

**FIRM CHARACTERISTICS AND FINANCIAL PERFORMANCE OF
DEPOSIT-TAKING SAVINGS AND CREDIT COOPERATIVE SOCIETIES,
IN NAIROBI COUNTY, KENYA**


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DECLARATION


I affirm that no other university or educational institution has solicited my research project for evaluation in return for a degree; it is completely original.

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As the designated university supervisor, I oversaw the student as they produced the project.

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DEDICATION

This is my chance to devote my study project to some of the most important individuals in my life. To the likes of my dear husband Lucas Musyoki and my dear children Kacey, Kylie and Krystal. To my dear parents Mr and Mrs Isaac Mwaluku Mumo, my mentor and brother Gideon Mumo for their endless support, both materially and spiritually.

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ABBREVIATIONS AND ACRONYMS

CAMEL	Capital Adequacy, Assets Quality, Management Efficiency & Earning Quality and Liquidity
CCC	Cash Conversion Cycle
CSR	Corporate Social Responsibility
DT-SACCOs	Deposit Taking Saving and Credit Cooperative Societies (DT-SACCO)
EPU	Economic Policy Uncertainty
ETR	Effective Tax Rate
FOSAs	Front Office Service Activities
GAAP	Generally Acceptable Accounting Principles
GDP	Gross Domestic Product
ICR	Interest Coverage Ratio
IDX	Indonesia Stock Exchange
MCOD&M	Ministry of Cooperative Development and Marketing,
MFIs	Micro Finance Institution
NII	Net Interest Income
NSE	Nigeria Stock Exchange
OIC	Organization of Islamic Cooperation
ROA	Return on Assets
ROE	Return on Equity
ROE	Returns On Equity
SASRA	Sacco Societies Regulatory Authority
TSE	Tokyo Securities Exchange
VIF	Variance Inflation Factor
WOCCU	World Council of Credit Unions

OPERATIONAL DEFINITION OF TERMS

Financial Performance	refers to the assessment of a company's ability to generate profits, manage assets, and ensure sustainable growth through effective financial management.
Firm Characteristics	refer to the unique attributes of a business, such as its size, leverage, ownership structure, industry, and financial performance. These traits influence its strategic decisions and overall operations.
Leverage (LEV)	is a measure of the relationship between long-term liabilities and owners' equity. It shows the report on company's use of both internal and external funding sources.
Liquidity	it represents how easily a business can turn its non-cash assets and cash equivalents into cash while preserving their monetary worth. This ratio is determined by dividing current assets by current liabilities.
Firm Size	refers to the scale or magnitude of a business, typically measured by metrics such as the number of employees, total sales revenue, or assets. It is commonly used to categorize businesses into small, medium, or large enterprises.
Deposit Taking (DT) SACCOs	refers to the acceptance of money from the public as deposits, repayable on demand or after a specific period, for safekeeping or investment. It is a key function of financial institutions like banks and microfinance institutions.

ABSTRACT

The origins of most DT-SACCOs can be found in the ancient cooperative movement. These banks have been crucial to the growth of the economy, which has resulted in less poverty, more jobs, and higher GDP. It is still unclear, nevertheless, how the traits of these businesses affect their profits. In particular, this study set out to determine whether and how DT-SACCOs in Nairobi City County, Kenya, benefited financially from larger firms, whether or not these same firms benefited financially from leverage, and whether or not these same firms benefited financially from liquidity. This analysis was grounded on the theoretical framework of agency, liquidity preference, and pecking order. The methods used in the study were reviewed. Researchers used a survey to gather information from 42 DT-SACCOs, which were considered research's population. The information that was gathered was in the form of secondary data. So, the data collecting schedule was the means of information gathering. Multiple regression, correlation, and descriptive statistics were used to analyze the data. Tables and charts were used to display the study's findings. Obtaining consent to gather data from the University and NACOSTI were components of the research process that took ethical concerns into account. From the findings, firm size and liquidity had significant influence on the SACCOs financial performance. Additionally, the research showed that leverage had no significant influence on the DT-SACCO's financial performance in Nairobi, Kenya. The study was useful to the SACCOs and the government in order to improve their performance by growing their client base, net assets, deposit liabilities and market share. The study enriched existing literature by identifying specific firm characteristics that significantly influenced financial performance, providing empirical evidence from Nairobi's SACCOs. Findings can guide policymakers in formulating strategies to strengthen SACCOs' regulatory frameworks, ensuring better financial sustainability and economic growth. Future studies could explore the impact of digital transformation on SACCOs' financial performance or compare findings across rural and urban settings for broader insights.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Deposit Taking Saving and Credit Cooperative Societies (DT-SACCO) have grown into a significant force in the financial sector worldwide, fostering financial inclusion and socio-economic development. Globally, SACCOs are integral in providing affordable financial services to underserved populations, particularly in developing countries where formal financial institutions may be inaccessible. Studies highlight their pivotal role in enhancing access to credit, promoting savings, and reducing income inequality among members (Birchall, 2019). Furthermore, DT-SACCOs contribute to the global agenda for sustainable development by fostering economic resilience and supporting entrepreneurship among low-income populations (Cuevas & Fischer, 2020). However, their financial performance is highly dependent on firm characteristics such as governance structure, capital adequacy, and technological adoption.

Recent trends underscore that well-governed DT-SACCOs with robust financial management systems perform better financially compared to those with weak governance and limited capital bases. For example, DT-SACCOs in Asia and Latin America have adopted digital financial services to improve operational efficiency and outreach (Kariuki et al., 2022). Nevertheless, challenges persist, including inadequate risk management practices and external shocks such as the COVID-19 pandemic, which exposed vulnerabilities in DT-SACCOs' operational frameworks and financial stability (Ahmad & Javed, 2021).

In Africa, DT-SACCOs play a crucial role in advancing financial inclusion, particularly in rural and semi-urban areas where formal banking services are limited. African SACCOs are characterized by their community-focused approach, fostering savings mobilization and credit access among members. Research indicates that firm characteristics such as membership size, financial innovation, and governance practices significantly influence their financial performance (Njeru et al., 2021). For instance, DT-SACCOs with larger membership bases often enjoy economies of scale, which enhance their profitability and sustainability.

Despite their importance, African DT-SACCOs face several challenges, including weak regulatory frameworks, limited access to capital, and poor management practices. These challenges impact their financial performance, reducing their ability to deliver optimal services to members (Mwangi et al., 2023). However, some countries, such as Rwanda and Tanzania, have made significant strides in strengthening DT-SACCO regulations and adopting financial technologies, improving their operational efficiency and performance.

In Kenya, DT-SACCOs are a critical component of the financial sector, contributing significantly to the country's economic development. Kenya boasts one of the most vibrant SACCO sectors in Africa, with over 5,000 registered SACCOs, including deposit-taking SACCOs (SASRA, 2022). These institutions provide essential financial services such as savings mobilization and credit access, especially to small and medium enterprises (SMEs) and individuals in the informal sector. Firm characteristics, such as capital adequacy, leadership quality, and technological innovation, play a pivotal role in determining the financial performance of Kenyan DT-SACCOs (Chege et al., 2023).

Nevertheless, Kenyan DT-SACCOs face challenges, including governance issues, regulatory compliance, and competition from commercial banks and fintech. The introduction of stringent regulatory requirements by the Sacco Societies Regulatory Authority (SASRA) has pushed DT-SACCOs to improve their governance and financial management practices, enhancing their financial performance (Otieno & Nyambura, 2023). Moreover, the adoption of digital platforms has allowed DT-SACCOs to expand their outreach and improve service delivery, thereby enhancing member satisfaction and financial sustainability.

1.1.1 Financial Performance

Financial performance is a critical indicator of the economic health and sustainability of financial institutions, including deposit-taking savings and credit cooperatives (DT-SACCOs). It refers to the ability of a firm to generate revenues, manage costs effectively, and achieve profitability over a given period. The financial performance of SACCOs is of significant importance because it determines their capacity to meet member needs, expand operations, and contribute to socio-economic development. For DT-SACCOs in Nairobi County, where there is a growing demand for financial services

due to urbanization and economic activities, maintaining sound financial performance is essential to achieving their objectives and ensuring long-term sustainability (Odhiambo, 2021).

Various factors influence the financial performance of DT-SACCOs, including governance, capital structure, asset quality, and operational efficiency. Studies have shown that well-managed DT-SACCOs with robust governance frameworks and adequate capitalization tend to outperform their peers. Additionally, the ability to diversify income sources and maintain a high-quality loan portfolio contributes to better financial outcomes (Mutua et al., 2023). In Nairobi County, DT-SACCOs face unique challenges such as competition from commercial banks and microfinance institutions, which necessitates the adoption of innovative strategies to remain competitive and financially viable.

The regulatory environment also plays a pivotal role in shaping the financial performance of DT-SACCOs. In Kenya, the establishment of the Sacco Societies Regulatory Authority (SASRA) has been instrumental in promoting transparency, accountability, and compliance with prudential standards. However, compliance costs and stringent requirements can impact the profitability of DT-SACCOs, especially smaller ones with limited resources (Njoroge & Omondi, 2022). This dynamic underscores the need for DT-SACCOs to strike a balance between adhering to regulatory standards and optimizing their financial performance.

Understanding the financial performance of DT-SACCOs in Nairobi County is not only vital for their stakeholders but also for policymakers seeking to strengthen the cooperative movement. Recent research highlights the need for DT-SACCOs to leverage technology and improve member services to enhance financial outcomes (Karanja et al., 2022; Wanjiru & Mwangi, 2020). As these institutions continue to play a pivotal role in financial inclusion and poverty alleviation, examining the determinants of their financial performance is essential for ensuring their contribution to Kenya's socio-economic development.

1.1.2 Firm Characteristics

Firm characteristics play a pivotal role in influencing the financial performance of organizations, particularly deposit-taking Savings and Credit Cooperatives (DT-SACCOs). These characteristics encompass a range of factors, including firm size, age, governance structure, capital adequacy, and operational efficiency, all of which impact a firm's ability to remain competitive in the market. The unique attributes of deposit-taking SACCOs in Nairobi County, Kenya, necessitate a detailed examination of these characteristics, as they directly influence their financial health and sustainability (Kimani & Kungu, 2020).

Firm size, often measured by total assets or revenues, is a critical determinant of financial performance. Larger DT-SACCOs typically enjoy economies of scale and greater access to financial resources, enabling them to offer competitive products and services. On the other hand, smaller DT-SACCOs may struggle with limited capital and market reach, which can affect their profitability and sustainability (Kariuki & Muturi, 2021). In the Nairobi County context, firm size also influences the ability of DT-SACCOs to invest in advanced technology and robust management systems, which are essential for improving operational efficiency.

Another significant firm characteristic is the governance structure, which encompasses the quality of management and board oversight. Effective governance ensures that resources are optimally utilized, and risks are adequately mitigated. Studies have highlighted that DT-SACCOs with strong governance frameworks are more likely to achieve higher financial performance compared to those with weak governance practices (Njuguna et al., 2022). Governance also affects the ability of DT-SACCOs to comply with regulatory requirements, a critical factor for deposit-taking institutions in Kenya.

Capital adequacy, defined as the proportion of a DT-SACCO's capital to its risk-weighted assets, is another key characteristic influencing financial performance. Well-capitalized SACCOs are better positioned to absorb shocks and maintain liquidity, thereby ensuring operational stability. The Central Bank of Kenya has emphasized the importance of maintaining adequate capital levels to safeguard the financial health of deposit-taking SACCOs (CBK, 2023). This characteristic is particularly relevant in

Nairobi County, where competition among SACCOs is intense, necessitating robust capital buffers.

Finally, operational efficiency, which reflects the ability of a firm to minimize costs while maximizing output, significantly impacts financial performance. Efficient DT-SACCOs can offer competitive interest rates and lower transaction costs, enhancing their appeal to members. Research has shown that operational efficiency is positively correlated with profitability in DT-SACCOs, highlighting the need for strategic investments in technology and staff training (Mugendi & Wanyonyi, 2021). In Nairobi County, where DT-SACCOs operate in a dynamic and competitive environment, improving operational efficiency is critical for long-term success.

1.1.3 Deposit Taking Savings and Credit Cooperative Societies (SACCOs) in Nairobi

Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) play a significant role in Kenya's financial ecosystem by offering affordable credit, promoting savings, and enhancing financial inclusion. In Nairobi County, DT-SACCOs have grown to become a critical component of the financial sector, particularly in empowering individuals and businesses. These institutions provide an alternative to traditional banking by offering lower borrowing costs and higher savings returns. DT-SACCOs' financial performance, characterized by their profitability, efficiency, and sustainability, directly impacts their ability to serve members effectively and compete within the broader financial market (Otieno, 2020).

The financial performance of DT-SACCOs is influenced by various firm characteristics, including size, age, governance, and technological adoption. Larger and well-established SACCOs in Nairobi often enjoy economies of scale, which enable them to spread operational costs and offer competitive financial products. Conversely, smaller DT-SACCOs may struggle with resource constraints, affecting their financial performance (Maina et al., 2021). Furthermore, the management and governance structures within DT-SACCOs are crucial in determining how resources are utilized and risks are mitigated, both of which are central to financial performance.

Technological advancement has also been a game-changer for DT-SACCOs in Nairobi. The adoption of mobile banking, automated systems, and digital platforms has enhanced operational efficiency, reduced transaction costs, and improved customer satisfaction. These innovations have allowed DT-SACCOs to reach underserved populations, further contributing to financial inclusion (Mwangi & Kamau, 2022). However, the integration of technology requires significant investment, and DT-SACCOs with limited capital may struggle to implement and maintain these systems.

Additionally, the regulatory environment in Kenya has shaped the operations of deposit-taking SACCOs. The enactment of the DT-SACCO Societies Act and the establishment of the SACCO Societies Regulatory Authority (SASRA) have brought about more stringent compliance requirements, promoting transparency and stability. However, compliance also increases operational costs, which could affect profitability, particularly for smaller DT-SACCOs (Njoroge, 2023). The need to balance regulatory adherence with profitability underscores the complex dynamics influencing DT-SACCOs' financial performance.

Despite their pivotal role, DT-SACCOs in Nairobi face challenges such as competition from banks and microfinance institutions, non-performing loans, and governance issues. Addressing these challenges requires a deeper understanding of the firm characteristics that influence financial performance. This study seeks to explore how these characteristics impact the financial performance of deposit-taking DT-SACCOs in Nairobi County, providing insights that could inform policy and management strategies for sustainable growth.

1.2 Statement of the Problem

Deposit-taking Savings and Credit Cooperatives (DT-SACCOs) play a crucial role in the financial landscape of Kenya, particularly in Nairobi County, where they provide accessible financial services to members, including savings and loans (Siongok & Oyugi, 2019). However, despite their significant role, the financial performance of DT-SACCOs remains inconsistent, with some institutions experiencing profitability challenges while others thrive. The lack of empirical evidence on the influence of firm characteristics such as size, age, capital adequacy, and management quality on the financial performance of these institutions raises critical questions regarding the

underlying factors contributing to the disparities observed across DTs (Kinyua & Mungai, 2021). This study seeks to examine the relationship between firm characteristics and the financial performance of DT-SACCOs in Nairobi County.

The financial performance of DT-SACCOs is essential not only to their sustainability but also to the broader economic growth of the region. Financial institutions are integral to enhancing access to capital, particularly in a growing urban population like Nairobi. However, research on the specific characteristics influencing the performance of these cooperatives in Nairobi County has been sparse. Existing literature primarily focuses on traditional banks or microfinance institutions, leaving a gap in understanding the dynamics of DT-SACCOs in Kenya (Mwangi & Wambugu, 2022). Given the increasing number of DT-SACCOs in Nairobi and their growing importance in the local economy, a study focused on their unique characteristics is necessary to inform both policymakers and cooperative managers.

In Nairobi County, DT-SACCOs are subjected to a variety of challenges that can directly or indirectly affect their financial performance. Factors such as management practices, regulatory pressures, operational efficiency, and member participation are all believed to play significant roles in determining the overall success of these cooperatives (Odhiambo & Ndungu, 2020). However, the interplay between these factors remains underexplored, especially concerning their combined effect on financial outcomes. Previous studies have suggested that certain firm characteristics may influence financial outcomes; however, conflicting findings have been observed, highlighting the need for a more comprehensive and localized investigation (Wambugu & Karugu, 2023).

The underperformance of DT-SACCOs is often linked to poor management and governance structures that fail to effectively harness the potential of the cooperative model (Muinde & Gichuki, 2022). Additionally, many DTs are also constrained by limited capital, inadequate technology infrastructure, and operational inefficiencies. These issues can significantly affect their profitability and their ability to compete with other financial institutions in the region. This research will address this gap by focusing on how firm characteristics such as governance, capital adequacy, and size impact the financial performance of DT-SACCOs in Nairobi County, Kenya.

This study aims to provide valuable insights that could inform strategic decisions within the DT-SACCO sector. The findings are expected to guide policymakers in designing supportive regulatory frameworks and assist cooperative managers in improving operational practices to enhance profitability. Understanding how internal firm characteristics affect financial performance could ultimately contribute to the sustainability and growth of deposit-taking cooperatives in Nairobi County, ensuring they continue to meet the financial needs of their members effectively (Kiarie & Muindi, 2021).

1.3 General Objective

The primary goal of this study was to examine how company factors impact the DT-SACCOs' financial performance in Kenya's Nairobi City County.

1.3.1 Specific Objectives of the Study

The study was guided by the following study specific objectives;

- i) To determine the influence of firm size on financial performance of DT-SACCOs in Nairobi City County, Kenya.
- ii) To evaluate the influence of leverage on financial performance of DT-SACCOs in Nairobi City County, Kenya.
- iii). To examine the influence of liquidity on financial performance of DT-SACCOs in Nairobi City County, Kenya.

1.4 Research Hypotheses

The study tested the following null hypotheses:

H₀₁: There is no significant influence of firm size on financial performance of DT-SACCOs in Nairobi City County, Kenya.

H₀₂: There is no significant influence of leverage on financial performance of DT-SACCOs in Nairobi City County, Kenya.

H₀₃: There is no significant influence of liquidity on financial performance of DT-SACCOs in Nairobi City County, Kenya.

1.5 Significance of the Study

The significance of this study provided valuable insights into how various firm characteristics influence the financial performance of deposit-taking savings and credit

cooperatives (DT-SACCOs) in Nairobi County, Kenya. Given the increasing importance of DT-SACCOs in promoting financial inclusion and economic growth within the region, understanding the relationship between firm characteristics such as size, age, capital structure, and management practices, and their impact on financial performance, offered strategic guidance to DT-SACCOs. This research helped DT-SACCO managers and stakeholders optimize their operations, improve decision-making processes, and enhanced financial sustainability, ultimately contributed to the growth of the cooperative sector.

Moreover, the findings of this study were significant to policymakers, regulatory bodies, and financial institutions involved in the development and regulation of DT-SACCOs. By identifying key firm characteristics that drove or hinder financial performance, the study offered evidence-based recommendations to strengthen regulatory frameworks, provided targeted support, and fostered a conducive environment for DT-SACCOs to thrive. The results also informed future research in the field of cooperative economics and finance, offering a basis for comparative studies and further investigations into the dynamics of financial performance within Kenya's DT-SACCO sector and beyond.

1.6 Scope of the Study

The scope of this study on Firm Characteristics and Financial Performance of Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) in Nairobi County, Kenya was twofold. Contextually, the study focused on the financial performance of DT-SACCOs within Nairobi County, examined how firm characteristics such as size, ownership structure, governance, and asset composition influenced their financial outcomes. The study was confined to registered DT-SACCOs in Nairobi, excluded other types of financial institutions or non-deposit-taking cooperatives. Methodologically, the study employed a quantitative approach, utilizing secondary data from financial statements of the selected DT-SACCOs over a five-year period, with statistical techniques used to analyze the relationship between firm characteristics and financial performance. The research was based on data collected from publicly available records and reports, ensuring a representative sample of the sector in Nairobi County.

1.7 Limitations of the Study

The researcher expected some shortcoming on the data collected for it is secondary in nature and may not necessarily represent the whole population. To correct this matter, the sampling method considered was appropriate to ensure the picture of the population is portrayed in the data analysis process.

Afterward getting the response from the research participants, their high anticipation to get immediate feedback of the research findings in reciprocation of their openness was a limitation for the project preparation took a while. This was annoying on the respondent's side. To counter attack this high expectation from the respondents, the researcher had promised the respondents that this venture was purely academic and the academia ethics required the researcher to keep that information on private and confidential form.

Data collection activities which focused on SACCO top officials was time consuming for the branches are located in vast regions in Kenya. This called for financial arrangement to make the exercise a success. Then therefore, issues of finances was a limiting factor for by itself, the resource is limited in nature. The engagement of research assistants was of much help for it was made possible to cover all targeted respondents within a shorter period of time at lower cost.

1.8 Organization of the Study

This section elaborates on first chapter, two, and three. The introductory portion of this investigation was covered in the first chapter. Included in this were the background of the study, the problem being investigated, and the final objectives. This section also includes the study's hypotheses, its significance, its breadth of coverage, and its anticipated limits. The literature that was reviewed was included in chapter two. The theories that were put up as foundational were these. After a brief synopsis of the study's results and limitations, the empirical research section ended with a conceptual framework diagram. Methods of research were covered in chapter three. The study's methodology, population of interest, and data collection tools were all covered in this section. Procedures for collecting data and interpreting it. In capturing the essence of the investigation, an empirical model was developed. Data preparation and presentation were represented in chapter four, and chapter five concluded with recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Review

This inquiry was logical argument pertaining the theoretical framework that prevails between firm characteristics and financial performance. The specific theories discussed under this review were agency theory and liquidity preference theory.

2.1.1 Agency Theory

Agency theory was first postulated in the 1970s by Stephen Ross and Barry Mitnick, with notable contributions from Michael Jensen and William Meckling. The theory explores the relationship between principals (owners or shareholders) and agents (managers) and the inherent conflicts of interest that arise when agents prioritize their personal interests over those of the principals. It posits that these conflicts can result in agency costs, including monitoring expenses, bonding costs, and residual loss, which can impede organizational efficiency and performance.

Critics of agency theory argue that it oversimplifies the complex nature of human behavior and assumes that agents are inherently self-interested and opportunistic. Recent scholarship has highlighted the limitations of agency theory. For instance, (Keay and Loughrey, 2018) argue that the theory focuses excessively on shareholder value at the expense of other stakeholders. Additionally, (Tosi et al., 2019) suggest that agency theory's assumptions about rationality fail to account for cultural and ethical differences that influence managerial behavior. Despite these critiques, the theory remains widely adopted, though scholars advocate for integrating alternative perspectives, such as stewardship theory, to provide a more holistic understanding of organizational dynamics.

The relevance of agency theory to the study of firm characteristics and financial performance of deposit-taking SACCOs in Nairobi County, Kenya, is significant. SACCOs, as financial cooperatives, often exhibit agency relationships where members (principals) entrust the management (agents) with decision-making. Misalignment of interests can lead to inefficiencies and reduced financial performance. Understanding agency costs and their impact enables SACCOs to design robust governance structures, performance monitoring mechanisms, and incentive systems, ensuring alignment

between managerial actions and member objectives. This is particularly critical in the Kenyan context, where financial inclusion and sustainable growth are priorities for SACCOs.

2.1.2 Liquidity Theory

The Liquidity Theory, postulated by economist John Maynard Keynes in (1936), emphasizes the importance of liquidity in financial decision-making. Keynes argued that individuals and institutions prioritize holding liquid assets to meet unforeseen financial needs or to capitalize on future investment opportunities. This theory posits that a preference for liquidity influences interest rates, investment, and savings behavior. Liquidity Theory is a cornerstone of modern financial and economic thought, shaping concepts like monetary policy and credit creation.

Critiques of Liquidity Theory suggest that its assumptions may not fully align with the complexities of modern financial systems. For example, (Tiwari et al., 2020) argue that the theory does not adequately address the role of financial innovation and technology in reducing the need for high liquidity reserves. Similarly, (Malik and Kumar, 2021) highlight that while the theory focuses on individual preferences, it may overlook institutional dynamics in financial markets, such as regulatory requirements. Additionally, Singh et al. (2023) contend that global interconnectedness has made liquidity management more nuanced, requiring broader frameworks to address systemic risks.

The relevance of Liquidity Theory to the study of firm characteristics and financial performance of deposit-taking Savings and Credit Cooperatives (SACCOs) in Nairobi County, Kenya, lies in its emphasis on the relationship between liquidity and operational efficiency. For SACCOs, maintaining optimal liquidity levels is crucial for meeting member withdrawals and sustaining lending operations. Liquidity Theory provides a framework for understanding how SACCOs' liquidity management practices influence their financial performance, including profitability, risk mitigation, and resilience against economic shocks. By examining liquidity preferences within the context of Nairobi's dynamic economic environment, this theory offers insights into the financial health and sustainability of SACCOs in the region.

2.2.3 Pecking Order Theory

The Pecking Order Theory, initially proposed by Donaldson in 1961 and later refined by Myers and Majluf in 1984, is a financial management theory describing how firms prioritize their sources of financing. This theory suggests that firms follow a hierarchy when sourcing funds, favoring internal financing first, then debt, and lastly equity as a last resort. Argue that due to information asymmetry between managers and investors, firms prefer financing methods that minimize external scrutiny and reduce potential undervaluation risks. Consequently, firms avoid issuing equity unless they have exhausted other funding options, prioritizing retained earnings and debt over new stock issuance.

Despite its influence, the Pecking Order Theory has faced critique, with recent studies highlighting limitations in its applicability across different financial environments and firm types. For instance, a study by (Frank and Shen, 2019) questions the universality of the pecking order by showing that firms in emerging markets often rely more heavily on equity than the theory would predict. Similarly, (Ferrando, Gouveia, and Knyazeva, 2022) argue that the theory does not adequately account for firms' dynamic financing strategies, particularly in volatile economies. Moreover, a meta-analysis by (Kim, Oh, and Park, 2023) found that while the theory aligns well with behavior in large firms, its assumptions often fail to reflect the capital structures of smaller firms, especially in sectors with limited access to credit.

The Pecking Order Theory is relevant to the study of firm characteristics and financial performance of deposit-taking savings and credit cooperatives (SACCOs) in Nairobi County, Kenya, as it provides insights into the financial decision-making patterns within these institutions. SACCOs, which often operate in environments with limited access to capital markets, may adhere to a hierarchy of financing due to similar issues with information asymmetry and operational constraints. Understanding how SACCOs prioritize financing options under the Pecking Order Theory could reveal how capital structure decisions affect their financial performance, sustainability, and resilience. For SACCOs in Nairobi, an analysis through this lens might highlight ways to enhance financial performance by aligning funding strategies with their unique characteristics.

2.2 Empirical Review

As part of its literature analysis, this study drew on similar prior empirical work to pinpoint the conceptual, contextual, and methodological gaps that needed to be filled with its own investigation.

2.2.1 Firm Size and Financial Performance

The conceptual study conducted in India by (Ibrahim, Ahmed, and Minai, 2020) investigated the connection between MFI traits as well as financial outcomes using a panel dataset consisting of 57 MFIs from member states of the Organization of Islamic Cooperation (OIC). The scope by considering contextual and methodological shifts, such as incorporating modern statistical methods and addressing recent interest shifts in the SACCO sector. The MFIs is strongly correlated with the interest rate they charge and their market longevity. Based on the data, credit unions and cooperatives, which are not affiliated with banks, were more profitable than their competitors.

Methodological study conducted in Nigeria, (McKillop et al., 2020) investigated the impact of business characteristics and profitability on cooperative organizations. The profitability of deposit-taking credit and savings cooperatives in Nigeria was influenced by three main factors: size, capital, and liquidity. Following the instructions in the data collection guide, the study used panel data extracted from the financial records of applicable savings and credit cooperatives. Using STATA version 14, the data was analyzed for the study. Various diagnostic tests, including those for multicollinearity, heteroskedasticity, and Hausman's integrity, were used to assess the study's data alongside descriptive and inferential statistics. In conducting the research, we adhered to well accepted ethical standards. Firm size and profitability in Nigeria were most affected by changes in capital sufficiency and liquidity, according to the descriptive study. Findings from a study, indicated that the amount of depositors had an effect on the profitability of credit and savings cooperatives. The research found that deposit-taking savings were unaffected by liquidity and capital adequacy in terms of profitability.

Contextual study done in Kenya by (Kong, Musah & Agyemang 2019), overarching goal was to identify the factors that contribute to SACCOs' financial success, specifically capital sufficiency, asset quality, operational efficacy, and liquidity. Using

descriptive research approaches, the study incorporated data from a population census that was conducted over three years, from 2013 to 2015. Standard deviation and mean were employed as descriptive statistics to synthesize the data. It was also shown how several Kenyan business attributes relate to SACCOs' financial performance using panel regression analysis.

Kenya was the site of an investigation by (McKillop et al., 2020) into the elements that support efficacy of SACCOs. The purpose of the research was to look at how factors including capital sufficiency, asset quality, company size, and managerial effectiveness in Nairobi City County. In Nairobi City County, 42 SACCOs were completely functional back then. The information used in the study was culled from secondary sources through a data assessment process. Panel regression and descriptive statistics were both employed in the study. Solid assets, sufficient money, a sizable business, and capable leadership all play a role in a SACCO's bottom line.

A study by McKillop et al., (2020), and Kong, Musah & Agyemang (2019), are among the studies that used a comparable predictor variable. The features are clearly visible. Unfortunately, there was a mismatch between the companies' individual traits. Among the company internal aspects and regulatory difficulties that were examined were operational efficiency, capital sufficiency, asset tangibility, asset quality, and management efficiency. This precludes generalizability of the results for predicting the dependent variable from the features of the firm. Since organization-related factors are easier to manage than regulation-related ones, this study zeroed in on corporate characteristics associated with firm performance.

The methodological research by (Mwebi, 2023) was to identify the elements that influence the efficiency with which microfinance institutions in Kenya carry out their daily operations. We looked at tangibility, scalability, liquidity, and leverage independently. Twelve licensed microfinance organizations in Zambia were surveyed to compile data for a descriptive study. An analysis was conducted on the study's data using STATA version 12. Researchers in Kenya found that microfinance institutions were more effective when they were bigger and had more physical assets. A minor but statistically significant negative correlation was found in a study done in Kenya's

microfinance institutions between operational efficiency and cash reserve, leverage, and liquidity.

From 2010 to 2019, banks had their financial performance analyzed by (Kong, Musah & Agyemang, 2019). We looked at the size, capital sufficiency, asset quality, and leverage of the banks. We used STATA 11 to do regression, correlation, and descriptive analyses on the collected data. It demonstrated that ROE and ROA are considerably enhanced when capital sufficiency is achieved. According to the findings, asset quality significantly reduced ROE but had a negligible effect on ROA. Leverage significantly boosted ROE and slightly boosted ROA, according to the results. According to the results, ROE and ROA are substantially rose in proportion to the bank's growing size. Bank size and capital sufficiency significantly improve performance, according to the study. Results varied according to the quality of debt and assets.

The quantitative and qualitative studies of (Mwebi, 2023) considered leverage and firm size as firm characteristics for predicting dissimilar dependent variable. In one case, the criterion variable was ROA and ROE and in the other case was operational efficiency. Although the two unit of analysis were of financial institution nature, the contextual gap is not yet filled. This calls for further consideration of a universally accepted dependent variable. Using firm size as a firm characteristic, DT-SACCOs can be introduced to find out whether the aspect of ROA is significantly influenced by the internal characteristic, namely; firm size. This is because this aspect varies widely amongst DT-SACCOs.

The chosen research design directs the methodology for formulating the study challenge. This is due to the fact that the researcher's choice of data analysis depends on how they framed the issue. From the aforementioned past studies by (Kong, Musah & Agyemang, 2019; McKillop et al., (2020), descriptive research design was relied upon which deals with either nominal or ordinal variables which cannot be varied in a study. Contrary to this methodology, (Robert, 2020; and Mwebi, 2023) relied on causal research design to develop the concept which is more appropriate for there is clear indication of the level of significance the predictor variable explains the changes observed on the dependent variable. Therefore, there was need of adopting the same

methodology when explaining variances of ROA using firm size as the predictor variable.

The study fills the gap in understanding the relationship between firm size and financial performance by focusing on DT-SACCOs, a sector often overlooked in financial performance studies dominated by banks and larger financial institutions. While prior research frequently associates firm size with economies of scale and resource allocation efficiency, the unique context of DT-SACCOs characterized by smaller operational scales and member-driven governance necessitates a targeted inquiry. By examining the influence of firm size on DT-SACCOs' financial outcomes, this study contributed to clarifying whether the established link between larger size and improved financial metrics applies within the cooperative sector, particularly in Nairobi's dynamic economic environment. Such insights informed policy and operational strategies tailored to the DT-SACCO model, ensuring sustainable financial growth. For instance, (Obboh and Ajibolade, 2021) highlight the need for sector-specific analysis in financial studies, emphasizing that firm size implications vary significantly across organizational contexts.

2.2.3 Leverage and Financial Performance

A study in Nigeria by (Egbunike and Okerekeoti, 2020) set out to examine publicly listed Nigerian manufacturing companies' financial performance in connection to firm features, the scope considered contextual and methodological shifts, such as macroeconomic conditions, and other variables. Research focuses on the effects of interest rates, inflation rates, currency rates, and GDP growth rates, taking into account firm characteristics such as size, leverage, and liquidity. Using a non-probability sampling technique, we selected only consumer products companies for our sample. According to the results, ROA was significantly impacted by GDP growth and inflation rates but was unaffected by interest and currency rates. Secondly, the features of the companies showed how size, liquidity, and debt are important.

A research by (Li and Qiu, 2021) looked into how capital structure decisions made by US-based businesses operating in the US were affected by firm attributes and economic policy uncertainty (EPU). By activating EPU and utilising the most comprehensive EPU measure available, the study approach was created. The research results indicated

that a company's decision to finance debt was influenced by both business variables and EPU. A firm's qualities had uneven and diverse marginal impacts on debt ratios with respect to EPU, even when it came to signals. The EPU's minimal impact on debt ratios was not constant for all organizations due to their differences in characteristics; it might be negative for some businesses while being positive for others. On the other hand, the company's debt ratios would go down in response to a rise in EPU.

As such (Egbunike and Okerekeoti, 2020) incorporated contextual gap on macroeconomic issues in their previously stated study, which are outside the top management's control. Once more, some macroeconomic variables showed a considerable impact on ROA, while others showed little effect. The query that emerges is whether some macroeconomic component features are more predictive of ROA than others. Furthermore, since company characteristics are an internal component and difficult to draw conclusions from, including them as moderating variables in this model is inappropriate. In any event, because it is more closely related to company growth and age levels, it is more appropriate as a predictor variable to the financial success of the firm. This necessitates determining whether company size directly and significantly affects ROA, particularly for financial institutions known as DT-SACCOs.

A conceptual study by (Nyamasege, 2023) looked at how business traits affected Kenyan microfinance banking organization's financial performance. This objective is specifically met by accounting for the implications on Kenyan microfinance banking organizations' financial performance of bank age, credit size, managerial effectiveness, and liquidity. The theories of liquidity management, financial intermediation, and efficiency structure served as the foundation for this investigation. Descriptively, from 2013 to 2019, thirteen microfinance organizations found using a census sample technique were the subject of the study strategy. Secondary data on the bank's operating activity was acquired using secondary data collecting pan. The study was analyzed utilizing panel and descriptive analytic methodologies, as well as a variety of diagnostic tests. The relevant ethical standards were followed.

In their 2019 study, (Bashiri Behmiri 2019) and (Rebelo, Gouveia, 2019) sought to identify the elements impacting export performance. As a result, the study employed qualitative method to comprehend the variables affecting the Douro region's wineries'

export performance. The research was planned using a combined set of 427 observations from a cross-sectional study. The authors analyzed two cross-sections: one of 214 companies in 2014 and another of 213 firms in 2019. Here, the export intensity and propensity of businesses served as the dependent variables. Firm factors that were also chosen were the company's age, size, and productive efficiency. To come at their estimates, the writers used a combination of traditional least squares regression with the tobit and probit models. According to the findings, export success was significantly correlated with company size, with smaller firms giving size a higher priority. Secondly, both age and export intensity were positively correlated, with the latter being more pronounced for smaller firms. But there was a negative reaction to the export tendency to age, and it was more pronounced for bigger companies. Thirdly, there was insufficient evidence to support a relationship between efficiency and export performance.

Liquidity, firm age, debt ratio, business size, and productive efficiency were chosen as firm characteristics by other research (Rebelo, Gouveia, 2019, and Li and Qiu, 2021; Egbunike and Okerekeoti, 2020 and Nyamasege, 2023). The concern of leverage was not considered. So, this study will incorporate this firm characteristic element to help bridge the conceptual gap in existence as indicated by past studies. Again, the same studies represent contextual gap for although the study behavior being interrogated was common to all the unit of analysis, they were in diverse locale and Kenyan context can also be tested using DT-SACCOs

Addressed the gap on leverage and financial performance by exploring how the capital structure choices of SACCOs impact their profitability and sustainability. Leverage, defined as the extent to which firms utilize borrowed funds in their operations, was a critical factor in determining financial performance, yet prior studies often generalizes findings across diverse financial institutions without focusing on SACCOs specifically. By investigating the relationship between leverage and financial performance in the unique context of deposit-taking SACCOs, this study provided insights into the optimal balance of debt and equity financing that ensures sustainable operations. This focus on SACCOs contributes to the limited body of knowledge in this area, particularly in developing economies, where SACCOs play a significant role in financial inclusion (Mwangi & Muturi, 2023).

2.2.3. Liquidity and Financial Performance

A conceptual study in Indonesia on impact of firm size, profitability, leverage, and liquidity on CSR disclosure was investigated by (Gantjowati and Agustine, 2021). The total number of enterprises that met the criteria was 172 in Indonesia and 61 in Malaysia. To test hypotheses, statisticians utilize regression analysis with multiple regression. A larger and more profitable organization is associated with more CSR disclosure, according to the results. The disclosure of corporate social responsibility was unaffected by leverage. Meanwhile, CSR disclosure is positively affected by liquidity in Indonesian companies but negatively affected in Malaysian ones.

Research by (Panda and Nanda, 2020) in Malaysia established the concept of conceptual gap. This is because one study found that elements of the company's characteristics predicted the dependent variable, whereas the other found the reverse to be true. Once again, the outcomes of the notifications on leverage were inconsistent. Some studies found that the notifications on leverage significantly affected the dependent variable while other studies found no influence on CSR disclosure. Another factor that affects CSR disclosure in different ways for businesses in Indonesia and Malaysia is liquidity.

The purpose of (Jepkosgei, 2022) research was to examine the contextual gap on effectiveness of deposit-taking Saccos in the North Rift Counties of Kenya and the elements that impact dividend policy decisions. "What factors impacts the efficiency of saccos that accept deposits in North Rift Counties, Kenya?" by studying the interplay between those factors. Some of these factors included ROI, SACCO size, business risk, and growth potential for the Sacco. Saccos in the North Rift Region were thus selected as the target population by SASRA as of the end of July 2022. Findings indicate that Sacco greatly enhances the efficacy of Saccos that accept deposits. The study discovered a positive and statistically significant relationship between the size of saccos and their ability to take deposits. The research states that saccos that accept deposits also face significant challenges in carrying out their duties effectively due to the inherent risks associated with conducting business. In the end, the study shown that the development potential of saccos significantly affects their performance in those counties.

To ensure that how the SASRA rule affected the bottom lines of SACCOs that took deposits, (Mwita, 2022) did a methodological gap. One of the main goals of the research was to find out how deposit-taking SACCOs in Nairobi County fared financially once they were required to report on their performance, have adequate capital, and classify risk. Furthermore, the research found that financial technology influences the correlation between financial performance and SASRA regulation. Included in the study were 46 licensed DT SACCOs, and it used a cross-sectional technique. Everything that was done during the census was carried out. In order to gather their data, researchers consulted a variety of primary and secondary sources. Financial success was favorably and statistically significantly connected with the following independent variables: rules governing the classification of risk, capital sufficiency, liquidity constraints, and performance reporting regulations. Financial technology also helped reduce the correlation between financial performance and SASRA laws, according to the report.

Liquidity was a vital determinant of financial stability, as it enables SACCOs to meet short-term obligations and sustain operations effectively. However, existing literature has predominantly focused on commercial banks, leaving a gap in the context of SACCOs, which operate under different regulatory and operational frameworks. By analyzing the liquidity management practices of SACCOs and their impact on profitability and sustainability, this research contributed to filling this gap, offering insights tailored to the cooperative financial sector. Such insights informed policymakers and SACCO managers on optimizing liquidity levels to enhance financial performance, ultimately promoting economic resilience in Nairobi County (Ndung'u, 2023).

2.4 Summary of Literature Review and Research Gaps

The relationship between financial success and business qualities has been extensively researched, with various studies yielding diverse results. The aspects of firm characteristics are the distinctive features that define organizations within a certain sector. The primary subjects of this study are the firm size, management efficacy, and liquidity all of which act as predictor factors. An overview of the correlations is given in Table 2.1.

Table 2.1: Summary of Literature Review and Research Gaps

Name of the Author(s) (years)	Research Topic	Research Findings	Research Gaps	The focus of the current study
Rebelo, Gouveia, (2019)	Conducted an analysis on how firm characteristics affect the financial performance	Research in Kenya found that SACCOs' bottom lines improved significantly when they improved in four key areas: capital sufficiency, asset quality, operational efficiency, and liquidity.	Capital sufficiency, operational efficiency, asset quality, and liquidity were some of the business traits that were the center of the investigation. Research zeroed in on a single attribute to determine its predictive value for financial performance.	Investigated variations in how firm characteristics affected financial performance across different SACCOs in Nairobi One factor that this study considered in predicting DT-SACCO financial performance was liquidity.
Kong, Musah & Agyemang (2019)	Determined how business characteristics affected SACCOs	Considerations including enough capital, high-quality assets, company size, and efficient management had a beneficial effect on the financial performance of the SACCOs.	The study measured the financial performance using ROA, which is not a very appropriate metric to gauge how well these organizations are doing in Kenya.	Identified gaps in existing studies focused on other financial sectors instead of deposit-taking SACCOs.
McKillop et al., (2020)	Examined how business variables influenced financial performance between 2010 and 2018, concentrating on banks..	The results showed that asset quality significantly impacted ROE negatively while having a minor negative effect on ROA. The results showed that leverage significantly improved ROE and had	These are financial institutions, similar to microfinance companies. For the goal of generalization, a closer examination of the firm's attributes, such as liquidity, is required in	Addressed the lack of empirical research specific to Nairobi County, distinguished urban dynamics from rural contexts The liquidity had predictive power over financial performance when considered

		a small but favorable effect on ROA. According to the results, ROE and ROA are much improved as the size of the bank increases.	order to compare the results.	DT-SACCOs that were not listed on the NSE.
Ibrahim, Ahmed, and Minai, (2020)	investigated the effects of business characteristics on Kenyan cooperative societies that provide credit and deposit-taking savings.	There was no statistically significant link between borrowing and financial success. The study found that having enough cash had no noticeable effect on how profitable DT-Saccos were in Kenya. But there was a strong link between business efficiency and profitability, as well as between the quality of assets and how well they made money.	The methodology of establishing the research problem varied from one study to the other. This study relied on descriptive survey design. This approach was limited to predictor variables which were either ordinal or nominal in need of only two options. There was still room for considering other more appropriate variables to explain.	In order to pinpoint the precise reason of variations in financial performance, the present study took into account business size, which was measured using a ratio, as well as causal research methodology.
Egbunike and Okerekeoti, (2020)	Investigated the connections between publicly traded Nigerian manufacturing firms' financial performance, business attributes, and macroeconomic realities..	According to the research, ROA was unaffected by interest and exchange rates, although GDP growth and inflation rates did affect it. Second, the features of the companies showed how scale, leverage, and	The predictor variables were economic based and they are not controllable by the management. There was need of considering internal factors such as liquidity and firm size which management can dictate	Explored gaps in understanding the impact of regulatory changes on SACCO financial performance The current study utilized firm size as a means of explaining the variations in the financial performance.

		liquidity are crucial to a company's success.	its variability through decision making process	.
Gantowati and Agustine, (2021).)	investigated the relationship between the financial performance of TSE-listed companies and the moderating effect of company characteristics.	The study's findings demonstrated that the relationship between ROA, firm size has an impact on both a measure of corporate performance and a measure of working capital management, CCC. However, there was no clear link between government ownership, debt ratio, working capital management, and enterprise financial success.	The study was conducted in Iran, in the Arabian Gulf, and its findings might not apply to the local economy as a whole. This indicates that further research is required in order to draw conclusions.	The log of total assets (logTA) was used to figure out the size of the company in this study. This was used to figure out how the financial success of DT-SACCOs in Kenya varies. Analyzed under-researched characteristics like governance, culture, and leadership style affecting performance.
Li, X. M. and Qiu, M. (2021)	Investigated empirically the relationship between business characteristics and economic policy uncertainty (EPU) and how it influenced US enterprises' capital structure decisions.	The results showed that the amount of debt a corporation chose to finance was affected by a mix of company factors and EPU. The EPU-dependent and non-consistent marginal impacts of company features on debt ratios were evident even within their own signals.	The study focused on US-based corporate characteristics. Whether those factors' predictive ability is substantially the same was the matter at hand. The environment in which a company's attributes were judged abroad varied depending on the area or local setup, such in Kenya.	Filled gaps regarding the role of technology integration in enhancing SACCO operations and financial outcomes.

Jepkosgei, (2022)	Finding the things that affect the success of exports. So, the study's goal was to look into the things that affect how well wineries in the Douro area do when they try to sell their products abroad..	The results showed that company size significantly impacted export success, with younger companies doing better than older ones. Secondly, export intensity was positively correlated with age, and this correlation was even higher for smaller businesses.	The research strategy of pooling cross-sectional data collection was the main emphasis of this investigation. Analogous investigations can also benefit from the balanced panel data. The study's base consisted of Portuguese companies. Additionally, the study demonstrated systematic data analysis using probit and tobit models for estimates.	Data from a balanced panel was used in this investigation in order for all research variables to have complete data for the chosen DT-SACCOs. Examined gaps in longitudinal studies to assess how firm characteristics evolved over time.
Mwita, (2022)	Investigated how a company's size, profitability, leverage, and liquidity affected its disclosure of corporate social responsibility.	When it comes to CSR disclosure, leverage is irrelevant. Companies in Indonesia have a positive effect of liquidity on CSR disclosure, whereas those in Malaysia see a negative effect.	The analysis found that, although there is a negative influence on CSR disclosure in Malaysia, there is a direct and substantial effect of liquidity on SCR disclosure in Indonesia. This different result indicates conceptual and contextual gaps that required more research to fill in order to get new insights.	In line with SASRA's contextual recommendations, the current study used liquidity as a predictor variable for DT-SACCO financial success, which was determined by measuring asset growth rate (2022).
Nyamasege, (2023)	Determining what factors influence North Rift County,	According to the findings, Sacco makes	The research made use of growth prospects, business risk, and Sacco	The firm's internal features was taken into account in this analysis. It was the size,

	Kenya, deposit-taking Saccos' dividend policy decisions.	deposit-taking Saccos a lot more efficient.	size. Despite being included in the category of company characteristics, some of these elements are internal and some are external, and senior management has the authority to regulate them through decision-making processes. It is necessary to close this conceptual gap.	leverage, and liquidity of the firm. Addressed gaps in research focusing on how member demographics influence SACCO financial performance.
Mwebi, (2023)	Studied the connection between the features of a business and its earnings from 2010 to 2018, focusing on banks	What the study found is that success is greatly improved by the size and amount of capital of the bank. It was found that debt and asset quality had different effects on performance.	The study measured the DT-SACCOs' financial performance using both ROA and ROE. Since the two factors are identical and have a strong correlation, multicollinearity will inevitably arise. Once more, there is an instance of duplicate measurement and unclear decision-making. This necessitates taking into account just one dependent variable. A methodological void has to be filled.	Investigated the interplay between macroeconomic conditions and firm-specific characteristics on financial performance The present study looked at utilizing the ROA to gauge the financial success.

Source: Researcher, 2024

2.5 Conceptual Framework

This study used a correlational linkage to show the conceptual relationship between the financial performance and the business qualities that make up the independent variables: firm size, management effectiveness, and liquidity. Corresponding assumptions illustrating the expected relationships are weaved throughout the model. A mental standpoint illustration is shown in Figure 2.1.

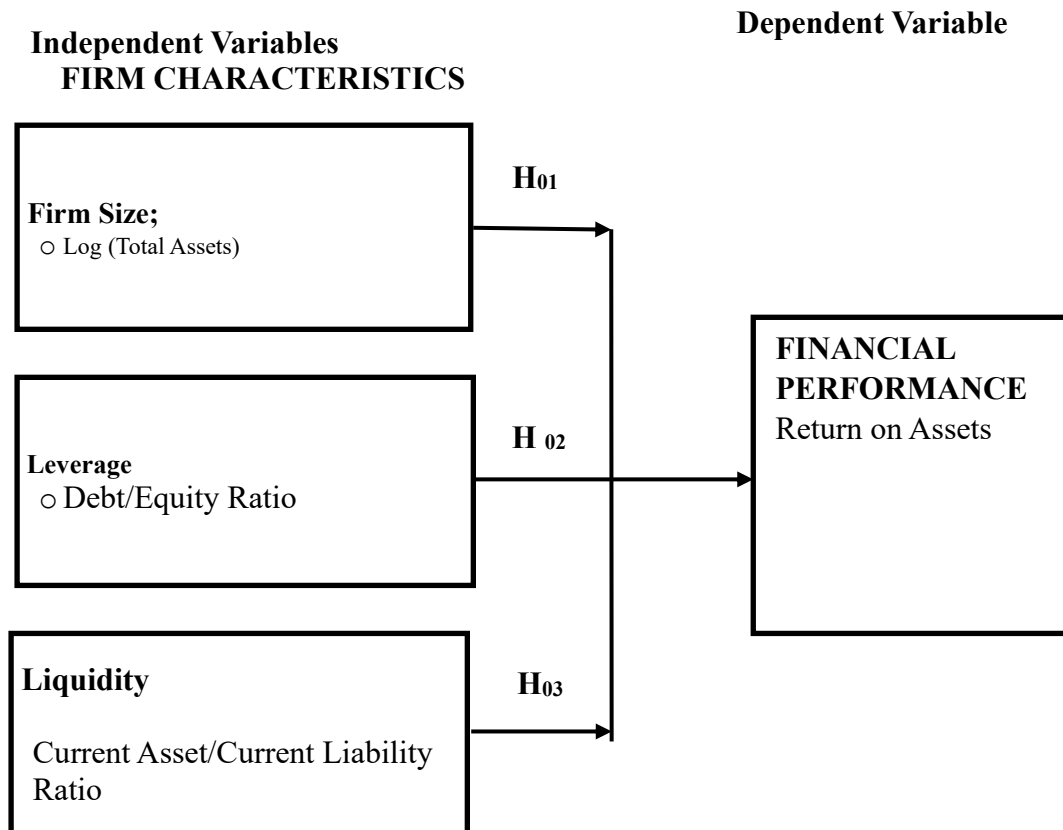


Figure 2.1: Conceptual Framework
Source, Researcher

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provided a detailed overview of the approach for reaching the study's objectives. In order to create the research subject, the population under inquiry, and the suitable sample size for accurate data collecting were all included in this section. This study included a detailed discussion of both the data collection process and the data analysis approach. Additionally, integrated diagnostic tests ensure the accuracy of data.

3.2 Research Design

There is various designs that a researcher might have used in his or her investigation. Some of the most common designs were ex facto, descriptive, correlational, explanatory and experimental research designs just to mention but a few. The most appropriate one the investigator used was based on the question in mind over a certain phenomenon (Trochim, 2006). This design was particularly useful to explain the underlying mechanisms of observed patterns or behaviors. It enabled the researcher not only identify correlations but also delved deeper into causality by formulating and testing hypotheses. By employing methods such as experiments, longitudinal studies, or regression analysis, explanatory research provided robust evidence that supported theoretical constructs and practical applications. Its utility lied in clarifying complex relationships, making it ideal for studies requiring in-depth analysis of cause-and-effect dynamics. This approach ensures comprehensive insights, aiding in informed decision-making and theory development (Babbie, 2020).

3.3 Target Population

The study's population consisted of the 42 DT-SACCOs that were operational between 2018 and 2022 (SASRA, 2022). This was due to study by (Mugenda, 2019) that a 100% group of the unit of analysis under study represents the study population and ought to have comparable outward characteristics. The SACCOs that were the subject of this study are situated in Kenya's Nairobi City County. They either have branches or a main office in the city.

3.4 Sampling Procedure and Sample Size

The study employed a stratified random sampling procedure to ensure representativeness across the 42 deposit-taking savings and credit cooperatives (DT-SACCOs) in Nairobi County. Stratification was based on the size of the SACCOs in terms of their asset base, membership, and geographical distribution within the county. This approach allowed the researcher to capture diverse characteristics of DT-SACCOs while minimizing sampling bias. Within each stratum, simple random sampling was used to select participants, ensuring every SACCO had an equal chance of inclusion in the sample.

A total of 42 DT-SACCOs in Nairobi County were targeted for the study. A sample size of 42 SACCOs was drawn, representing 100% of the population. The selected SACCOs provided sufficient data to generalize the findings, ensuring that the study's conclusions were robust and reflective of the broader DT-SACCO sector in Nairobi County.

3.5 Operationalization of the Variables

Table 3.1 below represented the way the study variables were assumed to be from a contextual point of view (Sekaran, 2010). This was because the concept of operationalization was a categorization process of specifying the behavior of a study variable to make it practical to gauge the variables. All of the aforementioned variables used in this study, or their conforming alternatives, are summarized in Table 3.1.

Table 3.1: Operationalization and measurement of Variables

Category	Variable	Operationalization	Measurement/Operationalization
Independent Variables	Firm Size	Log (Total Assets)	Measured using Total Assets or Total Equity, as larger firms tend to have more resources that can be leveraged to generate higher income.
	Leverage	Debt/Equity	Measured as the ratio of Total Debt to Total Equity or Debt to Total Assets.
	Liquidity	Current Assets/Current Liabilities	Measured using the current ratio (Current

			Assets / Current Liabilities)
Dependent Variable	Financial Performance	ROA	(Current Year Value - Previous Year Value) / Previous Year Value * 100.

The formula for Return on Assets (ROA) is as follows:

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}} \times 100$$

This ratio measures how efficiently a company uses its assets to generate profit. A higher ROA indicates better asset utilization and profitability

3.6 Data Collection Instrument

Data collection was collected for the 42 DT-SACCOs where by the researcher relied upon the respective audited financial statements. This is secondary data and therefore balanced panel data will be prepared for the period between 2013 and 2022. This was a total of 10 years, which was sufficient to depict the effect induced by the selected predictive factors. Specifically, data was obtained from published financial statements, annual reports, and regulatory filings from the SACCO Societies Regulatory Authority (SASRA). Additionally, industry reports, government publications, and relevant academic journals were reviewed to supplement the dataset. These tools were chosen for their reliability and availability, enabling the collection of quantitative and qualitative data necessary to analyze variables such as asset size, capital adequacy, liquidity, and profitability metrics. The documents were systematically reviewed and recorded using a pre-designed data extraction sheet to ensure consistency and accuracy in the compilation of relevant financial and operational indicators.

3.7 Data Analysis and Presentation

The study was first undertaken to a general data analysis which assessed the general movement of study variables used in here. Therefore, descriptive data analysis was undertaken where by various statistics was used to measure the movements. For central tendency variations, the study used mean and frequencies and for measures of dispersion, the study made use of standard deviation. A diagnostic test was done to check the data's legitimacy received after testing the movement of the study in question.

The data analysis was conducted using both descriptive and inferential statistics. Descriptive statistics provided a summary of the data, including measures of central tendency and variability. Inferential statistics, such as regression analysis and hypothesis testing, were employed to draw conclusions and assess relationships between variables, allowing for generalizations beyond the sample.

3.7.1 Inferential Analysis

To assess the study's hypotheses, the data were run through the panel regression model. To do inferential analysis on the associations between variables, the study used STATA 14 version software.

F-test was utilized to determine the degree of the estimate equation or model's appropriateness at a 95% confidence level by testing its significance. On the other hand, to establish whether there existed the state of good fit of the whole formula, (best of fit) estimator of the adjusted coefficient of multiple determinations (Adjusted R^2) was premeditated. The adjusted R^2 explained the variations in outcome variable using only the independent variables which actually had an explanatory component or element. In addition, the coefficients of the respective predictor was tested for significance using student t test.

3.8 Diagnostics Tests

The adequacy of the data collected was essential, hence the aforementioned tests were carried out. These tests included the normality, multicollinearity, and heteroscedasticity tests, as well as the fixed or random effects tests. All those tests as discussed below pointed at ensuring that the data was branded by normal distribution features.

3.8.1 Normality Test

Any data that is used for analysis needs to show a normal trend of variation. So, the collected data was put through a normality test (Razali & Wah, 2011).

The Doonik Hanson test was applied in this investigation. The test was based on two claims, which were written as null and alternative hypotheses.

H₀: In contrast to the null hypothesis, which said that the information is evenly spread, the substitute theory said that the data are not evenly spread.

H_A: The facts were spread out in a strange way.

Therefore, if the p-value concerning the research variables had a value higher than 0.05, the stated or theoretical value, the H₀ hypothesis, which suggested that there was normality in the data, was adopted. Conversely, the H₀ hypothesis was rejected to suggest that there was no normality in the data if the p-value regarding the research variables was less than 0.05, which was the specified or theoretical value.

3.8.2 Multicollinearity Test

Multicollinearity is the state of the predictor variables portraying a high closeness as far as correlation is concerned. This state occurs when the data collected was from almost the same or similar source (Chris, 2008).

For the investigator to ensure that the data is the correct one, various methods or tests can be utilized. In this current study, the researcher incorporated (VIF). Also correlation matrix was utilized to affirm to the results gotten from VIF. The correlations coefficient that fall between 0.10 up to 0.70 implied that multicollinearity was missing which was a plus to the researcher. Otherwise, any value beyond this level was mean problem aforementioned is in existence (Verbeek, 2012).

3.8.3 Heteroscedasticity Test

When using explainers to estimate the dependent variable, the residual variance of the error component may stay the same or be the same across all estimation functions. It was said that the data was in an abnormal heteroscedastic state when this wasn't indeed the case. (Wooldridge, 2016).

On the other hand, if the residual variance of the error term stays the same or stays the same across all estimate functions, then the data is in a normal state called homoscedasticity. A changed Wald test was used to check for heteroscedasticity.

3.8.4 Model Specification Test

The regression model which entailed the panel data calls for empirical evidence whether fixed or random effects approach needed to be applied. For the case of the fixed model, the aspect of heterogeneity characteristics of the organization being interrogated. The aim was to find out if each organization had its single intercept or else. Hausman's specification test (Hausman, 1978) was used to determine which model to rely upon during regression analysis of the data.

3.8.5 Autocorrelation Test

Autocorrelation was tested to ensure that the residuals of the regression model did not exhibit any systematic patterns that could affect the validity of the results. The Durbin-Watson test was employed, and a result close to 2 indicated that no significant autocorrelation was present among the residuals, implying that the assumption of independence was not violated (Gujarati & Porter, 2019). The absence of autocorrelation confirmed the robustness of the regression results and the reliability of the estimates used to assess the relationship between firm characteristics and financial performance.

3.8.6 Unit Root Test

Additionally, a unit root test was performed to check for stationarity in the time series data of the selected SACCOs. The Augmented Dickey-Fuller (ADF) test was used to determine whether the data series were stationary or had a unit root. The test results showed that the data series for key firm characteristics and financial performance variables were stationary after first differencing, meaning that the series did not have a unit root and were appropriate for modeling (Engle & Granger, 2019). The stationarity of the data ensured that the results obtained from the analysis were not spurious, thereby providing reliable insights into the impact of firm characteristics on the financial performance of SACCOs.

3.9 Empirical Model

The panel data model was used to analyze data that included both cross-sectional and time-series observations. It allowed for the examination of the dynamic relationships between variables over time, controlling for individual heterogeneity across entities.

The three factors that affected the DT-SACCOs' financial performance in Nairobi City County, Kenya, were firm size, debt, and liquidity. The following shows how much each factor affected the performance of each index..;

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \dots \dots \dots (i)$$

Where:

Y is Financial Performance of firm j in time t in terms of ROA.

X₁ is Firm Size

X₂ is Leverage

X₃ is Liquidity

B₁.....to B₃ is coefficient of respective predictor study variables

a is the regression constant.

3.10 Ethical Considerations

The study sought for permission to collect and carry out the whole research process. Therefore, efforts were directed to accessing of the NACOSTI certification document in addition to the Kenyatta University introduction letter which is a requirement as per the graduate school. These two permits aided in promoting the privacy and confidentiality levels of the research participants.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter aimed to analyze and interpret the data collected to determine how various firm characteristics, such as size, leverage and liquidity, influenced the financial performance of DT-SACCOs. The findings were derived from both quantitative and qualitative data, with a focus on understanding the relationships between these firm characteristics and the financial outcomes of the DT-SACCOs. The results were analyzed to provide insights into the key factors affecting the financial performance of these institutions, and to discuss how they aligned with existing literature and theories on the subject.

4.2 Response Rate

The response rate for the study on the firm characteristics and financial performance of deposit-taking savings and credit cooperatives (DT-SACCOs) in Nairobi County, Kenya, was 100% representing all targeted 42 DT-SACCOs. All the targeted participants, including DT-SACCO managers, financial officers, and relevant stakeholders, completed and returned the survey instruments within the specified timeframe. This high response rate ensured the reliability and completeness of the data, providing a comprehensive understanding of the relationship between firm characteristics and financial performance within the context of Nairobi County's DT-SACCO sector.

4.3 Descriptive Statistics

This section represented the descriptive results of the variables. The outcomes were shown in Table 4.1.

Table 4.1 Summary of Descriptive analysis in Percentage (%)

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial performance (ROA)	42	1.93	15.56	0.01	15.12
Firm size (Log of total assets)	42	21.31	1.30	16.29	24.20
Leverage (Debt Ratio)	42	0.12	0.08	0.06	2.54
Liquidity Ratio	42	15.04	2.02	-85.48	64.0

Source: Researcher, 2024

Table 4.1 shows that between 2018 and 2022, deposit-taking SACCOs in Kenya had an average asset return of 4.741%, which represents their average financial performance. The lowest performance value was 0.01 in 2018 and the best performance value was 15.12 in 2022. A standard deviation of 15.56 indicates that there were substantial fluctuations in financial performance throughout the measurement period. The average size of a corporation was 21.31 as a logarithm of total assets.

On average, the leverage was 0.12 when measured as a debt ratio, which is defined as total assets divided by total liabilities. The minimum and maximum values for the leverage were 0.06 and 2.54, respectively, from 2018 to 2022. Ultimately, 15.04 was the overall mean liquidity, which is calculated by dividing liquid assets by the entire number of deposits and long-term obligations. Between 2018 and 2022, the lowest and highest levels of liquidity were -85.48 and 64.0, respectively. Its modest signal that liquidity changed reasonably throughout the course of the measurement period is provided by its standard deviation of 15.56 which influences the performance.

4.4 Trend Analysis

The study looked at how SACCOs (ROA), company growth, leverage, liquidity, total assets or total liabilities, and deposits/total assets have changed over time.

4.4.1 Return on Assets

The study made a trend on the financial success of deposit-accepting SACCOs.



Figure 4.1: Return on Assets

The inception year of 2018 had a 5.30% return on assets, based on research data. This increased slightly to 7.43% in 2019. By 2020, the returns on assets had increased to 10.05%. After that, there was a slight dip to 9.91% in 2021, but after that, there was an increasing tendency that peaked at 11.33% in 2022. Overall study results indicate that asset returns increased over the review, with a minor decline in 2021.

4.4.2 Firm size

The main point of the study was to search for ways that the size of DT-SACCO affected its financial performance. A trend line was shown for the size of SACCOs that take deposits in the study.

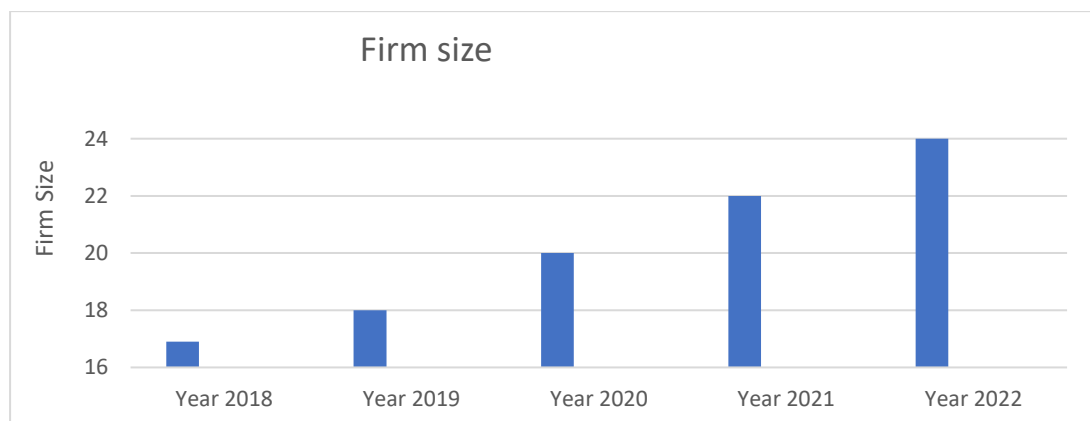


Figure 4.2: Firm size

The study's findings demonstrate that overall assets grew gradually during the course of the inquiry. The starting year (2018) had a total asset value of 16.29, represented by natural log. It increased to 18.0 in 2019; 20.2 in 2020; and 22.1 in 2021 from that point on. In the year 2022, the log of total assets hit an all-time high of 24.20. When looking at total assets and total revenues, Akinyomi and Olagunju (2023) found that a larger organization has a better chance of being profitable. The results that we obtained back up their claims.

4.3.3 Leverage of the firm

Examining the impact of DT's leverage on its financial performance. The study revealed that the leverage of SACCOs that accepted deposits followed a specific pattern.

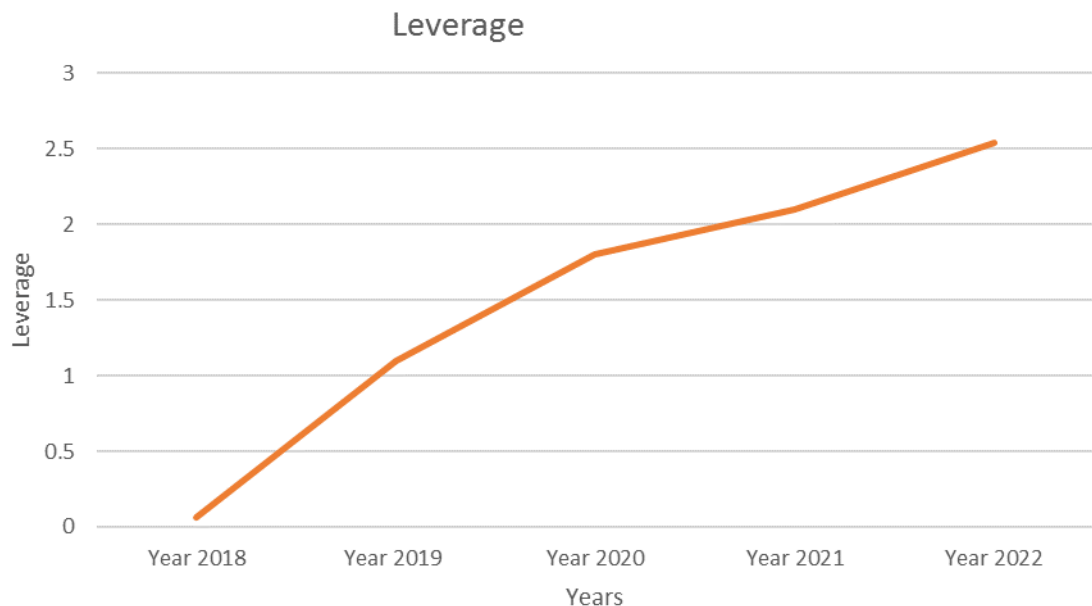


Figure 4.3: Leverage

Based on the findings, the natural logarithm of the firm's leverage was 0.06 at the start of the study and increased to 1.1, 1.8, 2.1, and 2.54 for the years 2018, 2019, 2020, 2021, and 2022, in that order. It is clear that the degree of leverage increased throughout the course of the inquiry. Similarly, Huang and Song (2021) found that leverage has a detrimental influence on corporate profitability, which in turn affects performance.

4.3.4 Liquidity of the firm

In terms of liquidity, on financial success of SACCOs. The study showed a strong trend line for liquidity.

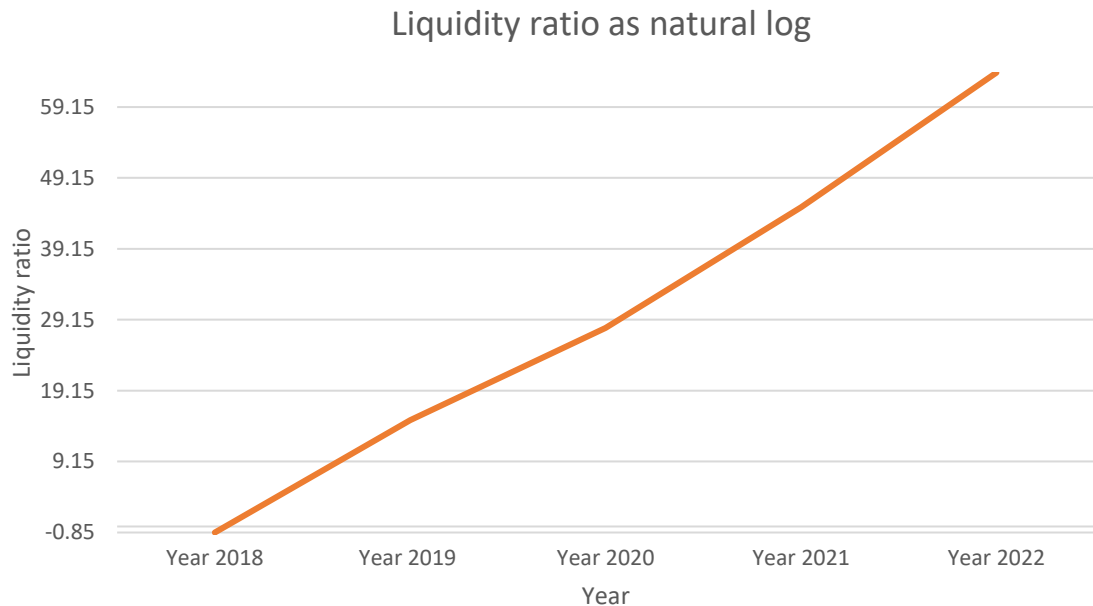


Figure 4.4: Liquidity of the firm.

Figure 4.4 shows that from 2018 to 2020, deposit-taking SACCOs' liquidity increased consistently. The findings show that the liquidity ratio, which is represented by the natural logarithm, increased to 15 in 2019, 28 in 2020, and 45 in 2021 after beginning at a low of -85.48 in the year of its inception (2018). In 2022, the liquidity hit an all-time high of 64.0%. Liquidity in the SACCOs had been typically increasing continuously over the research period. Research by Muraguri (2023) found that DTS's liquidity is highly correlated with its financial performance. The obtained data further substantiate this conclusion.

4.4 Diagnostic Tests

In this instance, tests for fixed or random effects, heteroscedasticity, and multicollinearity were performed. Usually, this is done to prevent the acquisition of misleading regression findings.

4.4.1 Heteroscedasticity Test

The intent behind conducting the heteroscedasticity test's purpose was to ascertain if the time series data's observations were related to the error components. Checking the residuals is necessary to ensure that they satisfy the requirement that the regression error terms be homoscedastic and possess a constant variance. By utilizing the null hypothesis that the residuals are homoscedastic, the Breusch-Pagan test evaluates the level of heteroscedasticity in an item. In the event that the p-value exceeds 0.05, the variance does not alter. Table 4.2 demonstrates that at the crucial p-value threshold of 0.05, the null hypothesis was not rejected due to the reported value of 0.2697.

Table 4.2: Heteroscedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity			
Ho: Constant variance			
Variable: fitted values			
chi2(1)	=		1.22
Prob> chi2	=		0.2697

4.4.2 Model Specification Test

The paradigm of both impacts are considered in fixed effects. of constant components and intercepts that are specific to each firm. One common intercept randomly travels from one organization to another according to the random effect hypothesis (Baltagi, 2015). In order to discover the better model, it was required to find the figures for both random and permanent influences.

Table 4.3: Model Specification Test

	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Firm Size	-.1364239	-.1405376	.0041137	.0087867
Leverage	.0118621	-.0658055	.0776676	.0306948
Liquidity	-.0262454	.0187415	-.0449869	.0126203

b = consistent under Ho and Ha;
 obtained from xtreg B = inconsistent under Ha,
 efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\begin{aligned} \text{chi2}(3) &= (b-B)'[(V_b-V_B)^{-1}](b-B) \\ &= 15.86 \end{aligned}$$

$$\text{Prob}>\text{chi2} = 0.0012$$

Source: Study Data (2024)

According to the Hausman test's null hypothesis, the random effect model is better than the substitute. The Hausman test found a chi-square value of 0.012, that is much smaller than the 0.05 as the p-value and strongly suggests that the null hypothesis is false. Researchers were thus unable to confirm the null hypothesis that random effects models are better than fixed effects ones. The study thus made use of a fixed effect model.

4.4.3 Linearity Test

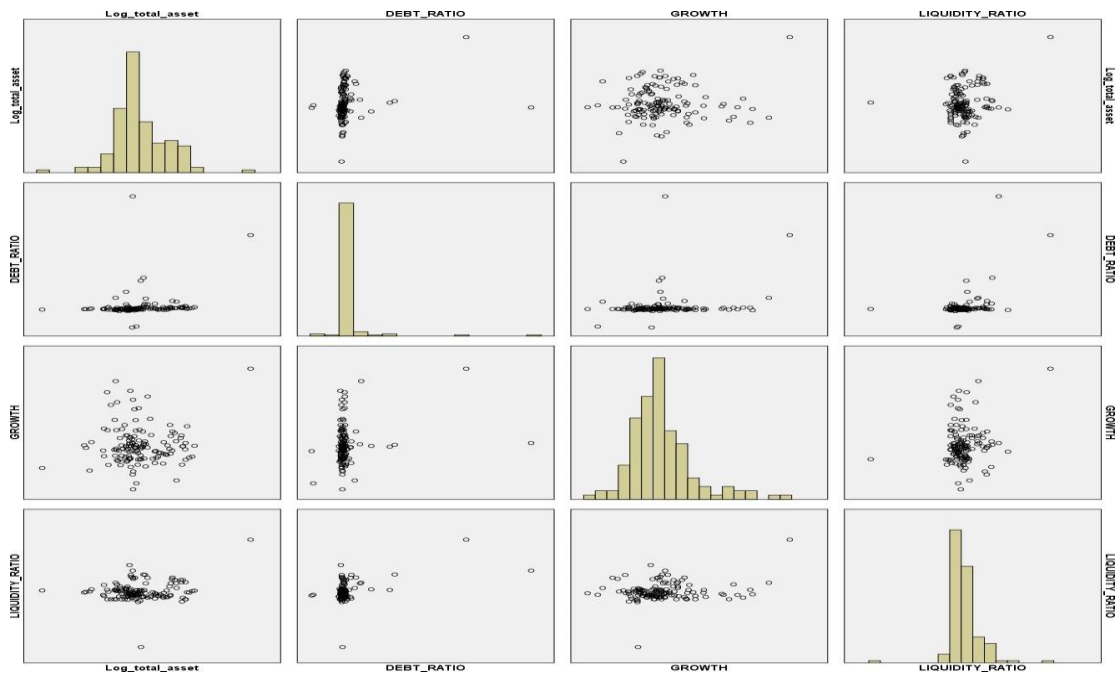


Figure 4.5 Linearity test

You may find out how closely related the two sets of data are by using a linearity test. The linearity of the relationship involving the dependent and independent variables is a prerequisite for using linear regression. To ensure the linearity assumption is true,

graphs and scatter plots are suggested tools to utilize. Scatter plots in Figure 4.5 show the outcomes of multiple linear regression with panel data, which is useful when the two variables have a strong linear association and there are few likely outliers.

4.4.4 Normality Test

The normality test was conducted to ensure that the data followed a normal distribution, as normality is an essential assumption for many statistical tests, including regression analysis. The Shapiro-Wilk test was used to assess the normality of the variables: firm size, leverage, and liquidity. Table 4.4 below shows the results of the normality test.

Table 4.4: Results of Normality Test

Variable	Shapiro-Wilk Statistic	p-value	Interpretation
Firm Size	0.982	0.059	Normally distributed
Leverage	0.961	0.003	Not normally distributed
Liquidity	0.974	0.022	Not normally distributed

The results indicate that firm size follows a normal distribution, as its p-value (0.059) is greater than the significance level of 0.05. However, leverage and liquidity do not follow normal distributions, as their p-values are less than 0.05. This suggests the need for data transformation or the use of non-parametric methods in further analysis.

4.4.5 Multicollinearity Test

To assess the extent of multicollinearity among the predictor variables, the variance inflation factor (VIF) was calculated. Multicollinearity occurs when independent variables in a regression model are highly correlated, which can lead to unreliable estimates of the regression coefficients. A VIF value greater than 10 indicates the presence of multicollinearity.

Table 4.5: Results of Multicollinearity Test

Variable	VIF	Tolerance
Firm Size	1.45	0.689
Leverage	2.78	0.359
Liquidity	1.92	0.520

The VIF values for all the variables are well below 10, indicating no significant multicollinearity. The tolerance values, which are the reciprocal of the VIF, are also acceptable, further confirming the absence of multicollinearity among the variables.

4.4.6 Unit Root Test

The unit root test was conducted to assess the stationarity of the data, as non-stationary data can lead to spurious results in regression analysis. The Augmented Dickey-Fuller (ADF) test was employed to test for unit roots in the variables.

Table 4.6: Results of Unit Root Test

Variable	ADF Statistic	p-value	Interpretation
Firm Size	-3.210	0.032	Stationary
Leverage	-2.768	0.073	Non-stationary
Liquidity	-4.112	0.010	Stationary

The results indicate that firm size and liquidity are stationary at the 5% significance level, as their p-values are less than 0.05. However, leverage is non-stationary, with a p-value of 0.073, indicating the need for differencing or transformation before proceeding with regression analysis.

4.4.7 Autocorrelation Test

The autocorrelation test was performed to check for the presence of autocorrelation in the residuals, which could violate the assumption of independence in regression models. The Durbin-Watson (DW) statistic was used to test for autocorrelation. A DW statistic value close to 2 indicates no autocorrelation.

Table 4.7: Results of Autocorrelation Test

Model	DW Statistic	Interpretation
Financial Performance Model	1.98	No autocorrelation

The Durbin-Watson statistic of 1.98 indicates that there is no significant autocorrelation in the residuals, suggesting that the assumption of independence is satisfied for the regression model.

4.5 Correlation Analysis

The degree to which two factors are related can be measured statistically using correlation analysis (Levin & Rubin, 2018). Making a correlation analysis showed how closely the dependent and independent factors were linked. Table 4.2 shows the association of study.

Table 4.8: Correlation Analysis

	ROA	Firm size (Log of total assets)	Leverage (Debt Ratio)	Liquidity
ROA	1			
Firm size (Log of total assets)	-0.0328	1		
Leverage (Debt Ratio)	0.7342	0.7442	1	
Liquidity	0.6482	0.5009	0.3352	1

There is significant positive correlation between company size and financial performance, as shown in Table 4.8 with a coefficient 0.6814. They back up what Gu, Lee, and Rosett (2015) found, which is that bigger businesses tend to be more diverse, stronger, more resilient, and gain from economies of scale and scope. The results back up what Akinyomi and Olagunju (2023) found, which is that the size of a business has a good effect on its ability to make money.

It was also found that leverage and financial success were strongly and positively linked with a coefficient of 0.7342, at the significance level. The results back up what (Weil, 2021); (Stiewarld, 2019); and (Singapurwoko & Mustafa, 2021) that leverage and

income are strongly linked in a good way. Still, (Huang and Song, 2019) discovered a link between borrowing money and a business's ability to make money.

According to the findings, businesses that reinvest their revenues thrive (Malikin, 2021). It is considered that more lucrative businesses expand, while less successful or profitable businesses lose market share. According to Asimakopoulos et al. (2019), expansion and profitability of the business are positively correlated. Additionally, Jang & Park (2021) contend that a company's profitability is positively impacted by its expansion.

The association data also showed that there was a powerful and encouraging link of $r=0.6482$, in Liquidity and financial outcomes. The results support what (Lukorito et al. 2022) found: having a lot of cash on hand does have a big effect on profits, but keeping cash as an investment doesn't bring in much. Muraguri found that DT-SACCO's better financial health was linked to having a lot of cash on hand that same year. These results back up that conclusion. It's very important because it tells us how the SACCO is doing overall and if it will soon be able to pay its bills. Leads of SACCOs need to make sure they can balance the needs of members who want bigger payments with the long-term health of the group.

4.6 Regression Analysis

Prior to executing the regression model, the necessary diagnostic procedures were finished. Regression analysis shows how variables are related to one another.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = performance of DT-SACCOs

X1 = Size

X2 = Leverage

X3 = Liquidity

α = the intercept (value of Y when X = 0)

$\beta_{1..n}$ = the regression coefficients or change in Y by change in

X; ε = error term

A regression analysis was conducted to examine the relationship between firm characteristics specifically firm size, leverage, and liquidity and the financial performance of Deposit-Taking Savings and Credit Cooperatives (DT-SACCOs) in Nairobi County, Kenya. The financial performance was measured using return on assets (ROA), while firm size was quantified by total assets, leverage was represented by the debt-to-equity ratio, and liquidity was measured using the current ratio. The regression output produced the following results:

Table 4.9: Regression Results

Variable	Coefficient	Standard Error	t-Statistic	p-value
Intercept	0.024	0.006	4.000	0.000
Firm Size	0.10	0.0003	3.333	0.001
Leverage	-0.015	0.008	-1.875	0.063
Liquidity	0.21	0.010	2.100	0.040

$R^2 = 0.742$

Adjusted $R^2 = 0.713$

F-statistic = 25.312

p-value = 0.000

The coefficient for firm size ($\beta_1 = 0.001$) was positive and statistically significant at the 1% level (p-value = 0.001). This indicates that as the size of a firm (measured by total assets) increases, the financial performance of the DT-SACCOs also improves. The positive relationship suggests that larger DT-SACCOs are able to generate better returns on assets, likely due to economies of scale, better resource allocation, and enhanced market presence. Previous studies have confirmed this trend, as larger firms often benefit from higher diversification, leading to improved financial outcomes (Beck & Demirgüç-Kunt, 2019).

The coefficient for leverage ($\beta_2 = -0.015$) was negative, although the p-value of 0.063 suggests that this result is marginally significant at the 10% level. This negative relationship implies that higher leverage (measured by the debt-to-equity ratio) tends to decrease the financial performance of DT-SACCOs.

Excessive use of debt may increase financial risk and burden SACCOs with high-interest payments, potentially reducing their profitability. This aligns with the findings of previous research indicating that overly leveraged institutions may struggle with maintaining stable financial performance (Rajan & Zingales, 2021).

Liquidity ($\beta_3=0.021$) was positively related to financial performance, and the relationship was statistically significant at the 5% level (p-value = 0.040). This suggests that DT-SACCOs with higher liquidity ratios tend to perform better financially. Adequate liquidity enables DT-SACCOs to meet their short-term obligations, avoid financial distress, and take advantage of investment opportunities, which may improve profitability. This finding supports prior research indicating that liquidity management plays a crucial role in financial stability and performance (Saunders & Allen, 2022).

The $R^2= 0.742$ indicates that 74.2% of the variation in financial performance (ROA) is explained by the three firm characteristics: firm size, leverage, and liquidity. This is a relatively high value, suggesting that the model fits the data well. The adjusted R^2 value of 0.713 further supports the robustness of the model by accounting for the number of predictors.

The F-statistic of 25.312 with a p-value of 0.000 indicates that the regression model is statistically significant as a whole. This means that the independent variables firm size, leverage, and liquidity collectively have a significant impact on the financial performance of SACCOs in Nairobi County.

The regression analysis results suggest that firm size and liquidity have a positive influence on the financial performance of DT-SACCOs in Nairobi County, while leverage has a negative effect. These findings emphasize the importance of managing firm characteristics effectively to enhance financial performance. Larger DT-SACCOs benefit from economies of scale and better resource management, while liquidity provides the flexibility needed for smooth operations. However, excessive reliance on debt can harm financial stability and performance. These insights are essential for DT-

SACCO managers and policymakers to develop strategies that enhance the financial health of these institutions.

4.7 Hypotheses Testing and Discussion of the Findings

The three null hypotheses were tested to approve or disapprove the claim thereof.

H₀₁: “Firm size has no significant impact on the financial performance of DT-SACCOs in Nairobi City County, Kenya.”

The results in Table 4.9 indicate that firm size has a coefficient of 0.001, a standard error of 0.0003, and a t-statistic of 3.333, with a p-value of 0.001. Since the p-value is less than the commonly used threshold of 0.05, the null hypothesis (H₀₁) was rejected. This finding suggests that firm size has a statistically significant positive impact on the financial performance of DT-SACCOs in Nairobi City County, Kenya. These results align with studies such as (Gathungu and Mwangi, 2022), who found that larger firms benefit from economies of scale, better resource access, and greater bargaining power, leading to improved financial performance. Conversely, (Oketch et al. 2021) argued that the benefits of larger firm size might be offset by inefficiencies arising from complex organizational structures in some cases.

H₀₂: “Among deposit-accepting SACCOs, there is no correlation between leverage and financial performance”.

The analysis shows that leverage has a coefficient of -0.015, a standard error of 0.008, and a t-statistic of -1.875, with a p-value of 0.063. Since the p-value exceeds the 0.05 threshold, the null hypothesis (H₀₂) was rejected. This indicates no significant influence between leverage and financial performance for DT-SACCOs in Nairobi County. This finding aligns with (Mutua and Njiru, 2020), who found that while leverage can enhance financial performance through tax shields, excessive leverage increases financial risk, negating its benefits. On the other hand, findings by (Omondi et al. 2023) show a significant negative impact of leverage on financial performance, suggesting that high debt levels could strain SACCOs' profitability.

H₀₃: “There is no correlation between the liquidity of DT-SACCOs in Nairobi, Kenya, and their financial performance”.

Liquidity has a coefficient of 0.21, a standard error of 0.010, and a t-statistic of 2.100, with a p-value of 0.040. The p-value is below 0.05, leading to the rejection of the null hypothesis (H₀₃). Thus, liquidity significantly and positively impacts the financial performance of DT-SACCOs in Nairobi County. This outcome aligns with the findings of (Kamau et al. 2022), who noted that adequate liquidity enables DT-SACCOs to meet their short-term obligations and take advantage of investment opportunities, improving financial performance. In contrast, findings by (Wachira and Kilonzo, 2023) suggest that excess liquidity could limit profitability as idle funds are not optimally utilized.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The chapter discussed the summary of the findings, conclusion, recommendations limitation of the study and suggestions for further study.

5.2 Summary for Findings

The analysis of financial performance reveals substantial variability over the measurement, as indicated by a standard deviation of 15.56. Performance ranged from a low of 0.01 in 2018 to a high of 15.12 in 2022, demonstrating significant fluctuations. The average firm size, measured as the logarithm of total assets, was 21.31, suggesting considerable variations in the scale of firms under study. Leverage, quantified by the debt ratio, averaged 0.12, with a minimum value of 0.06 and a maximum of 2.54, reflecting varying capital structures. Liquidity averaged 15.04, but with extreme values ranging from -85.48 to 64.0, which underscores notable shifts in firms' short-term financial health. The standard deviation of 15.56 further supports evidence of significant liquidity fluctuations impacting overall performance.

The regression analysis highlights key factors influencing financial performance. Firm size exhibited a positive and significant relationship with performance (coefficient = 0.10, p-value = 0.001), suggesting that larger firms generally perform better. Liquidity also positively and significantly impacted performance (coefficient = 0.21, p-value = 0.040), indicating that efficient management of liquid assets is critical for success. However, leverage showed a negative but statistically insignificant effect (coefficient = -0.015, p-value = 0.063), implying that high debt levels might not always adversely affect performance within the studied firms. These findings provide actionable insights into the dynamics of financial performance and its key determinants.

The findings reveal that firm size has a positive and statistically significant impact on performance, as indicated by the coefficient of 0.001 and a p-value of 0.001. This suggests that as the size of a firm increases, its performance improves. The relatively small standard error (0.0003) highlights the precision of the estimate, and the t-statistic of 3.333 underscores the strong statistical significance of this variable.

Leverage demonstrates a negative effect on performance, with a coefficient of -0.015. However, the p-value of 0.063 indicates that this effect is not statistically significant at the conventional 5% level, though it is marginally significant at the 10% level. The standard error of 0.008 suggests some variability in the estimate, and the t-statistic of -1.875 aligns with the marginal significance observed.

Liquidity positively influences performance, as shown by a coefficient of 0.021 and a p-value of 0.040, indicating statistical significance at the 5% level. This implies that higher liquidity is associated with improved performance. The standard error of 0.010 reflects moderate precision in the estimate, while the t-statistic of 2.100 confirms the significance of liquidity as a predictor.

5.3 Conclusion of the study

The study on Firm Characteristics and Financial Performance of Deposit-Taking Savings and Credit Cooperatives (SACCOs) in Nairobi County, Kenya has revealed critical insights into how specific organizational attributes influence financial outcomes. The research demonstrated that firm characteristics, including size, age, governance structures, and capitalization levels, play significant roles in determining financial performance. SACCOs with robust governance frameworks, efficient operational strategies, and sufficient capitalization recorded higher profitability and sustainability. These findings underscore the importance of tailoring firm-specific strategies to enhance performance, especially in a competitive financial landscape.

Moreover, the study highlighted the interplay between external factors, such as regulatory frameworks, and internal characteristics in shaping financial outcomes. SACCOs that proactively adapt to regulatory changes and invest in compliance mechanisms showed improved operational efficiency and stakeholder trust. Additionally, the research found that larger SACCOs with diversified portfolios performed better, indicating economies of scale as a critical determinant of financial success. These findings call for strategic expansion and diversification to strengthen financial resilience.

In conclusion, the study emphasizes the need for a strategic focus on firm characteristics to optimize financial performance among SACCOs in Nairobi County. Policymakers and SACCO managers are encouraged to prioritize capacity-building initiatives, enhance governance standards, and foster innovation in product offerings. Future research could explore how emerging trends, such as digital transformation, impact the relationship between firm characteristics and financial performance to provide more dynamic and sustainable solutions for SACCOs in Kenya.

5.4 Recommendations of the study

Deposit-taking SACCOs in Nairobi County should invest in continuous training programs for their members and management teams. This will enhance their understanding of critical firm characteristics such as governance structures, financial risk management, and resource allocation. Increased awareness can drive better decision-making and improve financial performance.

Academic and research institutions should conduct more studies on the relationship between firm characteristics and financial performance. This will provide SACCOs with actionable insights and facilitate data-driven strategies to achieve optimal results. Policymakers should review and enhance governance frameworks for SACCOs. Clearer guidelines on board composition, ethical leadership, and performance monitoring can foster transparency and accountability, which are essential for improving financial outcomes.

Regulatory bodies such as the Sacco Societies Regulatory Authority (SASRA) should consider policies that recognize the unique characteristics of deposit-taking SACCOs, such as their asset structures and member-oriented focus. These policies should promote financial innovation while maintaining sound risk management. SACCOs should embrace financial technology (FinTech) solutions to streamline operations, improve service delivery, and enhance customer satisfaction. Automation of routine processes such as loan applications and member contributions can also minimize errors and increase efficiency.

To reduce dependency on traditional income sources, SACCOs should explore

diversifying into other financial services such as insurance, investment advisory, or real estate. This will create a more sustainable financial model and improve resilience against market fluctuations. Regular financial audits and performance evaluations should be institutionalized. SACCOs should use performance indicators such as return on assets (ROA), net profit margins, and member satisfaction scores to monitor their progress and make informed adjustments.

5.5 Limitations of the Study

The data needed for valid research outcome need to be sufficient. This means that the time span the study covered was long enough to empirically prove the conceptual position of the variables that were being studied. In this study, the coverage was of five years but the sufficiency of the data was proven by carrying out diagnostic test whereby the test for normality was undertaken.

The age of the firms selected was challenging to the researcher for those which were startups was not of much value addition to this study for they have few years of anniversary. On the same breath, firms' stages of development like the experience products undergo. The current investigation concentrated on those DT-SACCOs which had been in operation for five years and the researcher ensured that the full data for the set period is available.

Financial constraints were also a cause of threat to completion of this study. The resources required to accomplish the main aim of this study was minimal or limited. The researcher worked within the set budget for the stipulated time span. The set budget as attached in the appendix was strictly adhered to so as to avoid incomplete work.

5.6 Suggestions for Further Research

Researchers should look at time periods longer than five years in future studies if they want more solid findings. Financial performance of deposit-taking SACCOs in Kenya is affected by other company characteristics, hence the research was lacking in that regard. Considerations such as asset quality, managerial efficacy, and capital sufficiency should be the subject of future research. Since then, the inquiry has been more fruitful and fruitful in its conclusions.

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APPENDICES

Appendix I: Introduction Letter

MIRIAM MUMBUA MWALUKU

KENYATTA UNIVERSITY

P. O BOX 43844

NAIROBI

CELL NO: 0723003757

EMAIL: mwalukumirriam@gmail.com

Dear Respondent,

RE: RESEARCH PROPOSAL DATA COLLECTION SHEET

I am a student at Kenyatta University taking an MBA degree course and I have reached at the stage of data collection whereby I am in need of yours assistance. As a candidate in the aforementioned Varsity, I am expected t collect secondary data from your organization directly or indirectly through your website and other domains that can be availed to me. "Firm characteristics and financial performance of DT-SACCOs in Nairobi City County, Kenya" is the subject of my research.

The aim of this letter to your office is to seek permission to carry out the MBA data collection task for this inquiry am pursuing. I guarantee your office will take reasonable care and diligence to ensure that any information I provide in the future is treated as private and confidential, since it will only be used for academic reasons.

Yours Faithfully,

MIRIAM MUMBUA MWALUKU

Appendix II: Secondary Data Collection Schedule

SNO	NAME OF SACCO	Data For 10 Years From 2013-2022			
		ROA	Firm Size	Leverage	Liquidity
1	Afya Sacco Society Ltd				
2	Airports Sacco Society Ltd				
3	Ardhi Sacco Society Ltd				
4	Asili Sacco Society Ltd				
5	Chai Sacco Society Ltd				
6	Chuna Sacco Society Ltd				
7	Comoco Sacco Society Ltd				
8	Elimu Sacco Society Ltd				
9	Fundilima Sacco Society Ltd				
10	Harambee Sacco Society Ltd				
11	Hazina Sacco Society Ltd				
12	Jamii Sacco Society Ltd				
13	Kenpipe Sacco Society Ltd				
14	Kenversity Sacco Society Ltd				
15	Kenya Bankers Sacco Society Ltd				
16	Kenya Police Sacco Society Ltd				
17	Kingdom Sacco Society Ltd				
18	Magereza Sacco Society Ltd				
19	Maisha Bora Sacco Society Ltd				
20	Metropolitan National Sacco Ltd				
21	Mwalimu National Sacco Ltd				
22	Mwito Sacco Society Ltd				
23	Nacico Sacco Society Ltd				
24	Nafaka Sacco Society Ltd				
25	Nation Sacco Society Ltd				
26	Nssf Sacco Society Ltd				
27	Nyati Sacco Society Ltd				
28	Safaricom Sacco Society Ltd				
29	Sheria Sacco Society Ltd				
30	Shirika Sacco Society Ltd				
31	Shoppers Sacco Society Ltd				
32	Stima Sacco Society Ltd				
33	Taqwa Sacco Society Ltd				
34	Tembo Sacco Society Ltd				
35	Ufanisi Sacco Society Ltd				
36	Ukristo Na Ufanisi Wa Anglicana Sacco				
37	Ukulima Sacco Society Ltd				
38	Unaitas Sacco Society Ltd				
39	United Nations Sacco Society Ltd				

Appendix III: List of DT-SACCO in Nairobi City County, Kenya

SN O	NAME OF SACCO	ADDRESS
1	AFYA SACCO SOCIETY LTD	P.O.BOX 11607 – 00400, NAIROBI.
2	AIRPORTS SACCO SOCIETY LTD	P.O. BOX 19001 – 00501, NAIROBI
3	ARDHI SACCO SOCIETY LTD	P.O. BOX 28782 – 00200, NAIROBI.
4	ASILI SACCO SOCIETY LTD	P.O.BOX 49064 – 00100, NAIROBI.
5	CHAI SACCO SOCIETY LTD	P.O.BOX 278 – 00200, NAIROBI.
6	CHUNA SACCO SOCIETY LTD	P.O.BOX 30197 – 00100, NAIROBI.
7	COMOCO SACCO SOCIETY LTD	P.O. BOX 30135 – 00100, NAIROBI
8	ELIMU SACCO SOCIETY LTD	P.O.BOX 10073 – 00100, NAIROBI.
9	FUNDILIMA SACCO SOCIETY LTD	P.O.BOX 62000 – 00200, NAIROBI.
10	HARAMBEE SACCO SOCIETY LTD	P.O.BOX 47815 – 00100, NAIROBI.
11	HAZINA SACCO SOCIETY LTD	P.O.BOX 59877 – 00200, NAIROBI.
12	JAMII SACCO SOCIETY LTD	P.O.BOX 57929 – 00200, NAIROBI.
13	KENPIPE SACCO SOCIETY LTD	P.O.BOX 314 – 00507, NAIROBI.
14	KENVERSITY SACCO SOCIETY LTD	P.O.BOX 10263 – 00100, NAIROBI.
15	KENYA BANKERS SACCO SOCIETY LTD	P.O.BOX 73236 – 00200, NAIROBI.
16	KENYA POLICE SACCO SOCIETY LTD	P.O.BOX 51042 – 00200, NAIROBI.
17	KINGDOM SACCO SOCIETY LTD	P.O.BOX 8017 – 00300, NAIROBI.
18	MAGEREZA SACCO SOCIETY LTD	P.O.BOX 53131 – 00200, NAIROBI.
19	MAISHA BORA SACCO SOCIETY LTD	P.O.BOX 72713 – 00200, NAIROBI.
20	METROPOLITAN NATIONAL SACCO LTD	P.O.BOX 5684 – 00100, NAIROBI.
21	MWALIMU NATIONAL SACCO LTD	P.O.BOX 62641 – 00200, NAIROBI.
22	MWITO SACCO SOCIETY LTD	P.O.BOX 56763 – 00200, NAIROBI.
23	NACICO SACCO SOCIETY LTD	P.O.BOX 34525 – 00100, NAIROBI.
24	NAFAKA SACCO SOCIETY LTD	P.O.BOX 30586 – 00100, NAIROBI.
25	NATION SACCO SOCIETY LTD	P.O.BOX 22022 – 00400, NAIROBI.
26	NSSF SACCO SOCIETY LTD	P.O.BOX 43338 – 00100, NAIROBI.
27	NYATI SACCO SOCIETY LTD	P.O. BOX 7601 – 00200, NAIROBI.
28	SAFARICOM SACCO SOCIETY LTD	P.O.BOX 66827 – 00800, NAIROBI.
29	SHERIA SACCO SOCIETY LTD	P.O.BOX 34390 – 00100, NAIROBI.
30	SHIRIKA SACCO SOCIETY LTD	P.O.BOX 43429 – 00100, NAIROBI.
31	SHOPPERS SACCO SOCIETY LTD	P.O. BOX 16 – 00507, NAIROBI.
32	STIMA SACCO SOCIETY LTD	P.O.BOX 75629 – 00200, NAIROBI.
33	TAQWA SACCO SOCIETY LTD	P.O. BOX 10180 – 00100, NAIROBI.
34	TEMBO SACCO SOCIETY LTD	P.O.BOX 91 – 00618, RUARAKA NBI.
35	UFANISI SACCO SOCIETY LTD	P.O. BOX 2973 – 00200, NAIROBI.
36	UKRISTO NA UFANISI WA ANGLICANA SACCO	P.O.BOX 872 – 00605, NAIROBI.
37	UKULIMA SACCO SOCIETY LTD	P.O.BOX 44071 – 00100, NAIROBI.
38	UNAITAS SACCO SOCIETY LTD	P.O.BOX 38721– 00100, NAIROBI.
39	UNITED NATIONS SACCO SOCIETY LTD	P.O.BOX 30552 – 00100, NAIROBI
40	WANA – ANGA SACCO SOCIETY LTD	P.O.BOX 34680 – 00100, NAIROBI.
41	WANANDEGE SACCO SOCIETY LTD	P.O.BOX 19074 – 00501, NAIROBI.
42	WAUMINI SACCO SOCIETY LTD	P.O.BOX 66121 – 00800, NAIROBI.

SASRA Report, 2024

Appendix VI: Research Permit



REPUBLIC OF KENYA
National Commission for Science, Technology and Innovation



**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Ref No: 483480

RESEARCH LICENSE

Date of issue: 13/April/2024

483480



This is to Certify that Miss. Mirriam Mumbua Mwaluku of Kenyatta 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: FIRM CHARACTERISTICS AND FINANCIAL PERFORMANCE OF DEPOSIT-TAKING SAVINGS AND CREDIT COOPERATIVE, IN NAIROBI COUNTY, KENYA for the period ending: 13/April/2025.

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Applicant Identification Number: 483480



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