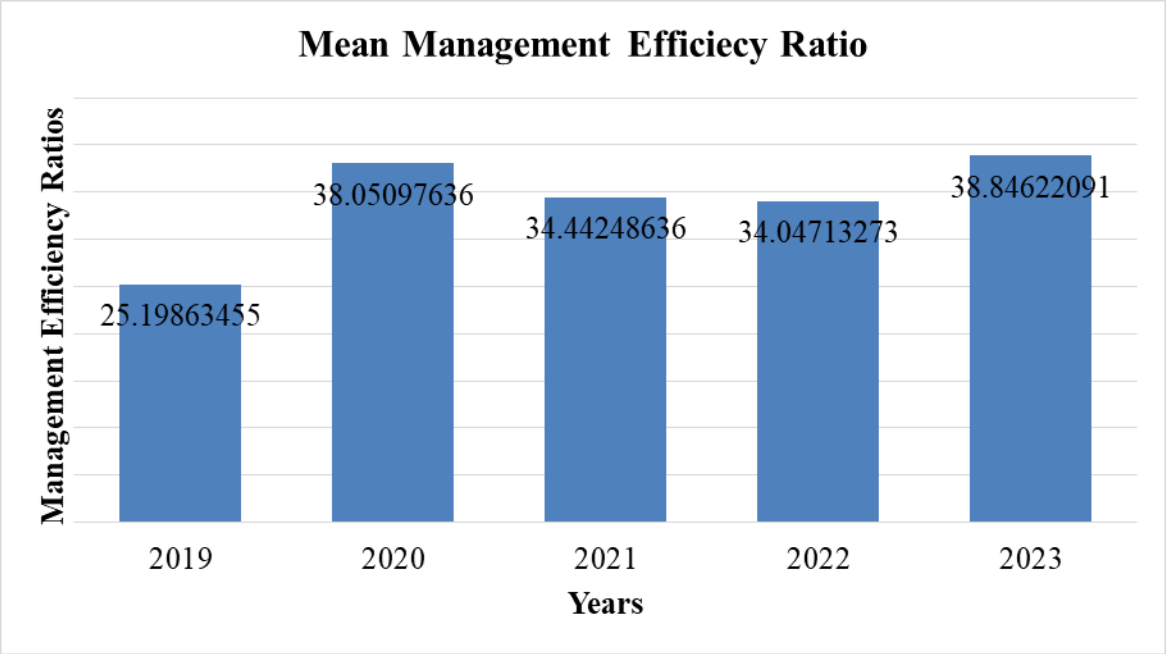


Figure 5 : Mean Mangement Efficiency Ratio

In 2020, the management efficiency ratio of the 11 listed commercial banks in Kenya increased to 38.06 percent, down from 25.19 in 2019. In 2023, the management efficiency ratio increased to 34.85 percent from 34.05 percent in 2022. The slight change indicated a slight decline in the efficiency of management in controlling operational expenses relative to income, suggesting potential challenges in cost management or operational efficiency.

4.1.5 Return on Assets

Return on Assets (ROA) is a financial metric used to evaluate how effectively a company, including commercial banks, utilizes its assets to generate profits. For commercial banks, ROA is particularly important as it reflects the bank's ability to earn profits from its assets, such as loans and investments. According to Birken and Adams (2021), an ROA of 5% or better is typically considered good, while 20% or better is considered great. In general, the higher the ROA, the more efficient the company is at generating profits. The study further sought to determine the mean, maximum and minimum management efficiency of the 11 listed commercial banks in Kenya for the 5 years. The findings are indicated in table 8.

Table 8: Return Assets

Return on Assets		
N	Valid	55
	Missing	0
Mean		5.2944136
Std. Deviation		4.62010825
Minimum		.45386
Maximum		19.66356

Source: Research Data (2024)

From the findings the average Return on Assets (ROA) was approximately 5.29%. This suggests that, on average, commercial banks had achieved a moderate level of profitability relative to their assets over a periodof five years. The high standard deviation of 4.62 indicated substantial variation in ROA among the banks, with some achieving significantly higher returns while others perform much lower. The range from 0.45% to 19.66% highlighted this difference, with a few banks demonstrating exceptional profitability and others struggling to generate returns.

4.1.5.1 Trend of the ROA Listed Commercial Banks for 5 years (2019-2023)

The study further sought to establish the trend of Return on Asset for the 11 listed commercial banks in Kenya for the 5 years. The findings are indicated in Figure 6.

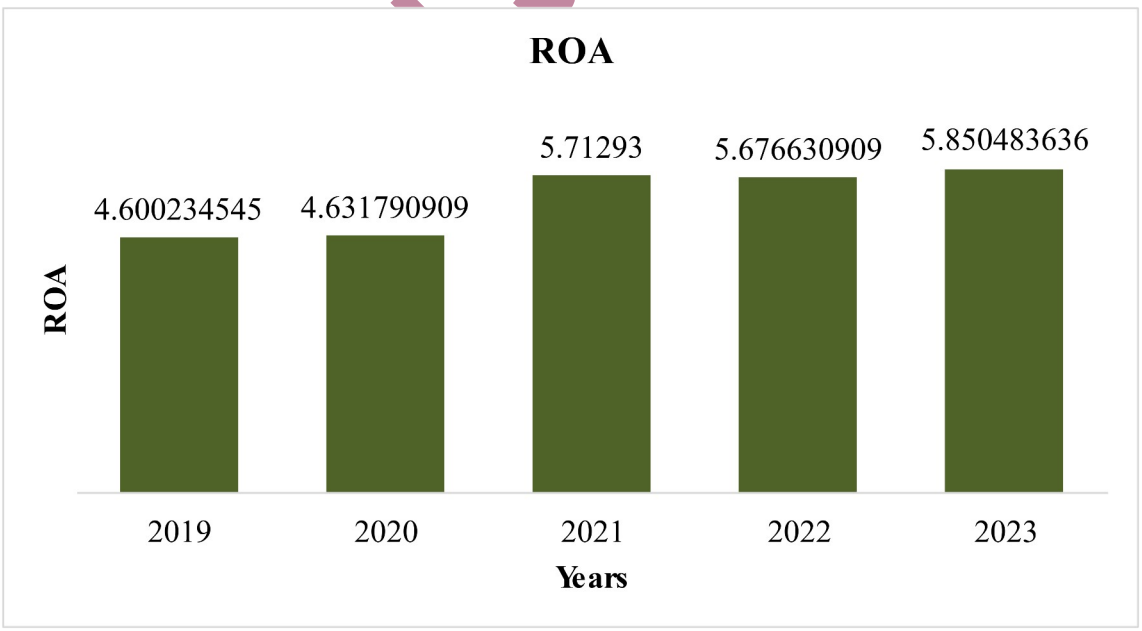


Figure 6 :Trend of the ROA Listed Commercial Banks for 5 years (2019-2023)

Over the last five years, the ROA ratio of the 11 listed commercial banks in Kenya showed a steady increase from 4.6 percent in 2019 to 5.85 in 2023. This implies that commercial banks have had a consistent improvement in their ability to generate profit from their assets, reflecting enhanced operational efficiency and profitability over the past five years.

4.2 Credit Risk Management on Financial Management

The analysis began with a correlation analysis to establish the direction of relationship between independent and dependent variables and the findings are presented on Table 9 below

Table 9: Correlation Analysis

		ROA	Capital Adequacy Ratio	Liquidity Ratio	Loan Loss Provision Ratio	Management Efficiency Ratio
Capital Adequacy Ratio	Pearson Correlation	-.133*	1	-.074	.019	.335*
	Sig. (2-tailed)	.033		.590	.889	.012
	N	55	55	55	55	55
Liquidity Ratio	Pearson Correlation	-.568*	-.074	1	.033	-.117
	Sig. (2-tailed)	.000	.590		.814	.393
	N	55	55	55	55	55
Loan Loss Provision Ratio	Pearson Correlation	-.107*	.019	.033	1	-.187
	Sig. (2-tailed)	.043	.889	.814		.172
	N	55	55	55	55	55
Management Efficiency Ratio	Pearson Correlation	-.208*	.335*	-.117	-.187	1
	Sig. (2-tailed)	.012	.012	.393	.172	
	N	55	55	55	55	55

The findings revealed that there was a weak negative and statistically significant correlation between capital adequacy and the financial performance of listed commercial banks in Kenya ($r= -0.133$; $p<0.05$). This implies that an increase in capital adequacy decreased financial

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performance of listed commercial banks in Kenya. In addition, the study indicated that there was a strong negative and statistically significant correlation between liquidity and financial performance of listed commercial banks in Kenya (r= -0.568; p<0.05). This implied that an increase in liquidity reduced financial performance of listed commercial banks in Kenya.

Furthermore, the findings revealed that there was a weak negative correlation between loan loss provision and financial performance of listed commercial banks in Kenya (r= -0.107; p<0.05). The results of the correlation analysis indicated that an increase in loan loss provision decreased financial performance of listed commercial banks in Kenya. Finally, the findings established that a moderate negative correlation existed between management efficiency ratio and financial performance of listed commercial banks in Kenya (r= -0.208; p<0.05). The results of the correlation analysis indicated that an increase in management efficiency reduced financial performance of listed commercial banks in Kenya.

Since the correlation test indicated that a linear relationship exiated between the dependent and independent variables , the data was subjected to regression anlysis . One of the output of this test is the R^2 (R-squared) which is the proportion of variance in the dependent variable, which can be explained by the independent variable.

Table 10: Model Summary

Source	SS	df	MS	Number of obs	= 55
				F(4, 50)	= 9.24
Model	489.959	4	122.498	Prob > F	= 0.000
Residual	662.693	50	13.254	R-squared	= 0.425
				Adj R-squared	= 0.379
Total	1152.687	54	21.346	Root MSE	= 3.641

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From the model summary the F-statistic was 9.24, with a p-value of 0.000. This indicated that the model as a whole was statistically significant, meaning that the independent variables conxtructs jointly (capital adequacy, liquidity ratio, loan loss provision ratio, and management efficiency) had a significant effect on ROA. In addition, the R-squared value was 0.425 suggesting that the 42.5% of the variation in the financial performance (ROA) of the listed commercial banks wasexplained by the independent variables included in the

model. The adjusted R-squared value was 0.379 slightly reduces this explanatory power to account for the number of predictors, but still indicates a reasonable fit for the model.

Table 11 shows the overall significant test results for the hypothesized research model.

Table 11: Regression Coefficient

ROA	Coef	Std. Err.	t	P>|t|	[95% Conf.Interval]	
(Constant)	20.167	5.505	3.66	0.001	9.109	31.227
Capital Adequacy Ratio	-0.102	0.142	-0.72	0.476	-0.386	0.183
Liquidity Ratio	-5.251	0.942	-5.57	0.000	-7.144	-3.358
Loan Loss Provision Ratio	-4.349	3.466	-1.25	0.215	-11.311	2.612
Management Efficiency Ratio	-0.049	0.0208	-2.37	0.022	-0.091	-0.008

From the findings the constant coefficient was 20.167, meaning that if all other factors were held constant, the baseline financial performance of listed commercial banks in terms of ROA would be 20.167 units. In addition, the findings showed that the Capital Adequacy Ratio (CAR) had a negative coefficient of -0.102, with a p-value of 0.476. Thus, implies that there is a weak inverse relationship between capital adequacy and financial performance, but the high p-value indicates that this relationship is not statistically significant. Therefore, capital adequacy does not significantly impact the financial performance of listed commercial banks. The study findings are in line with those of Osei, et al., (2023) which found that banks with higher capital reserves may be more conservative in their lending practices, as they need to maintain their capital ratio. This could result in lower loan growth, which might limit the bank's ability to generate higher interest income, potentially affecting ROA. A higher CAR often means the bank is retaining more earnings to build its capital base. While this might reduce immediate payouts to shareholders and slightly lower ROA in the short term, it strengthens the bank's position for sustainable growth, potentially leading to higher ROA in the future.

Furthermore, the liquidity ratio exhibited a significant negative relationship with ROA, with a coefficient of -5.251 and a p-value of 0.000. This implied that there was a statistical significance; showing that a 1-unit increase in the liquidity ratio among listed commercial banks led to a decrease of 5.251 units in ROA. Implicitly banks with higher liquidity ratios tend to have lower financial performance, suggesting that liquidity management plays a

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critical role in the profitability of commercial banks. The study findings were in line with those of Kamau, et al., (2021) which indicated that banks with higher liquidity ratio might retain more earnings to strengthen their capital base, potentially reducing short-term ROA but leading to greater financial stability and higher long-term profitability. A thinner capital buffer, increasing the risk of financial distress in adverse conditions, which can havenegative impact on ROA.

In addition, loan loss provision ratio had a coefficient of -4.349 and a p-value of 0.215 which showed non- statistical significance. Therefore, loan loss provisions did not have influence on the financial performance of listed commercial banks. The study findings were supported by findings of Mishra and Gupta (2021) which revealed that if a bank reduces its loan loss provisions, it boosts net income, which can increase ROA. However, this might indicate under-provisioning, which can berisky if loan defaults rise unexpectedly. When a bank increases its loan loss provisions, it reduces its net income because these provisions are recorded as expenses consequently lowering net income, leading to a decrease in ROA.

Lastly, the management efficiency ratio had a coefficient of -0.049 and a p-value of 0.022, which was statistically significant. This meant that a 1-unit increase in the management efficiency ratio led to a 0.049-unit decrease in ROA. The negative and significant relationship implied that higher management inefficiency was associated with poorer financial performance, making management efficiency an important determinant of profitability in listed commercial banks. The study findings agree with those of Adewale et al. (2023) who observed that, banks with higher management efficiency ratios tended to exhibit better financial performance, highlighting the role of effective management practices in enhancing profitability.

From the findings the overall multiple regression model was ;

$Y= 20.167- 5.251X_2 - 0.049\ X_4 +$

4.3 Research Hypotheses Findings

The research interpreted the hypothesis tests using significance levels of the coefficients. The general rule of interpreting hypothesis is that when the Pvalue value is less than the standard

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significant level of 0.05, the null hypothesis is rejected and when otherwise there is failure to reject. The findings were as indicated below.

$H0_1$: There is no relationship between capital adequacy and financial performance of listed commercial banks in Kenya.

The regression analysis showed that the Capital Adequacy Ratio (CAR) had a p-value of 0.476. which was greater than the standard significance level of 0.05, there was failure to reject the null hypothesis. This meant that there was no statistically significant relationship between capital adequacy and financial performance (as measured by ROA) of listed commercial banks in Kenya. These findings align with Hui (2019), who suggested that higher capital reserves may make banks more conservative in their lending, possibly limiting loan growth and reducing ROA.

H02: There is no relationship between loan loss provision and financial performance of listed commercial banks in Kenya.

The results indicate that the p-value for Loan Loss Provision Ratio (LLPR) was 0.215. Since the p-value was greater than 0.05, there wa failure to reject the null hypothesis which implied that there is no statistical significant relationship between loan loss provision and financial performance of listed commercial banks in Kenya. This result contrasts with studies such as that of Kagwiria (2022), which argued that increased loan loss provisions typically reduce net income, thereby lowering ROA.

H03: There is no relationship between liquidity and financial performance of listed commercial banks in Kenya.

From the findings the p-value for Liquidity Ratio was 0.001 which was less than the standard significant level of 0.05 therefore the study rejected the null hypothesis and concluded there was a statistical significant relationship between liquidity and financial performance of listed commercial banks in Kenya. This finding was consistent with Bausch and Pils (2019), who showed that banks with higher liquidity ratios might retain earnings to strengthen their capital base, potentially reducing short-term ROA but enhancing long-term financial stability.

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H04: There is no relationship between management efficiency and financial performance of listed commercial banks in Kenya.

The p-value for Management Efficiency Ratio (MER) was 0.022 and Since it was less than 0.05, the study rejected the null hypothesis the reverse was that there is a statistical significant relationship between management efficiency and financial performance of listed commercial banks in Kenya. These findings aligned with that of Alslehat and Altahtamouni (2016), who argued that efficient management, characterized by high income generation relative to costs, is crucial for maximizing profitability and achieving higher ROA.

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CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a detailed summary of the major findings of the actual study in accordance with research objectives. The chapter further provided conclusions and made some recommendations and suggestions on areas of further study.

5.2 Summary of Major Findings

This section provides a summary of the key findings based on the study's objectives. Correlation test indicated a negative linear relationship between capital adequacy and financial performance, where correlation coefficient of $r=-0.133$ and a significant value of ($p < 0.05$) were recorded. While capital adequacy is essential for ensuring the stability and solvency of banks, the results suggest that maintaining a strong capital base does not necessarily correlate with improved profitability. The Capital Adequacy Ratio (CAR), which mandates banks to hold sufficient capital reserves to absorb potential losses, ensures regulatory compliance and mitigates risk. However, a higher CAR may limit banks' ability to engage in income-generating activities, such as lending, which could lead to lower return on assets (ROA). Conversely, a lower CAR might enhance short-term profitability by allowing for more lending, but it also increases financial risk. Therefore, although listed commercial banks have maintained a strong capital base from 2019 to 2023, this does not imply that higher capital levels directly cause better financial performance. The correlation observed does not establish causation; rather, it merely indicates a directional relationship that warrants further investigation into the underlying factors influencing both capital adequacy and profitability.

The study also found a negative relationship between loan loss provisions and financial performance. Loan loss provisions, set aside to cover potential losses from non-performing loans, are an essential risk management tool for banks. The findings showed that listed commercial banks maintained an average Loan Loss Provision Ratio of 1.42%, which reflects prudent credit risk management. While increasing loan loss provisions is necessary for maintaining the health of the loan portfolio, it does lead to a reduction in net income, as a larger portion of revenue is allocated to cover potential defaults. This reduction in net income

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can lower return on assets (ROA), negatively impacting profitability. However, it's important to note that the observed correlation between higher loan loss provisions and lower profitability does not imply causation. The findings highlight the complex relationship banks must navigate between managing credit risk and sustaining profitability. While higher provisions are essential for risk management, their impact on short-term financial performance should not be viewed as a direct cause-and-effect relationship.

A strong negative correlation was observed between liquidity and financial performance, indicating that high liquidity levels are associated with lower ROA. Listed commercial banks in Kenya generally maintained liquidity ratios above the Central Bank of Kenya's minimum requirement of 20%, ensuring they had sufficient liquid assets to meet short-term obligations. This study highlights the trade-off between liquidity and profitability. Maintaining excessive liquidity may constrain a bank's capacity to achieve higher returns, as liquid assets typically yield lower returns than loans and long-term investments. Consequently, banks with elevated liquidity ratios often exhibit diminished profitability due to the opportunity cost of not allocating resources to more lucrative investments. While reallocating surplus liquidity to higher-yielding investments could enhance profitability, such a strategy may concurrently increase the risk of liquidity shortfalls during periods of financial stress. Therefore, banks must engage in careful assessment of their liquidity management strategies, balancing the necessity for adequate liquidity with the objective of optimizing returns.

The findings also demonstrated that management efficiency significantly influences the financial performance of listed commercial banks. The average Management Efficiency Ratio (MER) for the banks studied was 34.12%, indicating moderate operational efficiency. A lower MER suggests that banks effectively control their operating costs, leading to enhanced profitability and higher ROA. In contrast, higher operational costs, reflected in a higher MER, were found to erode profitability by reducing net income. The results showed that management efficiency has a direct and significant impact on ROA, underscoring the importance of cost management and operational efficiency in driving financial performance. Banks with lower MERs are better positioned to optimize their resources, reduce expenses, and improve overall profitability.

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5.3 Conclusions of the Study

The study concluded that the capital adequacy ratio does not have a statistically significant relationship with the financial performance of listed commercial banks in Kenya. While maintaining a higher capital base may provide long-term financial stability, it does not directly correlate with improved financial performance in the short term. The need to preserve capital may reduce the bank's ability to generate higher income, thereby limiting its return on assets (ROA).

The study concluded that liquidity ratio has a statistically significant relationship with the financial performance of listed commercial banks in Kenya. Banks with higher liquidity ratios may experience lower short-term profitability due to the conservative approach to maintaining liquid assets. However, this ensures greater financial stability and can enhance long-term profitability. Therefore, maintaining an optimal liquidity level is crucial for balancing profitability and stability.

The study concluded that there is no statistically significant relationship between loan loss provision and financial performance. Lowering provisions may temporarily increase net income and boost ROA, but under-provisioning poses long-term risks if non-performing loans rise unexpectedly. On the other hand, higher loan loss provisions reduce profitability in the short term by lowering net income, which directly impacts ROA.

The study concluded that management efficiency has a statistically significant relationship with the financial performance of listed commercial banks. Efficient management practices, characterized by lower operational costs and higher income generation, lead to improved profitability and a higher ROA. Effective cost control is a key determinant of a bank's financial performance, emphasizing the importance of operational efficiency in enhancing returns.

5.4 Recommendations of the Research Findings

From the findings the study made the following recommendations:

The Central Bank of Kenya (CBK) should continue to enforce the minimum Capital Adequacy Ratio (CAR) to ensure the stability of the banking system. However, regulatory bodies might consider introducing more flexible guidelines that allow banks to optimize capital allocation based on their risk profile, enabling them to pursue growth while maintaining safety buffers.

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The CBK should encourage banks to adopt a more forward-looking provisioning approach, such as the Expected Credit Loss (ECL) model under IFRS 9. This model requires banks to make provisions based on expected losses rather than incurred losses, promoting early risk detection and more accurate provisioning.

The CBK should continue to enforce liquidity requirements but could offer incentives for banks to diversify their asset portfolios to include higher yielding but relatively safe investments. This can help banks maintain adequate liquidity while boosting profitability.

Policymakers and regulators should promote policies that encourage operational efficiency in banks, such as investing in technological infrastructure and innovation. Government initiatives could support digital transformation in banking to enhance efficiency, particularly in areas such as transaction processing, risk management, and customer service.

Banks should adopt dynamic capital management strategies that allow them to adjust their capital structure to balance between regulatory compliance and income-generating activities. This could include exploring financial instruments like contingent convertible bonds (CoCos), which convert into equity in times of stress, thereby preserving the capital base without tying up too much capital in low-return assets. Banks should also conduct regular stress tests to ensure they maintain adequate capital reserves while optimizing profitability.

In addition banks should enhance their credit risk management frameworks by implementing advanced analytics and data-driven credit scoring systems to assess borrower risk profiles more accurately. This will enable more precise provisioning and reduce the need for excessive loan loss reserves, thereby improving profitability. In addition, banks should regularly review and adjust their provisioning policies based on the performance of their loan portfolios and market conditions to avoid unnecessary reductions in net income.

Furthermore, banks should implement liquidity optimization strategies by adopting a more active asset-liability management (ALM) approach. This involves better aligning liquid assets with short-term obligations while strategically reallocating excess liquidity to higher-yielding investments. Banks can also employ liquidity forecasting models to better anticipate liquidity needs, allowing them to invest a portion of their liquidity in moderate-risk, high-return assets without jeopardizing their ability to meet immediate obligations.

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Finally, banks should focus on improving operational efficiency by investing in digitalization and automation. This could include the use of artificial intelligence (AI) and machine learning to streamline internal processes, reduce manual interventions, and lower operational costs. Additionally, management should regularly evaluate cost-control measures and adopt lean management practices to ensure optimal resource utilization. Training programs should also be put in place to improve staff skills, particularly in using new technology, to increase productivity and efficiency

5.5 Areas for Further Research

The study suggested that further investigations can be done to identify among other financial institutions such as Saccos and MFIs. In addition, study should be conducted to assess the impact of Capital Adequacy on Long-Term Bank sustainability, as well as different loan loss provisioning strategies and their effectiveness in various economic environments. This research could focus on how banks can optimize provisioning to balance risk management and profitability, particularly during economic downturns or periods of high default rates.

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APPENDICES

Appendix I: Introductory Letter

Dear [Institution's Name],

Subject: Request for Secondary Data Access for Research Study

I hope this letter finds you well. My name is Caroline Mukasia Madegwa, and I am a Masters Student at St. Paul's University. I am currently embarking on a research study titled "Influence of Credit Risk Management on financial Performance of Listed Commercial Banks in Kenya.

I am writing to request access to secondary data that your institution may possess, particularly related to the financial statements (Statement of financial position, Income Statement and statement of cash flows) The data will be used solely for academic research purposes and will contribute to the advancement of knowledge in the field of School of Business and Leadership Studies. It is crucial for my study to encompass a comprehensive range of data to ensure the validity and reliability of the research findings.

I assure you that all data provided will be treated with the utmost confidentiality and will be used solely for the purposes outlined in the research study. Any proprietary information will be handled in strict accordance with your institution's confidentiality policies.

If there are any procedures or requirements for accessing the requested data, please do not hesitate to inform me, and I will ensure prompt compliance with all necessary protocols.

I would be immensely grateful for your assistance in providing access to the requested secondary data. Your contribution will be duly acknowledged in the final publication of the research study.

Thank you for considering my request. I look forward to your favourable response.

Sincerely,

Name: Caroline Mukasia Madegwa

Email: mbadist403721@spu.ac.ke

Phone: +254 728 099069

Institution: St. Paul's University

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Appendix II: Data Collection Check List

Bank Name N_1-N_{11}					
Years	**2019**	**2020**	**2021**	**2022**	**2023**
Capital Adequacy **Capital Adequacy Ratio = Total Capital of a Bank /Risk-Weighted Assets**					
Total Capital of a Bank					
Risk-Weighted Assets					
Liquidity Ratio **Current Ratio = Current Assets / Current Liabilities**.					
Value of current assets					
Value of current liabilities					
Loan Loss Provision **Loan Loss Provision Coverage Ratio = Pre-Tax Income + Loan Loss Provision / Net Charge Offs**					
Pre-Tax Income					
Loan Loss Provision					
Net Charge Offs					
Management efficiency Ratio **=Non-Interest Expenses/Revenue**					
Non-Interest Expenses					
Revenue					
Financial Performance (ROA) = Net Income/Average Total Assets					
Net Income					
Average Total Assets					

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Appendix III: Approval Latter From Postgraduate Department

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Private Bag 00217 LIMURU, KENYA
Email: office@spu.ac.ke
Website: www.spu.ac.ke

Tel Office: +254 (0) 20-2020505/10
Mobile: +254 (0) 728 - 669000
(0) 736 - 424440

BOARD OF POSTGRADUATE STUDIES

9th August, 2024

National Commission for Science and Technology,
P.O. BOX 30623-00100,
Nairobi.

Dear Sir/Madam,

RE: RECOMMENDATION FOR CAROLINE MUKASIA MADEGWA – MBADIST43721 TO CONDUCT RESEARCH

This letter confirms the above-named person is a student in the Master of Business Administration (MBA) Program at St. Paul's University.

The second year consists of a major research work leading to a Thesis. The student's selected topic is:

"Relationship between credit risk management and financial performance of listed commercial banks in Kenya."

Kindly grant this student the required permit.

Yours Faithfully,

DIRECTOR POSTGRADUATE STUDIES ST. PAUL'S UNIVERSITY
09 AUG 2024
P.O. BOX 00217 LIMURU

Dr. John Muhoho
Director Board of Postgraduate Studies

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Appendix IV: ISERC LETTER

the integrity of the research must be reported to *SPU- Institutional Scientific Ethics Review Committee* within 72 hours

v. Clearance for export of biological specimens must be obtained from relevant institutions.

vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.

vii. Submission of an executive summary report within 90 days upon completion of the study to SPU- Institutional Scientific Ethics Review Committee.

viii. Please note that it is within the ISERC's mandate to monitor your research and to do random visits to the site. All research is subject to post approval monitoring.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) ***https://research-portal.nacosti.go.ke*** **and also obtain other clearances needed.**

Yours sincerely,



Dr. Daniel Nzengya, PhD
Chairperson
SPU- Institutional Scientific & Ethics Review Committee



affected safety or welfare of study participants and others or affect

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Appendix V: NACOSTI PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 747942

Date of Issue: 16/August/2024

RESEARCH LICENSE



This is to Certify that Ms.. CAROLINE MUKASIA MADEGWA of St. Paul`s 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: RELATIONSHIP BETWEEN CREDIT RISK MANAGEMENT AND FINANCIAL PERFORMANCE OF LISTED COMMERCIAL BANKS IN KENYA for the period ending : 16/August/2025.

License No: NACOSTI/P/24/39065

747942

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix VI: Listed Commercial Banks in Kenya

1. Absa Bank Kenya
2. CFC Stanbic of Kenya Holdings Ltd
3. Diamond Trust Bank Kenya Ltd
4. Equity Bank Ltd
5. Housing Finance Co. Kenya Ltd
6. I & M Holdings Ltd
7. Kenya Commercial Bank (KCB) Ltd
8. NCBA Group PLC
9. Bank of Kigali
10. Standard Chartered Bank Kenya Ltd
11. The Co-operative Bank of Kenya Ltd

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Appendix VII: Plagiarism Report

CAROLINE Project 6th Nov 2024.doc

ORIGINALITY REPORT

14%	10%	9%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Ajufunbaya, Kamaldeen Olaitan. "Credit Risk Management, Financial Reforms and Financial Performance of Selected Deposit Money Banks in Nigeria", Kwara State University (Nigeria), 2024 Publication	2%
2	Submitted to Saint Paul University Student Paper	2%
3	ir-library.ku.ac.ke Internet Source	2%
4	su-plus.strathmore.edu Internet Source	2%
5	erepository.uonbi.ac.ke Internet Source	2%
6	Submitted to KCA University Student Paper	2%
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