ASSESSING EFFECTS OF SASRA FINANCIAL REPORTING TOOLS ON FINANCIAL PERFORMANCE OF DT-SACCOS IN KENYA

ABDULLAHI MOHAMED MUHUMED

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION DEGREE IN ACCOUNTING AND FINANCE OF

MOUNT KENYA UNIVERSITY

JUNE 2025

DECLARATION AND APPROVAL

Declaration by the student

This research project is my original work and has not been presented for a degree in any other University or for any other award.

Signature:  Date: 16/06/2025

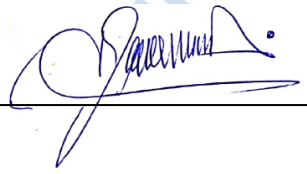
Abdullahi Mohamed Muhumed

MBA/2019/49172

16/06/2025

Approval by the supervisor

I confirm that the work reported in this proposal was carried out by the candidate under my supervision

Signature:  Date: 16/06/2025

Dr. Clement O. Olando (PhD)

Mount Kenya University, Nairobi Campus

DEDICATION

I dedicate my research work to the Almighty God, for the gift of life, His grace and endless love. To my lovely wife Kheira Abdi Sheikh and my daughter Hanifa and my son Ayman for their love and support and my entire family for your understanding, support and encouragement, it means a lot to me. I love you all and God bless you abundantly.

ACKNOWLEDGEMENT

I desire to offer deep appreciation to the Almighty God for bestowing me with the power, sound health, insight, and capacities required to complete this work successfully. His spiritual direction has been a never-ending source of inspiration during the course of this journey.

I am incredibly grateful to my supervisor, Dr. Olando, for his unshakeable commitment, constant support, and priceless intellectual advice during this project. I additionally wish to express deep thanks to my professors for their extensive expertise and for creating a stimulating learning atmosphere. In addition, I like the friendships and stimulating discussions among my classmates, which have enhanced my educational journey. I would like to express my heartfelt appreciation to the Department of Accounting and Finance of Mount Kenya University for their unwavering support and guidance throughout the course of this project. Their academic resources, expertise, and encouragement were instrumental in shaping the direction and quality of this work.

I would like to extend my sincere gratitude to the research assistants who contributed their time, skills, and dedication to this project. Their support in data collection, analysis, and administrative tasks was invaluable to the successful completion of this work. In particular, Special thank for their commitment, attention to detail, and collaborative spirit throughout the duration of the project. I intend to sincerely thank my family, friends, and children for their unwavering backing and encouragement over my academic career. I would like to acknowledge everyone for playing a crucial role in this incredible adventure.

ABSTRACT

Despite being crucial to Kenya's socioeconomic development, DT-SACCOs' financial performance is significantly impacted by issues related to financial reporting and monitoring that are getting worse. As a result, licenses have been revoked and five DT-SACCOs have collapsed. Still, SASRA has recommended financial tools for monitoring and reporting to help DT-SACCOS address these kinds of risk management issues that are negatively impacting financial performance. Research on SASRA financial reporting tools is vital for improving the performance, transparency, and sustainability of DT-SACCOs in Kenya. Although, there is a affluence of investigations on financial performance aspects including; earnings, liquidity, asset quality, and capital adequacy, the findings of extant empirical studies are inconsistent occasioned by methodological, conceptual, and contextual gaps. The current study as a consequence closed these knowledge gaps by evaluating the impact of financial tools for financial reporting and monitoring provided by SASRA on the financial performance of DT-SACCOs in Kenya. The specific objective to guide the study was to find out the effect of capital adequacy, asset quality, earnings, and liquidity on the financial performance of deposit-taking savings and credit cooperative societies in Kenya. The foundational theories underpinning this framework encompassed Capital Asset Pricing Model, Capital Buffer Theory, Liquidity Preference Theory, and Expense-Preference Behavior Theory. The study embraced a positivist paradigm, utilized a correlational research design**, and employed a rigorous quantitative methodology, ensuring a robust and objective analysis of the research phenomena. The target population for this research comprised the 181 DT-SACCOs actively involved in the SACCO business in Kenya between 2018 and 2022. Given the manageable size and accessibility of the population, a census approach was adopted, inviting every member of the target group to participate as a respondent. A meticulously designed data collection sheet was employed to gather information from secondary sources. To ensure the robustness of the findings, content analysis was utilized to assess the validity, while Cronbach's Alpha was applied to evaluate the reliability of the data collection instrument. Quantitative evaluation of the data is required to produce descriptive and inferential statistics. The data were meticulously scrutinized for normality, heteroscedasticity, multicollinearity, linearity, and autocorrelation. The study findings show that; capital adequacy has a statistically significant positive impact on the financial performance of Kenyan DT-SACCOs, accounting for 11.67% of the variation in financial performance., asset quality, conversely, exerts a statistically significant negative influence on financial performance, with a negative impact accounting for 22.88% of the variance in financial outcomes, earning ability, similarly, demonstrates a significant negative effect on financial performance of Kenyan DT-SACCO, and liquidity has a positive significant effect on Kenyan DT-SACCOs' financial performance, accounting for 29.68%. The study concludes that SASRA financial reporting tools; capital adequacy, asset quality, earning ability, and liquidity are vital for addressing pressing concerns related to financial performance of DT-SACCOs and for enhancing it. The study recommendations suggest that DT-SACCOs in Kenya should, implement robust internal mechanisms to continuously monitor their capital adequacy, enhance asset quality and maintain financial stability through comprehensive credit evaluation mechanisms, conduct a comprehensive review of operational costs, continuously monitor liquidity levels and adjust related policies.

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ANOVA	Analysis of Variance
CAOM	Capital Asset Pricing Model
CAEL	capital adequacy, quality of the assets, earnings and liquidity
CBK	Central Bank of Kenya
CLRM	Classical Linear Regression Model
DT-SACCOs	Deposit Taking Savings and Credit Cooperative Societies
IVs	Independent Variables
MKU	Mount Kenya University
MPT	Modern Portfolio Theory
NACOSTI	National Council of Science and Technology
PPM	Pearson's Product Moment
SACCOS	Savings and Credit Cooperative Societies
SASRA	Sacco Societies Regulatory Authority
SPSS	Statistical Package for Social Sciences
WOCCU	World Council of Credit Unions

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In order to actively engage the largest but poorest socio-economic group in society (typically representing the lowest income levels), of any country, into the financial system, it is presently imperative to offer loan products at substantially lower interest rates to them (Wanjiru & Jagongo, 2022). In light of this, the founding of Savings and Credit Cooperative Societies (SACCOs) is primarily focused on advancing the financial interests and overall well-being of its members (Lekaaso, Cherono, & Rintari, 2020). A key objective underlying the emergence of SACCOS is to foster a culture of saving while providing members with access to credit. Consequently, SACCOS serve as pivotal financial institutions, playing an essential role in mobilizing capital to support various development initiatives. Deposit-taking SACCOs (DT-SACCOs) are key financial intermediaries within the SACCO sector, providing essential services such as savings mobilization, loans, and other financial products (Ng'eno, 2019). They bridge the gap between the formal financial sector and underserved populations, particularly in rural and low-income areas. DT-SACCOs aim to promote sustainable growth by managing resources effectively, expanding their membership, and improving financial services.

A significant contributor to their success is the provision of business loans, which empower borrowers to invest in income-generating activities, enhancing both personal and community wealth (Lekaaso et al., 2020). This cycle of borrowing and repayment stimulates local

economic growth, creating a multiplier effect that benefits the wider community through job creation and increased economic activity.

As a result, DT-SACCO loans not only support financial stability but also contribute to social development by improving the standard of living for community members (Ogum & Jagongo, 2022). Since they are capable to offer loans at rates of interest that are less than what other financial organizations impose, these institutions are becoming significant in the financial sector (Maina & Jagongo, 2022). DT-SACCOs therefore have a significant impact on global economies.

Globally, over one billion people are actively involved in the SACCO industry, which has established itself as a critical pillar of the global financial sector. More than 250 million individuals are employed in this sector, contributing to its significant role in promoting economic stability, financial inclusion, and sustainable development. SACCOs offer vital financial services, encompassing savings and loan facilities, to individuals who may otherwise be marginalized or excluded from conventional banking systems. This industry fosters economic growth and community development by supporting small businesses, providing financial services in underserved areas, and encouraging a culture of saving and responsible borrowing. As a result, SACCOs have evolved into a cornerstone of economic infrastructure, playing a pivotal role in fostering the growth and prosperity of communities. The economic impact of the SACCO sector is exemplified by its remarkable global turnover of 2.2 trillion US dollars, a testament to the vast scale of the industry and its profound influence on the global economy. As reported by the World Cooperative Monitor (2014),

approximately 57,000 SACCOs were operational across 105 countries, highlighting the extensive reach and enduring significance of cooperative financial models on a global scale.

In Africa, SACCOs are grounded in unique ideals and values, such as mutual aid, self-responsibility, and democratic governance, which distinguish them from conventional financial institutions (Gadzo, Kportorgbi & Gatsi, 2019). These principles shape their operations and contribute to their ability to serve local communities effectively. Cooperative societies in Africa possess a rich legacy of cultivating solidarity and driving economic empowerment, particularly in rural regions where access to formal financial services remains constrained (Nassuna, Jeppesen & Balunywa, 2024). In the continent, SACCOs are integral to this tradition, serving as a cornerstone for financial inclusion. By offering essential financial services to marginalized populations, SACCOs empower members to gain access to affordable credit, foster savings accumulation, and, ultimately, contribute to poverty alleviation. Through these cooperative frameworks, SACCOs not only support individual economic growth but also nurture the collective well-being of entire communities, advancing a more inclusive and resilient financial ecosystem across the continent.

Regionally, the SACCO movement in Africa has experienced remarkable growth, with 16 million active members across the continent, representing 8% of the global SACCO membership (Barus et al., 2017). This growth reflects the increasing importance of SACCOs in addressing the financial needs of individuals and businesses, particularly in developing economies where access to credit is often constrained. Africa is home to the third-highest loan portfolio in the global SACCO sector, accounting for 65% of the industry's loans, which highlights the vital role SACCOs play in providing access to credit for both individuals and

small enterprises (World Council of Credit Unions [WOCCU], 2018). Additionally, WOCCU (2018) posits that Africa leads the world in the percentage of savings held within SACCOs, with 62% of total savings, demonstrating the trust and reliance placed on these organizations by their members. These figures underscore the significant contribution of SACCOs to Africa's financial landscape, as they provide a reliable and community-based alternative to traditional banking services.

In Kenya, SACCOs have emerged as a major force within the financial sector, positioning the country as a leader in cooperative finance on the continent. Kenya's SACCOs are not only the most prominent in Africa but are also ranked 11th globally (WOCCU, 2018). This achievement reflects Kenya's robust SACCO sector, which has become an essential part of the nation's financial ecosystem. In Kenya, SACCOs are predominantly, DT-SACCOs and non-deposit-taking SACCOs. Notably, DT-SACCOs have witnessed remarkable growth, progressively extending their reach to a broad spectrum of both rural and urban households (Sacco Societies Regulatory Authority, 2021). These institutions are instrumental in strengthening the financial landscape by providing a comprehensive array of financial products and services, ranging from savings accounts and loans to investment opportunities, thereby contributing significantly to the empowerment of individuals and communities (Ojili, 2023). Through their expansive offerings, DT-SACCOs serve as pillars of financial inclusion, facilitating access to essential resources and fostering economic resilience across the country. The rising membership within DT-SACCOs is a clear indication of their expanding influence and significance within Kenya's dynamic financial landscape.

According to the Republic of Kenya (2017), DT-SACCO activities directly or indirectly benefit approximately 63% of the Kenyan population, further highlighting their importance to the country's economy (Sacco Societies Regulatory Authority, 2022) DT-SACCOs in Kenya play a vital role in promoting economic growth by offering essential financial services to individuals and small and medium-sized enterprises (SMEs). Through accessible products like savings accounts, loans, and investment opportunities, they foster financial inclusion and stimulate local economies. Additionally, DT-SACCOs implement strategic initiatives to enhance their financial performance, aligning with broader financial sector goals. These strategies may include diversifying their investment portfolios, improving operational efficiencies, expanding their service offerings, and leveraging technology to enhance service delivery and customer satisfaction. Through these efforts, DT-SACCOs aim to strengthen their financial stability, ensure sustainable growth, and contribute to the broader economic development of the region. These strategies often include diversification of loan products, improvement of service delivery, and adoption of technology to improve operational efficiency (Ogum & Jagongo, 2022).

The financial performance of DT-SACCOs in Kenya, despite their notable achievements, has been impeded by several challenges. One of the primary issues is the ineffective monitoring and reporting of loans, which has led to suboptimal financial outcomes and dissatisfaction among stakeholders (Fundi & Wamugo, 2023; Muthee & Theuri, 2021). The high default rates resulting from poor loan monitoring significantly affect the overall profitability of these institutions. Moreover, a range of financial challenges, including interest rate fluctuations, liquidity constraints, and credit risk, poses substantial risks to the operational and financial stability of Kenyan DT-SACCOs.

These risks arise from the nature of their operations, as SACCOs typically lend to individuals and businesses that may be considered high-risk by traditional financial institutions. Credit risk, in particular, poses a significant threat to their performance, as many SACCO members rely on loans to fund agricultural activities or small businesses, both of which are subject to market fluctuations and external shocks (SASRA, 2017). Liquidity risks, on the other hand, stem from the need to maintain enough cash reserves to meet the withdrawal demands of members, while interest rate risks arise from fluctuations in borrowing and lending rates, which can affect profitability.

Thus, while SACCOs globally and in Africa have made significant contributions to economic development and financial inclusion, they also face considerable challenges, particularly in managing risks and ensuring sustainable financial performance (Mwangi, 2020. In Kenya, SACCOs, particularly DT-SACCOs, play a crucial role in supporting the financial well-being of a significant segment of the population. However, effectively addressing the operational and financial risks they encounter is imperative to ensure their sustained success and long-term stability within the financial ecosystem.

Pointedly, Sacco Societies Regulatory Authority (SASRA, 2019) regulations must be followed by Kenyan SACCOS. Thus, in order to monitor and report on the safety and stability of their operations, Kenyan DT-SACCOs have to adhere to the financial tools outlined in the SASRA Regulations 2010 for DT-SACCOs. These tools include capital adequacy, quality of assets, earnings, and liquidity, within several others derived from globally accepted standards and best practices (SASRA, 2022). Even with these instruments, Kenyan DT-SACCOs' financial performance is unstable (inconsistent).

Research on the monitoring and reporting financial tools used by the Sacco Societies Regulatory Authority (SASRA) plays a crucial role in strengthening the effectiveness and sustainability of SACCOs in Kenya. These tools are designed to ensure that SACCOs operate transparently, remain financially sound, and comply with regulatory standards. However, the success of these tools depends on how well they are understood, implemented, and aligned with the dynamic needs of SACCOs and their members. Conducting in-depth research into these systems helps uncover their strengths, limitations, and areas for improvement.

Therefore, the primary objective of this research is to thoroughly investigate the impact of various financial instruments on the financial performance of DT-SACCOs in Kenya. This examination aims to provide a deeper understanding of how these instruments influence the operational effectiveness, profitability, and overall financial health of DT-SACCOs. Furthermore, the findings are intended to support and enhance the reporting mechanisms of the Sacco Societies Regulatory Authority (SASRA), facilitating more robust oversight and informed decision-making in the regulation and supervision of DT-SACCOs. Through a comprehensive analysis of the relationship between financial instruments and performance outcomes, this research aspires to offer profound insights that can enhance the broader regulatory framework, ultimately fostering the long-term sustainability and resilience of DT-SACCOs in Kenya.

1.1.1 Financial Performance

In line with Maina and Jagongo (2022), financial performance refers to a firm's unique capacity to produce fresh resources from its ongoing business activities within a certain period of time. One of a DT-SACCO's main goals is to increase profits and wealth for its

shareholders. The manner in which a company performs financially greatly affects its capacity to grow and thrive.. Firm's total financial health is measured by its financial performance. As stated by Rahman (2014), it serves as a gauge of organizational effectiveness and managerial skill as well as creditworthiness, return on assets (ROA), business profits as well as return on investments (ROI). The identification of societies facing severe problems is made easier by financial performance, which is used to determine an economic entity's financial sustainability and enable the taking of corrective action (Hoang, 2014).

Firms use a variety of metrics to assess their financial performance. These measures include financial ratios, where the principal parameters are returns on assets; ROA (SASRA, 2020).

1.1.2 SASRA financial reporting tools

In alignment with the Sacco Societies Regulatory Authority (SASRA) prudential guidelines, which place significant emphasis on the monitoring and reporting of financial instruments, several key metrics are used to evaluate and assess the fiscal health and stability of DT-SACCOs. These metrics primarily focus on four critical components: capital adequacy, asset quality, earnings, and liquidity (Ngui & Jagongo, 2017). These factors are pivotal in determining the financial soundness of DT-SACCOs, as they directly influence the institutions' capacity to weather economic fluctuations, manage risks, and safeguard the interests of both members and stakeholders. Among these, capital adequacy stands out as one of the most vital indicators. Its primary objective is to ensure that each DT-SACCO maintains sufficient capital reserves to absorb potential losses and continue operations in times of economic adversity. Adequate capital acts as a buffer, protecting the SACCO's solvency and

liquidity, which are essential for safeguarding member deposits and maintaining creditor confidence. This is particularly crucial in mitigating risks associated with operational inefficiencies, loan defaults, or market volatility, which could otherwise threaten the financial stability of the SACCO (Mwangi, 2020).

Maintaining a robust capital base enables DT-SACCOs to remain resilient in the face of financial challenges, such as economic downturns or unexpected financial shocks. By having substantial capital reserves, these institutions can continue providing essential financial services, such as loans and savings products, without compromising their long-term stability.

Furthermore, the presence of strong capital reserves reassures members and stakeholders that the SACCO can effectively absorb financial shocks, thereby promoting trust and ensuring the sustainability of the sector. Adhering to the SASRA guidelines on capital adequacy, along with other key financial indicators, enables DT-SACCOs to strengthen their financial performance, mitigate risks, and enhance their long-term stability. This, in turn, fosters a more resilient and sustainable SACCO sector that continues to serve its members and contribute to broader economic development.

As a result, SACCO's needs to possess capital adequacy, or the amount necessary to support the effective and efficient performance of its primary functions (Gallati, 2022). Sufficient capital serves as a safeguard against unanticipated events. Because of its high ratio, there may be less need for outside funding, which raises profitability. It enables SACCOs to pay investors a return, maintain capital, absorb loan losses, and encourage future asset growth. It is expected that a high ratio will result in less need for outside financing and higher SACCO profitability. Since they incur lower bankruptcy costs and require less outside funding,

particularly in developing countries, Empirical evidence suggests that SACCOs with higher capital ratios typically yield higher profits than those with lower ratios (Ojili, 2023). In this instance, capital adequacy corresponds to making sure that each SACCO society that accepts deposits keeps enough cash on hand to shield member deposits and financing institutions from income losses brought on by the financial hazards the SACCO assumes.

Asset quality determines how well-prepared financial institutions are to withstand the depreciation of their assets, just as asset impairment jeopardizes their ability to remain solvent. The metrics based on which asset quality is evaluated i in compliance with SASRA financial reporting tools are: the number, distribution, and dimensions of properties that have been evaluated; the quantity and make-up of properties that are non-accrual and decreased rate properties; the sufficiency of valuation reserves; and the track record of managing and recovering issue loans (SASRA, 2022). The Central Bank of Kenya (2021) states that the ratio of net non-performing loans (NPLs) to gross loans shows a progressive improvement in asset quality over the preceding five years. The risk management systems that financial institutions have put in place are responsible for this improvement, which have raised the bar for credit evaluation and administration. Regarding studies that have attempted to demonstrate the connection between asset quality and bank performance

Earning ability is an important metric that describes a bank's past, present, and future actions with regard to improving its earning potential. Assessing earning ability can reveal the extent of coverage for all possible losses and the capacity for dividend distribution (Sathyamoorthi et al., 2017). Earning ability refers to its capacity to raise capital and return assets in preparation for future growth (Munir & Bustamam, 2017).

The liquidity of a business is determined by its capacity to make all of its scheduled cash payments (Lekaaso, Cherono, & Rintari, 2020). As stated by Lewis (2017), this means the ability to turn a firm's financial assets, like investments, accounts receivable, and inventory, into cash. All in all, liquidity is still the main factor used to monitor, evaluate, and quantify the soundness, stability, and financial performance of DT-SACCOs. It comes on top of capital adequacy, earnings, and asset quality. The current ratio is used to measure liquidity (Maina & Jagongo, 2022).

1.1.3 DT-SACCOs

According to the Sacco Societies Regulatory Authority (SASRA) guidelines (2017), DT-SACCOs are typically understood as autonomous, distinct associations formed by individuals who voluntarily come together to address shared needs and objectives across social, economic, and cultural domains. These groups operate through a business model that is collectively owned and managed, with decision-making processes rooted in democratic principles. This organizational structure ensures that all members have an equal say in the management and operations of the SACCO, fostering a sense of shared responsibility and collective ownership. By leveraging democratic governance, DT-SACCOs aim to create a sustainable and inclusive financial environment that aligns with the mutual interests of their members.

DT-SACCOs have the ability to offer products under Front Office Service Activities (FOSA), enabling them to attract and collect membership deposits. The Sacco Societies Regulatory Authority (SASRA) plays a crucial role in regulating and overseeing the operations of these institutions. SASRA is tasked with issuing licenses to DT-SACCOs, ensuring that they comply with the legal and regulatory frameworks governing cooperative societies in Kenya. Furthermore, SACCOs licensed by SASRA must also be registered under the Cooperative Societies Act of Kenya, reinforcing their adherence to the country's cooperative laws.

The Sacco Societies Act of 2008 legally established DT-SACCOs as recognized entities and empowered SASRA to supervise, license, and monitor all licensed SACCOs in Kenya. In line with this, SASRA provides detailed guidelines on risk management practices, which are mandatory for all SACCOs accepting deposits. Prior to being granted a license, SACCO societies must develop and implement robust risk management and internal control systems, in strict accordance with the provisions set forth in the Sacco Societies Act and its associated regulations. These requirements ensure that SACCOs maintain high standards of operational integrity, safeguard member deposits, and contribute to the broader stability of the financial sector.

In accordance with SASRA (2021), 175 DT-SACCOs had a license to conduct deposit-taking operations through December 2021. In 2021, the licenses of four (4) DT-SACCOs were withdrawn or did not renew given that they failed to comply with the minimal requirements needed for a SACCO to conduct business of accepting deposits. This means that there are now 171 DT-SACCOs with valid licenses (SASRA, 2022). In 2021, five SACCOs were granted new deposit-taking licenses by the Authority, increasing the total number of DT-SACCOs in operation in the nation to 176. The SACCO subsector had a total of 5.99 million members as of December 2021, of which 5.54 million were members of the 176-DT-SACCOs. Throughout 2022, the industry of regulated SACCOs saw improvements in all of the major stability metrics and indicators, including capital adequacy, asset quality, liquidity, and earnings. The segment of DT-SACCOs saw an increase in consolidated core capital from Kshs 109.29 billion in 2021 to Kshs 124.89 billion in 2022. Separately, 168 of the 176 DT-SACCOs kept their respective core capital above Kshs 10 million, indicating full compliance (SASRA, 2022). By 7.34%, the DT-SACCOs segment saw the largest increase in membership, reaching 5.96 million by 2022. Based on the total asset sizes of their members, DT-SACCOs are divided into three (3) categories. DT-SACCOs in Kenya are categorized into three distinct tiers based on their asset sizes. The **medium-tiered** DT-SACCOs are those with total assets ranging from Kshs 1 billion to Kshs 5 billion. The **small-tiered** DT-SACCOs, on the other hand, are those with assets totalling under Kshs 1 billion, while the **large-tiered** DT-SACCOs are characterized by having assets exceeding Kshs 5 billion (SASRA, 2020). These classifications allow for differentiated regulatory oversight and tailored financial strategies to address the unique operational dynamics, financial capabilities, and risk exposures of each tier.

1.2 Statement of the Problem

In the African region, Kenya harbours most vibrant DT-SACCO market, playing a pivotal role in providing essential financial services to its population (WOCCU, 2020). This dynamic sector is integral to the nation's financial landscape, ensuring broad access to fundamental financial products and fostering economic inclusion across diverse communities in addition to promoting economic growth. The subsector's role as drivers of economic growth in Kenya Vision 2030 is evidence of its importance to the country's economy. The research conducted in 2017 by the Republic of Kenya revealed that 63% of Kenyans gain from SACCO operations, in either a direct or indirect way. However, as per SASRA (2021), low-quality assets have persisted, causing declined in financial performance of these entities; in terms return on assets (ROA), to decrease. The ROA was 2.45% in 2016, grew to 2.69% in 2917, decreased to 2.40% in 2018, increased to 2.60% in 2019, and then to 2.65% in 2020 before experiencing a sharp decline to 1.59% in 2021 and then to 2.61% in 2022 (SASRA, 2023). Unexpectedly, even though the ROA grew in 2022, the rate of profitability growth has been decreasing. More specifically, compared to 9.80 percent in 2018, the ROA increased by 22.90 percent in 2020. The Kenyan SACCO component has persisted in operating with a subpar financial monitoring and control system, endangering the funds of its members, (Financial Sector Development Trust, 2020). This has been connected to the uneven ROA-based financial performance. The study makes clear that DT-SACCOs have persisted in using high-risk models that leave them vulnerable to numerous operational risk exposures. As noted by Muteti (2018), financial due diligence has increased commercial banks' profitability. Yet, prior studies lacked an in-depth examination of the profitability mechanism and as a result, did not provide an adequate evaluation for financial due diligence (Angore & Roulet, 2020).

SASRA has advised that the SASRA financial reporting tools help Kenyan DT-SACCOS address credit risk management issues that are negatively impacting their financial performance (SASRA, 2020). It is still unknown the manner in which SASRA financial reporting tools, as a financial instrument used for SASRA reporting and monitoring, influences the financial performance of DT-SACCOs in Kenya, despite the fact that a great deal of research has already been done on the subject. Most empirical studies had conceptual gaps (Ng'eno, 2019); some had contextual gaps (Okumu & Oyugi, 2016); still others, like Ojili's (2023) research, had methodological gaps (Ogweri, Otinga & Miroga, 2022). This shows that there was limited empirical evidence regarding Kenyan DT-SACCOs' use of SASRA financial reporting tools as financial reporting and SASRA monitoring tools to ensure their financial performance; hence this study.

1.3 Purpose of the Study

In order to acquire a better understanding of the utilisation of SASRA financial reporting tools, the investigation was designed to ascertain, through academic research, the relationship between the financial performance of DT-SACCOs in Kenya and the financial tools used for SASRA monitoring and reporting.

1.4 Objectives of the Study

1.4.1 General Objectives

The main objective of this study was assessing effects of SASRA financial reporting tools on financial performance of DT-SACCOs in Kenya.

1.4.2 Specific Objectives

Specific objective to guide the study were:

i. To establish the effect of capital adequacy on financial performance of Deposit Taking Savings and credit co-operative societies in Kenya.

ii. To find out the effects of asset quality on financial performance of Deposit Taking Savings and credit co-operative societies in Kenya.

iii. To determine the effects of earning ability on financial performance of Deposit Taking Savings and credit co-operative societies in Kenya.

iv. To find out the effect of liquidity on financial performance of Savings and Deposit Taking credit co-operative societies in Kenya.

1.5 Research Hypothesis

The research tested the hypotheses;

H_{01}: Capital adequacy does not have statistically significant effect on financial performance of Savings and credit co-operative societies in Kenya.

H_{02}: Asset quality does not have statistically significant effect on financial performance of Deposit Taking Savings and credit co-operative societies in Kenya.

H_{03}: Earning ability does not have statistically significant effect financial performance of Deposit Taking Savings and credit co-operative societies in Kenya.

H_{04}: Liquidity does not have statistically significant effect financial performance of Deposit Taking Savings and credit co-operative societies in Kenya.

1.6 Significance of the Study

This research advanced comprehension of SASRA financial tool monitoring, reporting, and analysis about Kenya DT-SACCO's financial performance. The primary recipients of the study's findings would be academicians, scholars, researchers, and policy makers for DT-SACOs and SACCOs.

These results might have a significant impact on Kenya's DT-SACCOs' ability to preserve and improve a controlled environment necessary to sustain their financial performance. Through an analysis of managing risk associated with ensuring asset quality, capital sufficiency, earning capacity, and liquidity, this research would help DT-SACCO managers understand what it takes to enhance the financing characteristics. Therefore, when DT-SACCOs are strategizing for efficient credit risk management practices, the study findings would serve as a guide.

1.6.1 DT-SACCO policy Makers

In this research, the findings would be highly valuable for policymakers involved in the development of guidelines and regulations related to credit risk management within DT-SACCOs. The conclusions could help shape more effective and tailored regulatory frameworks aimed at minimizing credit risk exposure in these financial institutions. Policymakers could use the insights gained to design strategies that enhance the overall stability and sustainability of DT-SACCOs, ensuring that they can manage credit risks effectively while continuing to provide financial services to their members. Furthermore, the study's results could inform the establishment of best practices for assessing creditworthiness,

managing loan portfolios, and mitigating potential defaults, thereby strengthening the resilience of DT-SACCOs within Kenya's dynamic financial environment.

The current study's findings may help decision-makers in the DT-SACCO sector manage credit risk appropriately, resulting in improved performance by averting credit risks.

1.6.2 DT-SACCO Managers

Additionally, the findings might enable DT-SACCO managers to give priority to managing current assets and loans with the goal to reduce the quantity of NPLs and ensure enhanced performance. They might use it as a guide when making decisions and developing strategies to maintain effective asset quality over time and, ultimately, maximize profits. The managers would learn about the elements to take into account whenever they want to lessen bad loan performance.

1.6.3 DT-SACCOs Institutions

The findings would be crucial for the DT-SACCO to preserve and improve a controlled banking environment, which would help the bank stay competitive. Commercial banks would benefit from this study's examination of credit risk management in relation to guaranteeing asset quality and insight into what it takes to enhance loan qualities. Therefore, when DT-SACCOs would be creating strategies for effective credit risk management protocols, the study's findings would act as a guide.

1.6.4 Shareholders and Investors

The research effort would give investors and shareholders insight into the main determinants of DT-SACCO efficiency as well as how those factors are determined. Their

comprehension went beyond the traditional fiscal information and statements that financial institutions provide in the annual reports they file.

1.6.1 Academicians and scholars

In addition, the investigation would help add novel evidence to the corpus of published works that academicians and scholars should read regarding the drivers of financial performance among DT-SACCOs, which include quality of assets, earnings, liquidity, and capital sufficiency. Academicians and scholars would find the study's findings helpful in balancing their theories and observations regarding the impact of financial tool reporting and SASRA monitoring on financial performance.

1.6.2 Researchers

The findings of the research paved the way for more investigation into performance and credit risk management, serving as a reference manual for subsequent scholars wishing to delve deeper into the same or related topics. Consequently, it would assist researchers in establishing a basis for identifying research gaps and subsequently carrying out additional research to close these gaps.

1.7 Scope of the study

1.7.1 Contextual scope

To gain a comprehensive understanding of how SASRA monitors and reports on financial tools related to the financial performance of DT-SACCOs, this study utilized the CAEL framework, which assesses four key parameters: capital adequacy, asset quality, earnings, and liquidity. These parameters are critical indicators used by SASRA to evaluate the

financial health and stability of DT-SACCOs in Kenya. This research used panel data to investigate this.

The study employed secondary data sources that were specifically designed for financial inquiries. The institutional instrument for collecting data sheet was used for collecting data.

1.7.2 Theoretical scope

Certain theories were considered appropriate in this study for directing the development of a suitable conceptual framework and these will comprise; Capital Buffer Theory (CBF), Expense-Preference Behavior Theory, Capital Asset Pricing Model (CAPM) Theory, and Liquidity Preference Theory.

1.7.3 Geographical scope

The investigation took place in Kenya involving the 181 DT-SACCOs that happen to be there.

1.7.4 Time scope

Data for the years 2018 through 2022 was gathered for the investigation.

1.7.5 Content scope

The first phase of investigation culminated in the creation of a three-chapter document that served as the basis for research. In the study, the first chapter begins with introductory details about the concepts and problem statement and then study purpose in addition to its objectives and associated hypothesis. Then came the significance of the study to be followed by the study scope. This chapter also included the limitations and the delimitations as well as the definitions of key terms. The literature, on the other hand, was covered in the second chapter.

This was along with theoretical literature, the emanating conceptual framework and research gaps.

The study's methodology was covered in the third chapter, which also included the target and sample populations, the study location, the research design used, the techniques for collecting and analyzing the required data, and the study ethics.

1.8 Limitations of the Study

The research effort might have run into problems that minimize its efficacy, relevance, and dependability. First, linear regression errors, linearity, non-normality, multicollinearity, heteroscedasticity, and autocorrelation might have limitations of the study. Specifically, breaking any one of these presumptions suggests that certain data might have been omitted from the model, making it erroneous. In order to avoid these errors and preserve the validity and resilience of the regression model, consequently, the investigation checked for the Classical Linear Regression Model's (CLRM) assumptions and make sure that these crucial CLRM assumptions are met. The study ensured that any of the previously mentioned errors are corrected right away after they become apparent.

1.9 Delimitations of the study

It is obvious that the present research had some delimitations; for instance, it solely assessed the connection between the Kenyan DT-SACCOs' financial performance and the financial tools used for SASRA monitoring and reporting. This was insufficient scope here to cover the whole cooperative sector, let alone the entire financial sector. Applying the study to the whole financial market might also not be feasible.

1.10 Basic Assumptions of the Study

It came to light that several assumptions were required in order for the research to produce trustworthy findings and suggestions. Those were:

1. The information provided by the respondents will accurately reflect the circumstances surrounding the question being addressed.
2. Respondents worked voluntarily and free from coercion supply their responses.
3. The analysis's chosen sample size is appropriate for the study's whole target population.
4. SASRA's monitoring and reporting financial tools play a vital role in assessing the financial performance of Kenyan SACCOs, particularly DT-SACCOs.

1.11 Operational Definition of Key Terms

Assets quality mean evaluation of the credit risk attached to a specific asset

Earning ability refers to measure of revenue sustainability and future income development, which indicates the prominence of incomes.

Liquidity refers to maintaining adequate cash on hand for client withdrawals as opposed to money that can be lend

Capital Adequacy refers to effectiveness or simplicity with which an asset can be changed into instant cash without depressing its intrinsic value

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The present study undertook an extensive review of the literature to explore the financial tool reporting and regulatory oversight and the manner in which they relate to financial performance This led to an outline of the literature review offered by numerous writers, researchers, and authorities, in the current chapter. So, this section reviewed the theoretical and empirical literature as it had been presented and assessed by numerous writers, researchers, and founders. The empirical literature underwent scrutiny to ascertain the findings and conclusions reached as well as the gaps left by the researchers, and the theoretical framework provides support for the conceptual framework's reasoning

2.2 Theoretical Framework

A theoretical framework provides the essential structure and guidance for a research study, acting as the lens through which a researcher understands and interprets the topic. By grounding the study in existing theories or concepts, it offers clarity, defines key variables, and shapes the formulation of research questions and methodology. It connects the research to existing literature, demonstrating the researcher’s grasp of the field while validating the study’s relevance. Additionally, it aids in data interpretation and strengthens the credibility of the research by ensuring it is rooted in scholarly thought and academic rigor. In this study; Expense-Preference Behavior Theory, Capital Buffer Theory, Capital Asset Pricing Model (CAPM)Theory, and Liquidity Preference Theory anchored the research.

2.2.2 Expense-Preference Behavior Theory

The Expense-Preference Behavior theory, first introduced by Williamson in 1963 and later refined by Rees in 1974, was found useful for underpinning financial performance of DT-SACCCOs. It asserts that the principal goal of managers within an organization is to maximize their own personal utility. This theory suggests that managers, rather than solely focusing on the organization's profit maximization, often prioritize personal benefits, such as higher compensation, perks, or job security, in their decision-making processes., rather than focusing solely on maximizing profits (Rees, 1974). According to this theory, managers, rather than acting purely in the interests of shareholders or the organization's profitability, may pursue actions that align more closely with their own preferences and well-being, such as seeking higher salaries, perquisites, job security, or reduced workload. This behavior can result in managerial decisions that prioritize organizational expenses and personal benefits, even if these decisions do not necessarily lead to the most efficient or profitable outcomes for the organization.

The theory suggests that in the absence of strong oversight or incentives, managers might exhibit a tendency to use organizational resources in ways that enhance their own welfare, potentially at the expense of the organization's profitability.

The improved version of the theory by Rees (1974) further elaborates on this concept by incorporating the notion that managers balance their desire for increased personal utility with the constraints imposed by the need to maintain the organization's financial health and satisfy external stakeholders, such as shareholders or regulators. Ultimately, the Expense-Preference Behavior theory provides valuable insights into understanding managerial behavior,

especially in contexts where managers' personal interests may diverge from the goal of profit maximization. Based in the scenario, managers will spend more on extra requirements than those related to maximizing profits when certain favourable conditions are met, such as the separation of ownership and control, expensive managerial behavior monitoring, the absence of efficient conflict in both the input and the outcome markets, or effective regulation in those specific financial markets (Gropper & Oswald, 1996). When it comes to explaining how businesses operate, expense preference provides an alternative to profit-maximization theory (Williamson, 1963; Rees, 1974). Greater supplies expenditure for managers with an optimistic personal preference than might be justifiable through profit maximization is typically indicative of expense-preference behavior. Since the theory offers guidance regarding how to measure performance using the SACCO's profitability, it is relevant to this investigation to identify the profitability as a measure of financial performance (Le, Nguyen & Ngo, 2024).

While Expense-Preference Behavior Theory provides useful insights into agency problems and the potential conflicts of interest in organizations, it oversimplifies managerial motivations and overlooks the broader and often more complex decision-making processes that guide managerial actions. One major critique is that the theory assumes managers always act out of self-interest, neglecting the possibility of managerial altruism or a commitment to the firm's long-term success. Many managers are driven by performance incentives, reputation, and strategic goals that align with organizational growth and profitability (Shleifer & Vishny, 1997). Another critique is the theory's over-simplification of managerial decision-making, assuming that managers act solely to increase personal benefits. However, real-world decisions are often influenced by factors like market conditions, competition, and

long-term objectives (Jensen & Meckling, 1976). In practice, managers may increase expenses for long-term growth or competitiveness, such as investing in innovation or improving employee morale, which may not immediately reflect in financial outcomes but could lead to greater performance over time. Thus, while the theory sheds light on agency conflicts, it overlooks the complexities of managerial decision-making.

However, the Expense-Preference Behavior theory fell short of relating capital adequacy to financial performance hence the Capital Buffer Theory.

2.2.1 Capital Buffer Theory

In this study, the capital adequacy was anchored on the Capital Buffer Theory. In accordance with this theory, which was first put forth by Jokipii and Milne (2011), financial institutions may heavily rely on capital adequacy as a lending criterion in accordance with the Capital Buffer Theory, the theory asserts that one of the primary factors influencing the interest rates that SACCOs earn and pay is the minimum capital requirement (Ojili, 2023). SACCOs often prioritize managing their capital more intensively than their assets, aiming to maintain capital reserves that exceed the recommended levels. This approach is intended to bolster financial stability and mitigate risks, particularly in times of economic uncertainty.

In line with this, Zheng, Xu, and Liang (2012) argue that capital creation regulations determine the lending behaviour of financial institutions, particularly SACCOs. These regulations are designed to encourage SACCOs to adjust their lending practices in response to economic cycles. During periods of economic growth, SACCOs are incentivized to increase their lending activities, thereby stimulating economic expansion. Conversely, in times of economic downturn, capital formation rules aim to restrict lending, which helps to

reduce the procyclical nature of credit availability. This regulatory framework is intended to stabilize the financial sector by ensuring that SACCOs do not overextend themselves during periods of economic boom or constrict their lending too severely during recessions. Theoretically, when financial institutions avoid increasing their capital reserves while on economic expansions, they are not probable to have sufficient funds on hand to satisfy their needs when recessions (Abbas, Butt, & Masood, 2019). The point being made is that in alongside accepting deposits and loans, financial institutions regularly use illicit means to raise capital. This is believed to be the outcome of SACCOs not having enough capital to prevent issues. To avert penalties from the financial institutions, SACCOs may continue to charge high interest rates in order to preserve their capital buffer (Abbas & Younas, 2021).

Capital Buffer Theory posits that financial institutions should maintain capital reserves above the regulatory minimum to absorb unexpected losses and ensure stability during economic shocks. However, there are critiques of this theory. One key critique is the overestimation of capital buffers' effectiveness in preventing bank failures, as demonstrated by the 2008 financial crisis, where even institutions with substantial buffers failed due to factors like liquidity issues and market disruptions (Acharya et al., 2010). Another critique is that maintaining higher capital buffers could lead to moral hazard, where institutions may engage in riskier behavior, relying on their buffers to absorb potential losses, thereby undermining the purpose of the buffers (Diamond & Rajan, 2000). These critiques suggest that a more holistic approach to risk management, incorporating better asset quality, liquidity management, and regulatory oversight, is needed.

The theory worked well for evaluating the capital adequacy that financial institutions employed. Given that financial institutions and other regulatory bodies find the theory useful, it is relevant. It might boost the credibility of financial institutions and guarantee the smooth operation of the financial system through conveying a positive message to various vendors and marketers. It is a crucial instrument for mitigating losses and, consequently, the default risk of SACCOs. A capital buffer increases the financial stability of SACCOs but it does not inform asset quality as a useful determinant of financial performance. This necessitated the review of the CAPM.

2.2.3 Capital Asset Pricing Model Theory

The Capital Asset Pricing Model (CAPM), first introduced by Sharpe in 1964 and later enhanced by Black in 1972, is a fundamental theory in financial economics that explains the relationship between the expected return on an asset and its risk (Komen, Ngali & Matanda, 2024). The renders the theory helpful in anchoring asset quality and earning ability.

The model emphasizes the necessity for investors to diversify their investment portfolios to mitigate risk. According to CAPM, an investor should hold a mix of individual securities and a market portfolio, which represents a broad cross-section of all available assets in the market, in order to optimize returns relative to risk. One of the key tenets of the CAPM is that investors can reduce unsystematic risk, risk unique to individual assets, by holding a diversified portfolio, which ensures that the overall portfolio's performance is less affected by the performance of any single asset. CAPM recommends maintaining a well-diversified portfolio, which would typically include a broad mix of asset classes, such as stocks, bonds, and other financial instruments. This diversification helps ensure that risk is spread across

multiple investments, reducing the potential impact of adverse movements in any single asset or market sector. Thus, the CAPM theory not only provides insights into the relationship between risk and return but also offers a strategic framework for making informed investment decisions and achieving optimal portfolio performance. As articulated by Black (1972), this concept is encapsulated in the Efficient Market Hypothesis (EMH). According to the EMH, in order to engage in highly speculative or risky investments, investors must have a substantial degree of confidence in the anticipated returns associated with such ventures. This hypothesis asserts that financial markets are efficient in reflecting all available information, implying that investors can only achieve higher returns by accepting higher levels of risk. Consequently, a clear understanding of expected returns is essential for investors to make informed decisions in the context of high-risk investments. It should be noted, though, that financial institutions may not always allocate their resources to ventures with large profits if there are issues with contract enforcement and informational asymmetries.

Investment performance can be greatly improved by accounting for estimating mistakes; simulation modelling, mean-variance choice of portfolios, and representative portfolio performance offer empirical support for this idea. In accordance with the hypothesis, investors constantly try to reduce risk when choosing portfolios; they only take into account the mean and variation of their ROI over a particular period (Fofack, 2009Investors consistently opt for mean-variance-efficient portfolios, as these portfolios minimize the variance of returns for a given level of expected profit, while simultaneously maximizing expected returns for a given level of risk. This strategic selection reflects the pursuit of optimal portfolio performance within the framework of risk and return. However, the CAPM, due to its foundational assumptions, often faces criticism for its lack of realism. One of the

primary contentions lies in the assumption that investors can borrow and lend capital at the risk-free rate, an idealized scenario that does not fully align with real-world financial conditions. This assumption, along with others inherent in the model, has led to debates regarding the model's applicability and practical utility in the context of actual market dynamics.The foundation of the CAPM, which states that investors require a minimum return, is supported by portfolio theory. Moreover, the theory presupposes the existence of an ideal capital market. In a perfect capital market, there would be no taxes or transaction fees, a large number of buyers and sellers in the market, uniform investor expectations because perfect information would be readily available to them, and rational, risk-averse investors looking to maximize their own worth.

The theory is relevant given that it offers recommendations on the capital adequacy and asset quality variables (Komen et al., 2024). It assumes that since a financial organization's portfolio is made up of both assets and liabilities, the loans and assets it has are significant parts of that specific financial institution.

The Capital Asset Pricing Model (CAPM) is a widely used theory in finance that establishes a relationship between an asset's expected return and its risk, with beta (β) representing the asset's sensitivity to market movements. Despite its prominence, CAPM has been critiqued on several fronts. First, it is based on unrealistic assumptions, such as the notion that all investors have identical expectations regarding future returns and risks, that markets are perfectly competitive, and that investors can completely diversify to eliminate unsystematic risk. In reality, markets are not perfectly efficient, and investors have different risk tolerances and access to capital. Furthermore, CAPM assumes a single-period investment horizon and

no transaction costs, which limits its applicability in real-world scenarios where these factors play a crucial role (Fama & French, 1992). Additionally, CAPM fails to explain empirical anomalies, such as the outperformance of small-cap stocks over large-cap stocks and low price-to-earnings (P/E) stocks over high P/E stocks. These anomalies are better explained by the Fama-French Three-Factor Model (1993), which incorporates additional factors beyond market risk. This failure suggests that CAPM may be too simplistic and does not fully capture the complexities of financial markets

Therefore, it is the responsibility of the financial institution management organizations to create portfolios that offer the best returns while posing the fewest risks and expenses. It is pertinent to the study because it is used to evaluate the performance assessments of financial instrument portfolios and estimate banks' cost of capital. The relationship between yields and risks is revealed by the theory. This does not confirm the of usefulness of liquidity in financial performance hence the need for reviewing Liquidity Preference Theory to assess the liquidity.

2.2.4 Liquidity Preference Theory

In 1936, John Maynard Keynes introduced the Liquidity Preference Theory, which posits that the interest rate is primarily determined by the demand for and supply of money within the economy (Kumar, 2015). According to Keynes, interest rates are a reflection of individuals' preferences for liquidity, meaning their desire to hold cash or easily accessible assets rather than investing in less liquid forms of capital. In this framework, the interest rate is not merely a result of the marginal productivity of capital, but is instead influenced by the supply of money and the public's demand for liquidity. Thus, Keynes argued that the

phenomenon of interest is inherently tied to the dynamics of money, challenging traditional views that positioned interest rates solely as a function of capital investment and productivity.

In addition, he proposed that interest is the cost incurred by those who give up their liquid assets (Ogum & Jagongo, 2022). Therefore, there is a greater likelihood of a high interest rate if there is a strong preference for liquidity. An entity is less likely to invest over the long run if its preference for liquidity is higher because cash does not generate income. This is because the preference for liquidity creates money demand.

In accordance to this theory, investors prefer cash over other assets due to transactional, speculative, and precautionary reasons (Pollet and Belke, 2010). The transaction motive enables businesses to retain the cash necessary to fund ongoing operations while adhering to stated and profit-based criteria.

The Liquidity Preference Theory, proposed by John Maynard Keynes, posits that interest rates are determined by the supply and demand for money, with individuals preferring liquidity over illiquid investments. The theory suggests that people hold money for transactions, precautionary, and speculative motives. However, it faces criticism for oversimplifying the demand for money by focusing only on these three motives, ignoring other important factors like inflation expectations, wealth distribution, and financial innovation, which influence liquidity preferences (Friedman, 1970). Another critique is its assumption of static expectations, where individuals' views on future interest rates and economic conditions remain constant. In reality, expectations are dynamic and can shift rapidly, especially during economic uncertainty, making the theory's assumption of stable expectations unrealistic. This limits the theory's ability to account for how evolving

expectations interact with other economic variables, such as fiscal and monetary policies (Minsky, 1986).

The precautionary motive encourages businesses to keep cash on hand to handle emergencies, contingencies, and unanticipated events. Entrepreneurs keep reserve cash on hand in equal amounts, either to overcome unfavourable circumstances or to profit from unforeseen transactions. In the opinion of Keynes, the two motivations are both highly income elastic and inelastic in relative terms (Kumar, 2015). This theory is useful because it provides a thorough explanation of the factors that lead individuals to keep cash on hand. Nevertheless, detractors contend that although Keynes maintains that interest rates are solely a financial phenomenon, they are also influenced by capital productivity, savings, and investments. The theory is relevant to the research given many DT-SACCOS employ liquidity preference as their theory of liquidity employment. In terms of its financial performance, the theory backs DT-SACCOS's ability to have enough liquidity for growth.

2.2.5 Theoretical Framework

The reviews of relevant theories led to construction of a theoretical framework as shown in Table 1, where; Capital Buffer Theory (Ojili, 2023), Expense-Preference Behavior Theory (Le, Nguyen & Ngo, 2024), Capital Asset Pricing Model (CAPM) Theory Komen, Ngali & Matanda, 2024), and Liquidity Preference Theory(Ogum & Jagongo, 2022) explain the variables used in this research.

The Capital Buffer Theory emphasizes the critical necessity of maintaining sufficient capital reserves to safeguard the long-term financial stability and performance of financial institutions. This theory underscores the strategic role that capital buffers play in absorbing

potential shocks and ensuring resilience during periods of economic volatility. In the context of financial institutions such as DT-SACCOs in Kenya, the theory illustrates how regulatory frameworks and financial measurement tools, such as those employed by SASRA, are integral to evaluating financial performance. These tools, which monitor and report on key financial indicators, provide a comprehensive means of assessing the effectiveness of capital buffers and overall financial health, ensuring that institutions can withstand financial stress while continuing to meet their obligations and achieve sustainable growth. This was where; Capital Adequacy is a crucial tool used to measure a DT-SACCOs' financial capital buffer by ensuring that the institution maintains sufficient capital relative to its risks (Lekaaso et al., 2020). A higher CAR suggests stronger financial health and an adequate buffer against losses. Maintaining a capital buffer enhances the leverage ratio, ensuring that the institution is not overly reliant on debt and has sufficient equity to cover potential losses. More so, holding large capital buffers may lower ROE or ROA in the short term as less capital is allocated toward profitable ventures, but it ensures long-term stability, reducing the risk of financial shocks. Furthermore, liquidity serves as a crucial indicator of an institution's capacity to meet its short-term obligations by utilizing its high-quality liquid assets. It reflects the institution's ability to convert assets into cash swiftly and efficiently, ensuring that it can fulfill its financial commitments without compromising stability or incurring significant losses. A well-managed capital buffer will ensure that institutions have enough liquidity to meet short-term needs, even during financial stress (Ng'eno, 2019).

Expense-Preference Behavior Theory highlights how managerial preferences for discretionary spending in DT-SACCOs can negatively impact financial performance by increasing operational costs and reducing profitability (Le, Nguyen & Ngo, 2024). Financial

measurement tools such as cost-to-income ratio, ROA help to identify inefficiencies caused by this behavior, allowing SACCOs to implement strategies that enhance resource utilization and ensure sustainable growth.

The CAPM offers a comprehensive theoretical framework for understanding how DT-SACCOs navigate the intricate relationship between risk and return (Komen et al., 2024). Financial measurement tools, grounded in CAPM principles, enable SACCOs to evaluate their financial performance more effectively. By leveraging these tools, SACCOs are equipped to make well-informed decisions regarding resource allocation, risk management, and operational efficiency, ultimately fostering enhanced financial performance and promoting long-term, sustainable growth.

In a similar vein, the Liquidity Preference Theory offers a valuable framework for analyzing the influence of financial measurement tools on the performance of DT-SACCOs (Ogum & Jagongo, 2022). This theory provides insights into how liquidity considerations affect decision-making and financial stability within these institutions. This theory emphasizes the importance of liquidity in financial decision-making, offering insights into how SACCOs manage their liquid assets to meet obligations and optimize financial stability. Financial tools such as the liquidity help SACCOs manage liquidity risk, balance liquidity with profitability, and ensure long-term financial stability. By applying these tools effectively, SACCOs can optimize their financial performance, ensuring they meet both member needs and regulatory requirements while continuing to grow and thrive.

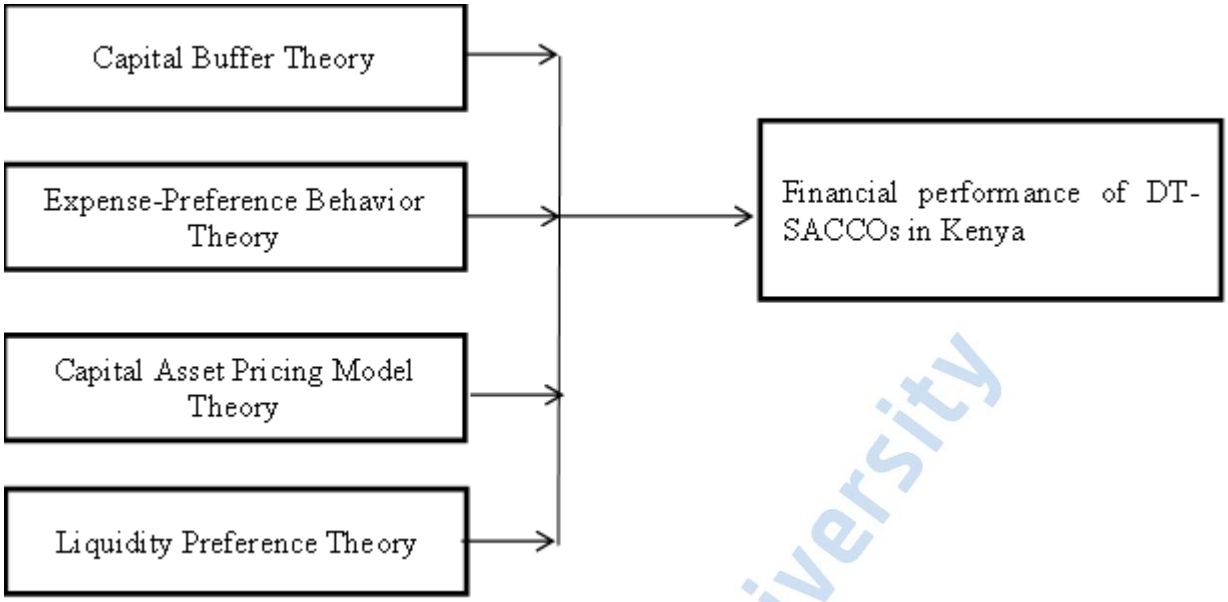

Figure 1: Theoretical Framework

Source: Researcher Own Computation (2024)

2.3 Empirical Literature

In order to demonstrate how financial performance is related to financial tool monitoring and reporting, comprehensive examinations of relevant empirical research were conducted in this section. The research examined the literature on the relationships as captured hereunder.

2.3.1 Capital Adequacy and Financial Performance

Studies examining the relationship between capital adequacy and financial performance have been conducted across various contexts, globally, regionally, and locally, highlighting the critical role of capital buffers in ensuring the stability and profitability of financial institutions. Ojili (2023) sought to ascertain the manner in which capital sufficiency impacted the financial performance of cooperative societies that took dT-SACCOs in the western part of Kenya. The direction of the investigation was determined by capital buffer theory and

adopted cross-sectional design. Using a census sample, this study examined seven DT-SACCOS that took deposits for credit and savings. The secondary data for this study was audited financial accounts. In order to assess panel data, inferential and descriptive statistics were applied.

In order to offer inferential statistics, regression analysis, correlation analysis, and analysis were performed. The inferential statistics of the study indicate a significant negative link between capital adequacy and the financial performance of DT-SACCOs. The findings suggest that inadequate capital directly led to a deterioration in the financial performance of these institutions. Capital adequacy, which ensures the availability of enough capital to protect member deposits and creditors from potential business losses, is crucial for maintaining financial stability. However, the study by Ojili (2023) presents methodological limitations, notably the use of a small sample size, which diminishes the broader applicability and generalizability of its conclusions.

In contrast, the study by Lekaaso, Cherono, and Rintari (2020) focused on evaluating the impact of capital adequacy on the financial performance of SACCOs in Samburu County, Kenya, offering a localized perspective on the importance of capital sufficiency in SACCO performance.There were thirty-four Savings and Credit Cooperative Societies in operation. Keynes's 1936 Liquidity Preference Theory and Frantz Roger's 1988 Efficiency Structure Theory served as the study's guiding theories. The study employed a survey design for descriptive research, utilizing questionnaires to gather data from a purposively selected sample of 26 SACCO managers. The managers were chosen based on specific criteria, ensuring a targeted and relevant sample. To analyze the collected data, both descriptive and

inferential statistical methods, including regression analysis and Pearson correlation, were applied. Despite these rigorous analytical approaches, the study revealed no significant relationship between capital sufficiency and the financial performance of SACCOs in Samburu County. A notable methodological limitation of the study is the use of purposive sampling, which depends on the researcher's subjective judgment in selecting sample units, potentially introducing bias into the sampling process.

This introduces the potential for research bias, thus limiting the objectivity and generalizability of the findings. This is especially true of bias caused by observers. Given that the sample units were selected based on the researcher's subjective evaluation, there was a considerable possibility of bias in the results, which could result in observer bias in particular. This is just one instance of the study's methodological flaws. Another is that research bias might arise from intentional sampling.

Mwangi, (2020) studied manner in which to keep DT-SACCO) capital adequate with174 SACCOs that had been registered with SASRA by the end of 2019 were the subject of a descriptive research design. Using a questionnaire, primary data was gathered from each SACCO that had signed up. The examination of SASRA-generated annual reports' documents yielded additional information. The data analysis method employed was quantitative analysis. It is also employed in the current investigation to evaluate the significance thresholds for relationship identification, the correlation was done to demonstrate associations. A considerable and positive influence on DT-SACCO's financial performance was found as a result of capital sufficiency. The analysis demonstrated how capital adequacy requirements had reduced operational risks for the SACCOs, encouraged

public trust in the organization's financial stability, and given the profits of the SACCOs a risk reserve to protect against capital loss. All of these factors contributed to the SACCOs being able to operate successfully. The study's methodological flaw was that it only used correlation analysis, which was unable to demonstrate cause and effect.

In their study, Nyabaga and Wepukhulu (2020) focused on the listed banks on the Nairobi Securities Exchange (NSE), analysing the factors that influenced their financial performance during the period from 2010 to 2018.

The study's target population consisted of Kenya's 11 listed banks as of December 2018 The attributes of the banks that were looked at were size, asset quality, leverage, and capital adequacy. Based on the data, ROA was negatively impacted by asset quality, but insignificantly while leverage significantly improved ROE and had a minor but favourable influence on ROA. The findings of the study indicate that both bank size and capital adequacy have a substantial and positive impact on performance. Specifically, larger financial institutions tend to exhibit enhanced operational efficiency and profitability, likely due to economies of scale, greater resource availability, and a more diversified portfolio of services. Additionally, sufficient capital reserves are critical to maintaining financial stability, as they enable banks to absorb shocks, protect against losses, and support continued growth and expansion. The study underscores that capital adequacy is integral to improving the overall financial performance of institutions, as they contribute to both resilience in volatile markets and the ability to capitalize on growth opportunities. Nevertheless, the study's extremely narrow sample size; 11 banks, limited the ability to extrapolate the findings to other institutions.

Ng'eno (2019) intended to determine the connection between Kenyan DT-SACCOs' financial performance and the capital adequacy framework. The impact of the six aspects of the capital adequacy framework was investigated in that study. A descriptive survey was conducted using questionnaires to gather participant data. A thorough grasp of the underlying relationships was provided by the data analysis method, which used both descriptive and inferential statistics. These relationships were identified and measured using regression analysis and correlation methods. Internal financing, credit management, portfolio selection, risk management, and managerial experience were among the important elements that the study found to have a favourable and noteworthy effect on the financial performance of DT-SACCOs in Kenya.

These variables collectively contributed to enhancing the financial performance and stability of these institutions, underscoring the importance of sound financial strategies and effective management practices in driving organizational success. This implies that each of the five factors will become more important in tandem with the state of the economy. The financial performance suffered as a result of the debt financing. Positive results are expected for DT-SACCOs with prudent outside financing. It was discovered that the relationship among financial performance and the capital adequacy framework was significantly impacted by the allocation of funds. However, the study's definition of capital sufficiency used both external and internal finance as indicators of capital structure. However, the current study will employ the SASRA-recommended measurements.

Notably, the connection between empirical studies on capital adequacy and financial performance and those that incorporate asset quality into the analysis lies in their shared

objective: evaluating the stability, efficiency, and profitability of financial institutions. Both sets of studies examine key prudential indicators used to assess the health of DT-SACCOs.

2.3.2 Asset Quality and Financial Performance

Over the years, asset quality has emerged as a critical determinant of financial performance in financial institutions, including DT-SACCOs. As lending remains the core function of most financial institutions, the quality of loan assets directly influences their profitability, stability, and sustainability. Consequently, researchers and policymakers have placed increasing emphasis on examining the relationship between asset quality and overall financial performance. Mutunga and Gatauwa (2021) sought to determine how firm characteristics affected the SACCOs' performance in Nairobi City County that were open for business from 2014 to 2018 made up the target population for the causal research design Given that there were few members of the target population, a census was used. The foundation of the analysis was secondary data that would be gathered using a data review guide. The study employed both panel regression analysis and descriptive analysis, revealing that asset quality positively impacted the financial performance of SACCOs. However, the study's scope was limited to SACCOs in Nairobi City County, which created a contextual gap.

In a separate study, Gadzo, Kportorgbi, and Gats (2019) examined the impact of credit and operational risk on the financial performance of universal banks in Ghana. Analyzing data from 24 banking institutions, the study found that credit risk adversely affected the financial performance of these banks, a result that diverged from some previous empirical studies but was consistent with the Lemon Theory of information asymmetry. The theory suggests that

adverse selection and asymmetric information in lending can lead to higher risks, thus negatively impacting financial outcomes. Additionally, the research highlighted the positive effect of asset quality on bank performance, indicating that banks with higher-quality assets tend to achieve better financial results. However, the study's relatively small sample size limited the generalizability of its findings. A larger, more diverse sample could provide more comprehensive insights into the applicability of these results across the broader banking sector in Ghana.

Adebayo (2017) explored the impact of credit risk management on the performance of Money Deposit Banks in Nigeria. Using secondary data from the banks' annual audited reports and prospectuses, the study employed both descriptive and inferential statistical analyses. The results revealed a significant negative correlation between bank performance and asset quality. However, the study's focus on commercial banks introduced a contextual limitation, as the findings may not be fully applicable to other types of financial institutions.

Ademba (2019) aimed to identify the factors influencing the financial performance of deposit-taking SACCOs in Nairobi County. The study was guided by several theoretical frameworks, including agency theory, liquidity preference theory, and the Capital Asset Pricing Model (CAPM). A panel research design was utilized, with data collected from 39 deposit-taking SACCOs in Nairobi County.

Secondary quantitative data, such as monthly reports and audited financial statements from SACCOs listed in the SASRA registry, were used in the study. To ensure the robustness of the analysis, formal statistical hypothesis tests were conducted to assess heteroscedasticity, multicollinearity, and normality, while the Hausman Specification Test, Wooldridge Test for

Serial Correlation, and various diagnostic tests were applied. A dynamic panel data regression model was employed, along with multiple linear regression modeling to explore the relationships between independent factors and the dependent variable. The descriptive statistics were complemented by Pearson correlation, and diagnostic tests were conducted to assess model validity. The findings of the study indicated a substantial and positive relationship between asset quality and the financial performance of deposit-taking SACCOs. This result highlighted the significant role that asset quality plays in the financial success of SACCOs, emphasizing the importance of maintaining high-quality assets for enhancing financial stability and performance.

Similarly, Okumu and Oyugi (2016) evaluated the impact of asset quality on the performance of SACCOs in Kisumu County. The study utilized both inferential and descriptive statistics to analyse quantitative data, while qualitative data were analysed through content and thematic analysis. The results of this investigation revealed a strong and positive association between asset quality and SACCO performance, further supporting the conclusion that asset quality is a critical determinant of SACCOs' financial success. According to the study's conclusion, in order to promote better business performance. It was necessary to strengthen SACCO's asset base. The best research design was a descriptive one because cross-sectional data did not lend itself to regression analysis. However, the study's applicability was limited to Kisumu County because it was only conducted in SACCOs there; contextual gap.

Expanding on the idea of drawing a link between empirical studies on asset quality, earning ability, and financial performance, we can see that these elements are deeply interconnected, particularly in the context of DT-SACCOs and other financial institutions. Empirical

evidence from various studies highlights that asset quality, earning ability, and financial performance do not operate in isolation, rather, they form a dynamic relationship that collectively determines the financial soundness, sustainability, and growth potential of these institutions..

2.3.3 Earning Ability and Financial Performance

Earning ability is a fundamental indicator of a financial institution's operational efficiency and sustainability. It reflects the institution's capacity to generate income from its core business activities, primarily interest income from lending, alongside non-interest income such as fees, commissions, and investments. In studies examining the determinants of financial performance, earning ability consistently emerges as a key driver of profitability and long-term viability, particularly for DT-SACCOs. These studies underscore that institutions with strong earning ability are better positioned to cover operating costs, build capital reserves, invest in growth, and withstand economic fluctuations. Thisaranga and Ariyasena (2021) conducted a study to examine the impact of the CAMEL criteria on both market- and accounting-based performance of eight listed commercial banks in Sri Lanka, covering the period from 2014 to 2019. The study utilized secondary data, which was sourced from the audited annual financial accounts of the listed commercial banks during this period. The CAMEL framework, which evaluates financial institutions based on key aspects such as Capital adequacy, Asset quality, Management quality, Earnings, and Liquidity, provided the basis for assessing the banks' overall financial health and performance. By analyzing this data, the study aimed to explore how these financial indicators influenced the banks' market performance, as measured by stock market metrics, and accounting performance, as indicated

by financial ratios and other accounting measures. Eight Sri Lankan commercial banks that went public between 2014 and 2019 had their market- and accounting-based performance evaluated in this study in relation to the CAMEL characteristics. The results show that performance is significantly improved by earning potential. This research contributes to a deeper understanding of the factors that affect the performance of commercial banks in Sri Lanka, particularly in relation to the CAMEL criteria.

The Ndungu study (2019) found that profits (measured by ROA) significantly and favourably affected financial distress. This implies that the report's conclusions about the noteworthy and promising influence of earnings on financial distress are positively impacted by the bank's efforts to increase profitability and liquidity. Excellent profits should be a reliable gauge of a company's future prospects and chances of success.

Huynh (2018) conducted research to examine the intricate connections between corporate performance, corporate reputation, and earnings quality. Ata was gathered from fifty Vietnamese businesses. Seven factors were used in the paper to measure the quality of earnings. Furthermore, research was done and statistical validation was obtained for the hypothesis that earnings quality mediates the relationship between corporate reputation and corporate performance. The results provide robust statistical evidence supporting the hypothesis that a significant relationship exists between company performance and earnings quality. Specifically, the study reveals that the nature of this relationship is influenced by the conditional distribution of corporate performance. This suggests that the strength and direction of the link between earnings quality and performance may fluctuate depending on contextual factors or specific performance thresholds. In other words, the effect of earnings

quality on corporate performance is not consistent; rather, it is contingent upon the particular distribution or state of the company's performance metrics. This nuanced finding highlights the need to consider the dynamic context in which earnings quality is evaluated, as its impact may be more pronounced or more constrained depending on the overall performance conditions of the company. Additionally, the study provides statistical evidence of earnings quality's mediating role in the relationship between corporate performance and company image. Reducing this causal relationship, earnings quality transmits some of the influence of corporate image on company performance when it is included in the research model alongside corporate reputation and performance. Given that the study was conducted in a different region, it is challenging for Kenyan DT-SACCOs to apply.

The measurement methodology outlined by Zagherd and Barghi (2017) indicates that the earnings potential of Iranian banks is significantly influenced by the ratio of earning expenses to total income. This ratio serves as a crucial indicator of a bank's efficiency in generating income relative to its operating costs. The study suggests that a higher ratio typically signifies increased challenges in profitability and financial stability, directly affecting the overall performance of the bank. This relationship underscores the importance of effective cost management strategies in enhancing the financial outcomes of Iranian banks.

In a similar context, Munir and Bustamam (2017) examined the earning capacity of Islamic banks within the Gulf Cooperation Council (GCC) region, utilizing Return on Equity (ROE) as a primary performance measure. ROE is a widely utilized financial metric that evaluates a bank's ability to generate profit from its shareholders' equity. The study found that the earning capacity of Islamic banks in the GCC region is strongly influenced by their ability to

achieve a high ROE, reflecting their overall financial health and operational efficiency. Through this analysis, the study provides valuable insights into the factors that determine the profitability and financial performance of Islamic banks in the region, with findings that suggest earning capacity plays a significant role in reducing return on investment.

Similarly, the research conducted by Barus, Muturi, Kibati, and Koima (2017) sought to investigate how earnings ability affects the financial performance of 83 Kenyan SACCOs. Using an explanatory research design, the study examined a sample of all SACCOs that remained operational between 2011 and 2015, employing a census methodology. Both primary and secondary data were analyzed through multiple linear regression, with both descriptive and inferential statistical techniques used for data examination.

The study concluded that the financial performance of Kenyan SACCOs is significantly influenced by their earnings capacity, with regression results indicating a positive correlation between earnings ability and financial performance. However, the study was limited to the banking sector, which may affect the generalizability of its findings to other financial institutions or sectors.

Building a link between studies on earning ability and studies on liquidity and financial performance reveals an important relationship between a financial institution's capacity to generate income and its ability to meet short-term obligations. Both earning ability and liquidity are key components of financial health and empirical research highlights how they jointly influence the overall financial performance of institutions like DT-SACCOs.

2.3.4 Liquidity and Financial Performance

The relationship between liquidity and financial performance has been a subject of numerous empirical studies, especially in the context of lending institutions. These studies generally examine how liquidity ratios (such as the current ratio, quick ratio, liquid assets to total assets ratio, and cash reserves ratio) influence performance metrics including ROA and overall profitability. The liquidity ratio was shown to have a negative low association with non-performing loans at a 5% level of significance by Onyango and Olando (2020) in contrast to the the results of the Ndungu (2019) investigation showed that liquidity significantly and favourably affected financial distress.

Using all bank liquidity indicators, the results of the Charmler, Musah, Akomeah, and Gakpetor (2018) studies show a positive weak correlation between liquidity and asset returns. The relationship between net assets and the gross interest-bearing liabilities and ROE was negligibly negative. It was discovered that the capital adequacy ratio and bank size all correlated positively with the control variables. The paper states that in order for banks to optimize their profits, there should be a predetermined optimal amount of liquid assets. Consequently, it is imperative for banks to evaluate the level of liquidity at which their profitability would decline. Still, the study was sector-specific.

Onyekwelu, Chukwuani, and Onyeka's (2018) study investigated at how liquidity affected the deposit money banks in Nigeria's financial performance. An analysis of multiple regression was performed on the gathered data. Based on the findings, banks' profitability ratios are positively and significantly impacted by liquidity as well as employees' return on capital.

An effective management of liquidity fosters public confidence in a financial system, and consequently, on banks' liquidity positions. The low liquidity status of Nigerian banks may be influenced by management, as relevant studies and the economic laws and variables in this one have shown that efficient banking is correlated with effective liquidity management. But the study was limited to Nigerian deposit money banks.

2.4 Conceptual Framework

In research, a conceptual framework provides a structured representation of a study, which may be expressed either narratively or graphically. It outlines the study's key variables; primarily; dependent, and independent variables, and illustrates the presumed relationships among these variables (Salawu, Shamsuddin, & Bolatitio, 2023). Additionally, it highlights the significance of the research being undertaken and demonstrates the relevance and appropriateness of the chosen methods and approaches for conducting the study (Ravitch & Riggan, 2017). This framework serves as a foundation that guides the research process, ensuring coherence between the research objectives, methodology, and analysis. As shown in Figure 1, a conceptual framework was established to evaluate the impact of SASRA financial reporting tools on the financial performance of DT-SACCOs in Kenya. As such, the independent variables (IVs) of capital adequacy, asset quality, earning ability, and liquidity had an impact on the dependent variable (DV), which is the financial performance of DT-SACCOs in Kenya.

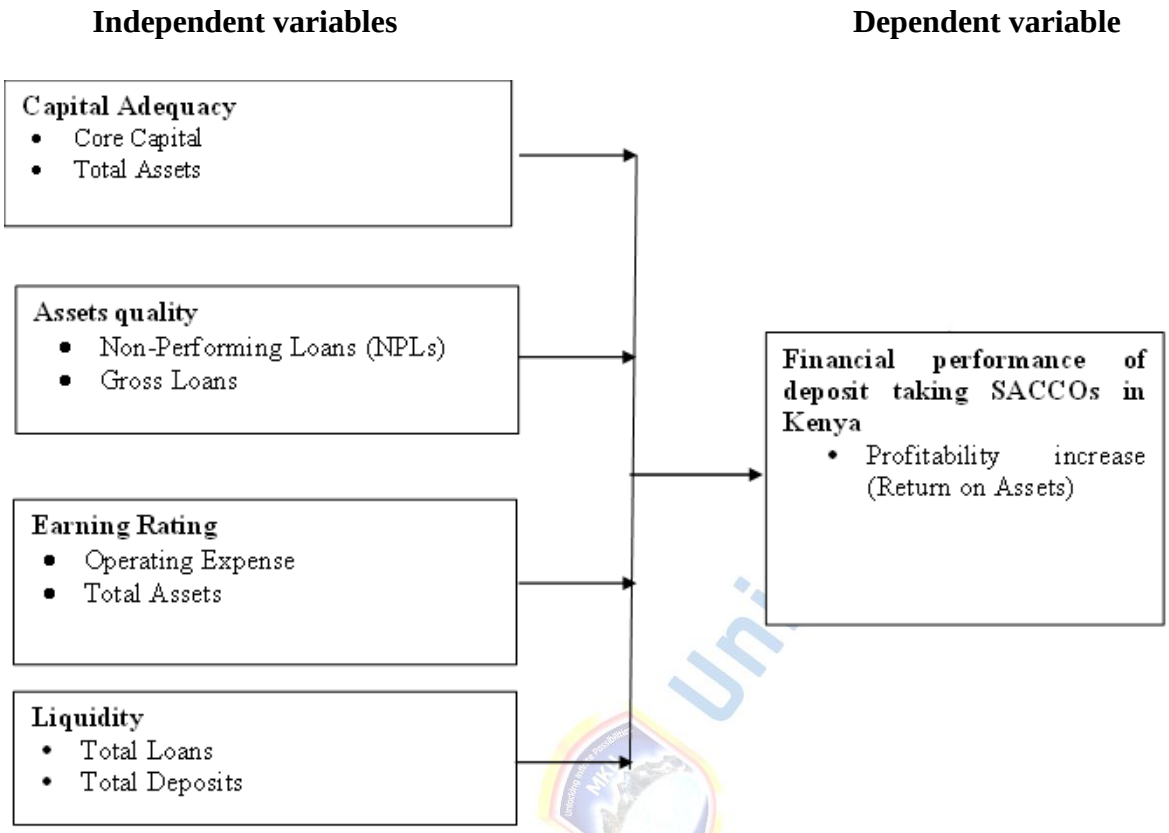

Figure 2: Conceptual Framework

Source: Researcher (2024)

2.5 Recap of literature review

The research conducted a thorough examination of several key financial theories, namely the Liquidity Preference Theory, the CAPM, the Expense-Preference Behavior Theory, and the Capital Buffer Theory, to evaluate their applicability and relevance in understanding financial performance within institutions.

Each of these theories was scrutinized to assess how they provide insights into the complex processes that influence decision-making, risk management, and overall performance within financial institutions.

The Liquidity Preference Theory, for instance, was explored in terms of how it explains investors' demand for liquidity and how financial institutions must manage liquidity risk to maintain stability. The study delved into the implications of this theory for financial institutions' decision-making processes, particularly regarding their approach to balancing liquidity and profitability. The CAPM, another central theory examined in the research, was assessed for its role in determining the relationship between risk and expected return. The study analyzed how financial institutions use CAPM to guide investment decisions, assess risk, and optimize asset portfolios to achieve desired returns while managing exposure to market fluctuations. The Expense-Preference Behavior Theory was also explored in the context of managerial behavior, particularly in how managers prioritize personal utility maximization, often at the expense of organizational performance. This theory was critical in understanding how financial institutions might face inefficiencies in decision-making and resource allocation due to managerial preferences that could affect profitability and long-term stability. The Capital Buffer Theory was evaluated to understand how institutions maintain capital reserves as a cushion against financial shocks. The research examined how the capital buffer plays a pivotal role in safeguarding the institution's financial health, enabling it to absorb losses and continue operations during periods of financial stress. By analyzing these theories in detail, the study illuminated how each theoretical framework contributes to the broader understanding of the mechanisms that underpin financial stability, risk management practices, and performance metrics within financial institutions.

The research ultimately provided valuable insights into the ways these theories shape the operational effectiveness and financial outcomes of these institutions, offering guidance for improved financial decision-making and management practices. Pursuant to the Capital

Buffer Theory, management's choice to establish a manageable mix of assets and liabilities determines the potential for optimal profitability. This decision also had an impact on capital adequacy. In order to ensure asset quality, Capital Asset Pricing Model Theory places an emphasis on fund management to maximize the overall return on an individual portfolio Risk Liquidity Preference Theory helps understand liquidity while Expense-Preference Behavior Theory explain financial performance.

The search additionally examined at empirical studies that showed improved performance could be attained while maintaining adequate capital, high-quality assets, profits, and liquidity. The following factors affect financial performance: earnings, liquidity, asset quality, and capital sufficiency.

2.6 Research gaps

As mentioned above, the chapter reviewed articles that were pertinent to earlier studies and factors that influence financial performance. Empirical studies were shown to produce contradictory results. Most of the study had contextual gaps where research by Mutunga and Gatauwa (2021) was specific to SACCOs in Nairobi City County while that by Adebayo (2017) s limited to its scope to commercial banks, it was done a different location showing contextual gap. and the study by Okumu and Oyugi (2016) was confined to SACCOs in Kisumu County, which limited its applicability to that region; contextual gap.

A significant number of studies, including Ojili (2023), exhibit methodological gaps that affect the reliability and generalizability of their findings. One of the primary gaps identified was the use of a very small sample size. A small sample size limits the ability to make broader inferences or generalizations about the population being studied. With a limited number of

participants or data points, the findings of the study may not accurately reflect the behavior or characteristics of the larger population. This can result in skewed or unreliable conclusions, as the sample may not be representative of the entire target population. Moreover, small sample sizes often lead to issues with statistical power, meaning that the study may lack the sensitivity to detect true effects or relationships. This makes it difficult to confidently apply the results to other contexts or settings, as the findings could be specific to the small sample used in the research. To improve the validity and generalizability of such studies, future research should consider using larger and more diverse sample sizes, which would allow for more accurate and reliable conclusions.

Given that the researcher's subjective judgment is used to select the sample units, there is a high risk of bias in the research results, especially in observer bias in research by Lekaaso et al. (2020). Purposive sampling represents a method that can lead to research bias while that by Mwangi, (2020) relied on correlation analysis which could not show cause and effect and the one by Nyabaga and Wepukhulu (2020) used a very small sample of 11 listed banks in Kenya which limited generalisation of the findings to the commercial listed banks in the Nairobi Securities Exchange.

There were those with conceptual gaps such that by Ng'eno, (2019) which used internal financing, external financing, which were capital structure indicators as measures of capital adequacy. So, \Kenyan DT-SACCOs were deprived of important information that could have influenced their financial performance. As a result, it is unclear how SASRA financial reporting tools and Kenyan DT-SACCO financial performance are related.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Delineated in this chapter is the research methodologies as well as strategies that was utilized. Included are the target population, the methodology, the research design, and the procedures for selecting a representative sample. This section covered the research instruments themselves as well as their validity and reliability, the way the tool was used to collect data, and the methods for organizing, analysing, and measuring the data. Further capturing of research ethics.

3.2 Research Methodology

This study tackled the question of the links among the measured variables using a quantitative method in order to comprehend, forecast, control, and predict phenomena. For this reason, the study utilized data from 2018 to 2022. Such yielded as much data as possible about the financial performance of DT-SACCOs and SASRA financial reporting tools for the entire population under investigation. The positivist paradigm, which maintains that facts constitute the basis of scientific knowledge and ensures that only what was observed and measured was taken into account, was the basis for this study. It could predict and explain social environment events by observing patterns and informal connections.

Consequently, it is complemented by a narrowly focused quantitative approach that is usually applied in a laboratory setting (Creswell, 2014). Specifically, the question about the relationships between variables was addressed through the application of a quantitative technique. The above approach was bolstered by the fact that quantitative data, when

combined with the analysis that follows, offered a comprehensive grasp of the topic under consideration.

3.3 Research Design

As stated by Gupta and Rangi (2014), a research design is a framework that coherently and logically puts together all of the investigation's many components. It serves as a roadmap outlining the methods applied in a study. It considers the purpose for the study, the time, place, and kind of data that will be required (Kothari, 2012). This study employed a correlational research strategy for its exploration and analysis. Through examining the relationships between multiple variables, this kind of research design was used to establish forecasts and investigate associations (Kabir, 2016).

A correlational research design is appropriate when the goal of a study is to examine the strength and direction of the relationship between two or more variables without manipulating them. This design is particularly useful in situations where experimental methods are not feasible or ethical, such as when studying naturally occurring variables like financial performance, economic indicators, psychological traits, or educational outcomes. It allows researchers to identify patterns, trends, and associations, helping to generate hypotheses for further investigation. Correlational design is also suitable when dealing with quantitative data and large datasets, such as in financial and social science research, where researchers seek to determine whether variables like capital adequacy, asset quality, liquidity, or profitability are related. However, while this design is excellent for identifying relationships, it is important to note that correlation does not imply causation. This means researchers must be cautious in interpreting results, as other unseen variables may influence

the observed relationship. So, correlational research strategy was chosen based on the current study, which compares the financial performance of DT-SACCOs with financial tools used for SASRA monitoring and reporting.

This approach is particularly suitable for the current study, which aims to examine the financial performance of Kenyan SACCOs and the financial tools employed for SASRA monitoring and reporting. By utilizing this design, the study could establish whether a relationship exists between the variables and, if so, determine the strength and direction of that relationship, as reflected by the correlation coefficient. This statistical measure helps quantify the degree to which the variables are associated, providing clarity on the nature of their relationship. A significant advantage of adopting a correlational research design is its capacity to offer a more in-depth understanding of both the presence and magnitude of the relationship between the independent and dependent variables IVs and DV). This makes it especially valuable for studies like this, where manipulation of the variables is not feasible, but understanding their interplay is crucial (Boucaud, 2017).

3.3 Location of the study

The focus of this research was specifically on the Nairobi County area, as it was within this geographical region that the target population of interest was located. Nairobi County was selected because it represented the most relevant context for the study, providing access to the institutions, organizations, and individuals that were integral to the research objectives. By concentrating on this region, the study was able to directly engage with the specific group under investigation, ensuring that the data collected was both pertinent and representative of the population being studied. Additionally, Nairobi County offers a diverse and dynamic

environment, making it an ideal setting for exploring the factors influencing the research topic in a practical and applicable manner.

3.4 Target Population

Multiple scholars have argued that the target population refers to the entire group of individuals, subjects, or objects that share common characteristics and are specifically identified for research purposes. This population serves as the foundation for the study, encompassing all elements that fit the criteria established by the researchers. From this target population, samples are selected to represent the larger group, allowing researchers to draw conclusions that can be generalized to the entire population. The process of sampling ensures that the data collected is both relevant and representative, enabling the study to accurately reflect the characteristics and behaviors of the broader group under investigation. Target group members need to possess the interest-relevant characteristics of the study. The number of DT-SACCOs that are permitted has decreased in Kenya. In this study, target population comprised the 181 DT-SACCOs that were actively operational in Kenya during the period from 2018 to 2022 (SASRA, 2018, SASRA, 2019, SASRA, 2020, SASRA, 2021, SASRA, 2022, SASRA, 2023),. These DT-SACCOs were selected as the focus of the study because they represent a significant portion of the financial sector in Kenya, providing essential services such as savings and credit facilities to members. The chosen time frame allowed for an in-depth examination of the trends and dynamics over study period. By focusing on this specific group, the study aimed to gather insights that are relevant to the operational challenges and financial outcomes faced by DT-SACCOs in Kenya within the stated period.

3.5 Sampling Procedures and Techniques

The procedure of selecting samples from the population is known as sampling technique (Cooper & Schindler, 2016). Obtaining a subset of the population with representative features is the goal. According to Mugenda & Mugenda (2015), samples are chosen in order to save money and facilitate data collection. Research samples frequently contain biases and inaccuracies. Variations in estimates are called errors, whereas incorrect procedures are called biases. According to Cooper & Schindler (2016), errors and biases can be caused by improper sampling, faulty measuring tools (interviewer or questionnaire), a lack of respondents, or inherent biases like a respondent's desire to appear impressive or provide depressing answers. Mugenda (2015) suggests choosing a better sampling design in order to address systematic biases and sampling error. The procedure of choosing a limited number of measurements to represent a larger (total) population is known as sampling in statistical analysis. The research used a census for its sampling because the target population was easily accessible and controlled.

3.6 Sample Population

Given that a census was used, the sample size was 181 DT-SACCOs. As mentioned earlier, the target population was 181, and since the census took place with the entire population, the sample size was 181.

3.7 Construction of research instruments

This study used secondary data sources considering this was a financial study. The secondary data used in this research was sourced from the SACCO Societies Regulatory Authority (SASRA), the regulatory body responsible for overseeing and monitoring the operations of

SACCOs in Kenya. SASRA provided essential data on the performance and regulatory compliance of DT-SACCOs in the country. To gather the required information, the research utilized a data collection sheet, which was designed to systematically capture relevant financial and operational data from the secondary sources. This data collection tool facilitated the extraction of key performance indicators, regulatory reports, and other pertinent financial information from SASRA's records, ensuring the accuracy and reliability of the data used in the analysis.

3.8 Data Collection Methods and Procedures

The process of acquiring, compiling, and assembling data from primary or secondary sources is known as data gathering. Among the tools that can be used to gather data are time sheets, questionnaires, observation schedules, interview guides, and focused group discussion guides. Secondary data was analyzed in this study in order to collect information from reports on SASRA oversight and publicly available financial statements for commercial banks for the years 2016 through 2022. The time series approach was used in this investigation because it produced more accurate and dependable data. The five-year time series ran from 2018 to 2022.

3.9 Proposed data analysis techniques and procedure

Descriptive statistics such as means (M), minimum (Max), maximum (Min), and standard deviation (SD) were produced by the study using quantitative methods in accordance with the research objectives and even hypotheses.

3.10.1 Descriptive statistics

The research utilized a quantitative analysis approach to systematically analyze the collected data and generate descriptive statistics. This approach involved the use of numerical data to identify patterns, trends, and relationships within the dataset. The researcher found it easier to understand and assess study data by using means and standard deviation, to spot trends, patterns, and correlations. Tables displaying the results were accompanied with narratives providing an explanation of the data.

3.10.2 Measure of study variables

Table 1: Operationalization of Study Variables

Concept	Nature	Explanation	Measure	Analysis
Financial performance DT-SACCOs in Kenya	Dependent Variable (DV)	ROA	Scale (Rate)	Descriptive Inferential
Capital Adequacy		$\frac{Core\ Capital}{Total\ Assets}$	Scale (Rate)	Descriptive Inferential
Assets quality	IV	$\frac{\text{Non} - \text{Performing Loan}}{\text{Gross Loans}}$	Scale (Rate)	Descriptive Inferential
Earning Ability	IV	$\frac{Operating\ Expense}{\text{Total assets}}$	Scale (Rate)	Descriptive Inferential
Liquidity		$\frac{Total\ Loans}{Total\ Deposits}$	Scale (Rate)	Descriptive Inferential

Source: Researcher (2023)

3.10.3 Model Specification

In order to figure out if there was a connection between DT-SACCO financial performance and SASRA financial instrument monitoring and reporting, Pearson correlation analysis was

utilized. The study employed an econometric model to assess the financial performance of DT-SACCOs, focusing on; capital adequacy, asset quality, earning ability, and liquidity. To accomplish this, Multiple Regression Analysis (MRA) was utilized, allowing for the examination of the relationships between these financial variables and their combined effect on the overall performance of DT-SACCOs.

The MRA allowed for the quantification of how each of these financial indicators affected the performance of DT-SACCOs, enabling the researcher to draw meaningful conclusions about the factors driving financial success within these institutions. The use of this model ensured a rigorous approach to understanding the complexities of financial performance, accounting for multiple variables simultaneously while controlling for other potential influencing factors.

$$Y_{it} = \beta_o + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon_{it} \quad \text{..... (i)}$$

Where:

Y_{it} = is the dependent variable; Financial performance of DT-SACCOs *i* at time *t,*

X_{1it} = Capital Adequacy of DT-SACCO *i* at time *t,*

X_{2it} = Asset quality of DT-SACCO *i* at time *t,*

X_3it = Earning Ability of DT-SACCO *i* at time *t,*

X_4it = Liquidity of DT-SACCO *i* at time *t,*

β_0 is a constant (which is the value of dependent variable when all the independent variables are 0).

$\beta_{1\text{-}5}$ is the regression coefficients or change induced by X_1, X_2, X_3, and X_4

ε_{it} is the normal error term

.

3.10.4 Testing Study Hypothesis

The study used Analysis of Variance (ANOVA) to examine the relationship between independent variables (capital adequacy, asset quality, earning ability, and liquidity) and the financial performance of DT-SACCOs. ANOVA was applied at a significance level of 0.05 (p-value = 0.05) to test whether variations in these financial indicators led to statistically significant differences in financial performance.

The study aimed to determine if the mean financial performance differed significantly across categories of the independent variables. If the p-value was ≤ 0.05, the null hypothesis, suggesting no significant relationship, was rejected, indicating that at least one independent variable impacted performance. If the p-value was > 0.05, the null hypothesis was retained, meaning the variables did not significantly influence financial performance. This methodology allowed for a robust test of the relationships between financial indicators and DT-SACCOs' performance.

3.10.5 Classical Linear Regression Model (CLRM) Assumptions Tests

To ensure the reliability and validity of the regression model, the study assessed whether the data met the fundamental assumptions of the Classical Linear Regression Model (CLRM), as outlined by Lelissa (2018). These assumptions are critical to ensuring the robustness and accuracy of the regression analysis, as violating them could lead to biased or inconsistent results. When the assumptions were met, all available data was considered for the model's consideration. But some data might not have been included in the model if these assumptions turn out to be false. The core CLRM assumptions of normality, linearity, multicollinearity, heteroscedasticity, and autocorrelation were confirmed by carrying out the required

diagnostic tests. The Shapiro Wilks test was utilized to evaluate the data's distribution using the normalcy test. According to Khatun (2021), the degree of normality was ascertained using the Shapiro Wilks test. For the purposes of this analysis, the data was considered to be normally distributed if the mean and standard deviation were in alignment. Conversely, when discrepancies between these two statistical measures were observed, the distribution was classified as non-normal, as outlined by Khatun (2021).

In this study, a **linearity test** was conducted to examine whether the relationship between the independent and dependent variables followed a linear pattern. Specifically, the test aimed to determine if changes in one variable resulted in proportional and consistent changes in another variable. Establishing linearity was crucial because the statistical techniques used, such as Pearson correlation and linear regression, are based on the assumption that the relationships among variables are linear in nature. If this assumption is violated, the accuracy, reliability, and interpretability of the findings could be significantly compromised. Th study used ANOVA to tests for linearity where the deviation was greater than 0.05 it implied linearity otherwise no linearity.

In this case, the correlated variables were eliminated because their data were identical, and multicollinearity was evaluated to determine whether the IVs are strongly correlated. Multicollinearity occurs whenever there is in fact no correlation between two or more independent variables.

Multicollinearity is identified when the tolerance value falls below 0.1, representing less than 10% of the variance, or when the variance inflation factor (VIF) exceeds 10. These thresholds suggest that the independent variables are highly correlated, which could distort the

regression model and lead to unreliable estimates of the relationship between the variables. Therefore, values outside these ranges indicate potential multicollinearity, which may require corrective measures to improve the accuracy and interpretability of the model.

Astivia and Zumbo (2019) state that heteroscedasticity occurs when each error term has a distinct variance. Heteroscedasticity was present when the p-value was less than 0.05. In order to evaluate for heteroscedasticity, the study will use the Breusch-Pagan test at the 5% level of significance.

In the study, the quantitative data collected through a secondary data sources was subjected to a descriptive analysis using the statistical software packages Stata Version 12 and MS Excel.

3.11 Ethical Considerations

In light of the study, the investigation was carried out ethically. The researcher first got a letter from Mount Kenya University in order to begin the study. In addition, a request for authorization to carry out research was submitted to NACOSTI, the National Council of Science and Technology. The researcher ensured that every participant was thoroughly informed on the nature of the study, its objectives, potential risks, advantages, and alternatives.

Participants were provided with the opportunity to voluntarily choose whether or not to partake in the study, ensuring that their participation was entirely at their discretion. They were also encouraged to ask any questions or seek clarification regarding the study's purpose and procedures. The informed consent document clearly outlined the principle of autonomy, emphasizing that individuals had the right to make an informed decision about their

involvement without any form of coercion. This consent process ensured that participants understood their rights, including the option to withdraw from the study at any stage without penalty or negative consequences.

In accordance with Kothari (2017), consent to participate in the study must be freely given by the respondents and cannot be obtained through coercion or promises of benefits that are unlikely to materialize. Anonymity or secrecy was a crucial and relevant requirement for the research process. The study supported the truth and never fabricate data in order to obtain it (Schinder & Cooper, 2016)., there was no any treachery in a research project. The confidentiality of the data participants contribute was guaranteed by this study.

CHAPTER FOUR

RESEARCH FINDINGS, ANALYSIS AND PRESENTATION

4.1 Introduction

The evidence and findings pertaining to the effect of SASRA's financial reporting and monitoring tools on the financial performance of DT-SACCOs in Kenya were presented in this chapter. In order to evaluate the financial stability of DT-SACCOs, particular attention is paid to important financial metrics such capital adequacy, asset quality, profitability, and liquidity. In order to guarantee the precision and coherence of the results, the chapter opens with a review of the validity and dependability of the research tools. The, demographic characteristics of the participants were captured. Subsequently, it provides an analysis of descriptive statistics and regression results, accompanied by detailed interpretations. Finally, the findings are discussed in relation to existing empirical literature, thereby situating the study within the broader context of financial performance research in DT-SACCOs.

4.2 Response Rate

This section presents the analysis of the response rate, focusing on data collection from 181 DT-SACCOs operating in Kenya during the period 2018–2022. The total number of records collected across the five years was 871, translating to a 100% response rate.

As noted by Mugenda and Mugenda (2008), such a response rate is regarded as exceptionally high, playing a pivotal role in ensuring the generation of accurate, reliable, and credible findings that enhance the overall robustness of the research outcomes. The authors categorize response rates exceeding 69% as excellent and conducive to producing robust and dependable results. As shown in Table 3, the response rate in this study was rated as

exceptional at 100%, aligning with the criteria set by Mugenda and Mugenda (2008) and underscoring the validity of the study's findings.

Table 2: Analysis by Response Rate

Parameter	Frequency
Kenya DT-SACCOs	181
Total	181

Source: Research Data (2024)

4.3 Univariate Analysis

This section presents the univariate analysis, which offers a comprehensive summary of the findings derived from the quantitative examination of both the independent variables (IVs) and the dependent variable (DV) (Tessler, 2022).

4.3.1 Descriptives Statistics

A range of descriptive statistical measures were employed, including the mean (M), standard deviation (SD), minimum (Min), maximum (Max), percentage (%), and frequency (N), to succinctly capture the key characteristics of the data in Table 4. These descriptive statistics serve to illuminate significant trends and patterns within the variables under study, thereby providing a more nuanced understanding of their inherent properties. The results were meticulously organized into tables, complemented by detailed narrative interpretations, to provide a comprehensive and visually engaging representation of the data. More so, the trend for each of IV with reverence to the DV were presented. The descriptive statistics provided essential insights into the underlying trends and patterns within the study variables. These insights were presented systematically in tabular formats, with accompanying narrative interpretations, ensuring that the data was clearly and comprehensively understood.

Table 3: Descriptive Statistics

Parameter	N	M	SD	Min	Max
Financial performance of Kenyan DT-SACCOs	871	2.37%	0.78%	0.00%	6.98%
Capital adequacy	871	15.40%	16.67%	-77.31%	102.94%
Asset quality	871	7.64%	8.77%	0.00%	65.11%
Earning ability	871	4.67%	2.52%	-5.51%	10.37%
Liquidity	871	110.42%	29.42%	0.00%	288.16%

Source: Research Data (2024)

Table 4 results show that the number of observations, N, were 871 comprising of annual data collected among the 181 Kenyan DT-SACCOs for the period 2018 to 2022 about their financial performance as well as SASRA financial reporting tools; capital adequacy, capital adequacy, asset quality, and liquidity.

Table 4 provides a detailed summary of the dataset used in this study, comprising 871 observations collected from the annual financial data of 181 DT-SACCOs in Kenya over the period from 2018 to 2022. This dataset includes key financial performance indicators, such as Return on Assets (ROA), alongside various metrics used for SASRA's monitoring and reporting financial tools, specifically focusing on capital adequacy, asset quality, and liquidity.

In terms of financial performance, as measured by ROA, the data revealed a wide range of outcomes. The observed ROA values varied from a minimum of -0.05% to a maximum of 10.3%, showcasing the diversity in performance across the DT-SACCOs over the study period. The statistical summary indicated an average ROA of 2.37% (M = 2.37%), with a standard deviation of 0.78% (SD = 0.78%), highlighting a moderate level of variability in

performance among the sampled SACCOs. The minimum and maximum ROA values within the dataset were found to be 0.00% and 6.98%, respectively. These figures provide insights into the range of financial outcomes experienced by the DT-SACCOs, reflecting differences in their ability to generate returns on assets during the study period.

Based on this, the Coefficient of Variation (CV) expressed as $\frac{SD}{M} x100 = \frac{0.78}{2.37} x100 = 32.19\%$. According to Shechtman (2013), a Coefficient of Variation (CV) below 10% is considered excellent, while a CV between 20% and 30% is categorized as low variability. A CV ranging from 30% to 50% indicates moderate variability, and values exceeding 50% are regarded as significantly high. Consequently, the observed CV of 32.16% signifies moderate variability, suggesting that the DT-SACCOs demonstrate a moderate level of consistency in achieving Return on Assets (ROA) close to the target financial performance.

In financial analysis, a ROA below 5% generally signifies an asset-intensive business, where substantial investments in assets are required to generate earnings CFI Team, 2024). Conversely, businesses with an ROA exceeding 20% are characterized as asset-light, efficiently utilizing minimal assets to produce significant returns. Within this context, the financial performance of Kenyan DT-SACCOs demonstrates suboptimal efficiency, as evidenced by an average ROA of 2.37% during the study period.

This outcome highlights the asset-intensive nature of DT-SACCO operations and raises concerns about their ability to convert asset investments into meaningful earnings. Factors contributing to this low ROA may include suboptimal asset utilization, elevated operating costs, or strategic inefficiencies in asset management. Additionally, the CV of 32.16% suggests moderate variability in ROA across the SACCOs. This level of variability could be

indicative of disparities in operational efficiency, governance structures, and market conditions within the sector. Such findings underscore the importance of implementing targeted strategies to enhance asset productivity and improve overall financial performance within Kenyan DT-SACCOs. These interventions may include robust financial planning, strategic cost management, and capacity building to address the operational challenges faced by the sector.

The capital adequacy results for the DT-SACCOs indicate an average of 15.40% with a standard deviation (SD) of 16.67%. This means that, on average, the SACCOs have set aside Ksh 15.40 for every Ksh 100 in assets to cover potential losses due to risk and other liabilities. The standard deviation of 16.67% suggests a high level of variability in the capital adequacy across the different DT-SACCOs, implying that the capital reserves in some institutions may significantly differ from the average. Further analysis of the results reveals that the capital adequacy ratio ranged from a minimum of -77.31% to a maximum of 102.94%. This range of 180.25% demonstrates a substantial variation, with some SACCOs having negative capital adequacy ratios, while others have very high positive ratios. According to the SASRA (2022), the minimum recommended capital adequacy ratio for SACCOs is 10%, which represents 10% of core capital to total assets. This benchmark serves as a guideline for ensuring that SACCOs maintain sufficient capital to absorb unexpected financial shocks and risks.

This presents the members a safe environment to deposit their money Notably, DT-SACCOs are inherently exposed to unforeseen financial losses, the frequency and magnitude of which are unpredictable yet often significant (Almazari & Alamri, 2017). The ability of these institutions to sustain operations and maintain consistent financial performance is contingent

upon their capacity to hold adequate financial resources. This highlights the critical importance of sufficient and readily accessible cash reserves to meet operational requirements, a cornerstone of organizational financial stability. Ineffective capital management not only hampers financial performance but also poses a risk of insolvency (Melani et al., 2019).

In the financial management framework of DT-SACCOs, capital sufficiency is a fundamental metric of organizational health and success. Regulatory frameworks require SACCOs to maintain prescribed capital adequacy levels to protect member deposits and creditors from potential losses due to business risks (Chepkemoi, 2023). These standards play a critical role in safeguarding the financial health of SACCOs, ensuring they are equipped to withstand financial shocks and maintain their stability. By adhering to these guidelines, SACCOs contribute to the broader stability of the entire financial ecosystem, promoting trust and confidence among stakeholders. The SASRA, as the primary regulatory body, holds the responsibility for overseeing the capital adequacy of DT-SACCOs. SASRA's role is central to maintaining the financial integrity of SACCOs, as it ensures that these institutions meet the prescribed capital adequacy requirements. Through vigilant monitoring, oversight, and strict enforcement of these regulations, SASRA helps mitigate the potential impacts of unforeseen financial losses. Additionally, SASRA's regulatory framework strengthens the sector's resilience, enabling SACCOs to better navigate economic downturns, operational challenges, and other risks that could undermine their stability.

By maintaining robust capital buffers, SASRA not only protects individual SACCOs but also enhances the overall resilience of the financial sector.

This regulatory vigilance fosters trust and confidence among members and stakeholders, underpinning the sustainability and growth of SACCOs within Kenya's cooperative financial sector. With an average capital adequacy ratio of 15.40%, the environment for member DT-SACCO) can be deemed secure. Capital adequacy serves as a critical metric for assessing whether sufficient risk reserve funds are in place to mitigate the impact of non-performing loans, particularly those with maturities ranging from one to twelve months.

The evaluation of capital adequacy incorporates a thorough analysis of loan loss provisions, assessing their adequacy in relation to the total volume of delinquent loans. This ensures that SACCOs maintain sufficient buffers to address financial risks arising from defaults. Additionally, the capital adequacy framework encompasses other important financial indicators, such as loan charge-offs and recovery rates, offering a comprehensive view of the institution's financial health and resilience. This comprehensive approach highlights the critical importance of sound capital management in ensuring the ongoing operational stability of SACCOs. By maintaining adequate capital reserves, SACCOs are better positioned to handle financial uncertainties, mitigate risks, and remain resilient in the face of economic challenges. Effective capital management is not only essential for the institution's internal stability but also plays a crucial role in cultivating trust and confidence among members. When members are assured that their SACCO is financially secure and capable of absorbing potential losses, their confidence in the institution's ability to safeguard their investments and provide services grows. This, in turn, helps sustain long-term membership loyalty and enhances the SACCO's reputation in the broader financial landscape.

Based on the dataset of 871 observations, the study assessed the asset quality of DT-SACCOs using the loan loss coverage ratio (gross). The results revealed a broad range of asset quality values, spanning from 0% to 65.11%, with the minimum recorded at 0.00% and the maximum at 65.11%. The average asset quality stood at 7.64%, with a standard deviation of 8.77%. This average surpasses the 5% threshold recommended by the SASRA (2021), which is aimed at ensuring SACCOs maintain sufficient capital reserves to cover NPLs. An average asset quality of 7.64% means that, on average, for every Ksh. 1 allocated to cover the cost of NPLs, the SACCOs have provisioned Ksh. 7.64. This indicates a higher-than-recommended level of capital reserves, suggesting that the SACCOs are more adequately prepared to absorb the financial impact of NPLs. Such a provision enhances the SACCOs' resilience, improving their capacity to manage and recover from the potential risks associated with bad loans.This substantial provision reflects the considerable burden of NPLs, suggesting that the DT-SACCOs face significant challenges in managing loan portfolios and mitigating associated risks. Additionally, the observed standard deviation of 8.77% highlights considerable variability in asset quality across the SACCOs, emphasizing inconsistency in financial health within the sector.

The findings indicate that the asset quality of DT-SACCOs is unsatisfactory, as the ratio surpasses the maximum 5% threshold set by both the SASRA (2021) and the Central Bank of Kenya [CBK] (2020) in its 2020 prudential guidelines. This threshold is designed to ensure that SACCOs maintain a sufficient level of capital to cover non-performing loans (NPLs) and other financial risks. When the asset quality ratio exceeds this limit, it signals a higher-than-acceptable level of NPLs relative to the SACCO’s total assets, indicating potential financial instability.

Such a scenario poses risks to the SACCO's ability to meet its obligations and maintain operational effectiveness, highlighting the need for improved asset management and better risk mitigation strategies. This situation underscores the importance of adhering to regulatory guidelines to safeguard the long-term financial health of SACCOs and protect their members' interests.

These guidelines stipulate that financial institutions should maintain an NPL ratio below 5% to safeguard financial stability. Surpassing this threshold signals a critical NPL problem, suggesting heightened credit risk and potential mismanagement of loan portfolios, which can undermine institutional stability and growth. The rising accumulation of NPLs in the sector is a major concern, as it often correlates with financial distress within institutions and may contribute to broader systemic vulnerabilities in the financial sector. As demonstrated in the findings and shown in Table 4, the elevated levels of NPLs within DT-SACCOs are indicative of poor financial performance and operational inefficiencies. These factors present a significant threat to the sustainability and stability of the SACCO sector in Kenya, necessitating urgent regulatory attention and corrective measures to improve asset management and risk mitigation strategies.

The results regarding the earning ability of DT-SACCOs indicate significant variation. The lowest level of earning ability was recorded at -5.51%, while the highest was 10.37%. The average earning ability stood at 4.67%, with a standard deviation of 2.25%, reflecting some variability in the earnings performance across the SACCOs. The standard deviation reveals that the earning ability of the SACCOs deviated from the average by as much as 15.03% at the highest and 3.79% at the lowest.

This wide range suggests that some SACCOs are performing well in terms of generating earnings, while others are struggling, which points to potential inefficiencies or challenges in their revenue-generation strategies. In addition to earnings performance, the results also highlighted a high level of Operating Expense to Total Assets (OETA) ratio. This ratio is a key indicator of how efficiently a SACCO is using its assets to generate revenue and manage its operations. A high OETA ratio typically signals inefficiency, as it means a large portion of the SACCO's assets is being consumed by operating expenses, including administrative, general, and other non-revenue-generating costs. When this ratio is elevated, it suggests that the SACCO is not optimally utilizing its assets, potentially leading to reduced profitability and overall financial performance. This inefficiency can hinder the SACCO's ability to generate sustainable earnings and maintain financial stability in the long term.

In the context of DT-SACCOs, a high OETA ratio might indicate that the institution is facing high operational costs relative to its asset base, which could be due to factors such as overstaffing, inefficient management practices, or excessive overhead expenses. This could also suggest that the SACCO is not maximizing its asset utilization or that its cost control mechanisms are weak (Van der Merwe & Pistorius, 2019). High OETA ratios can raise concerns for investors, regulators, and stakeholders because they may signal that the institution is not efficiently converting its assets into value for members or shareholders. If the ratio is persistently high, it could lead to reduced profitability, difficulty in maintaining capital adequacy, and greater vulnerability to financial instability. Financial institutions, including SACCOs, are expected to manage operational expenses prudently to ensure that resources are deployed effectively in generating returns.

According to Akintoye (2020), a consistently high OETA ratio may also indicate potential long-term sustainability issues, suggesting a need for cost optimization strategies to reduce the burden of operational costs on the institution's assets. Thus, an elevated Operating Expense to Total Assets ratio can be an early warning indicator of inefficiency, which, if unaddressed, could lead to reduced financial health, impaired performance, and a weakened ability to meet obligations or sustain growth.

The liquidity results showed an average liquidity ratio of 110.42%, with a standard deviation of 29.42%, and a range from 0.00% to 288.16%. The average liquidity ratio of 110.42% implies that, on average, for every Ksh. 1 of short-term liabilities, the SACCOs had Ksh. 110.42 in liquid assets available to cover those obligations. This indicates that the DT-SACCOs maintained sufficient cash or cash-equivalent assets to meet their short-term obligations without significant risk of liquidity shortfalls. Such a high liquidity ratio suggests that the DT-SACCOs were not only able to cover their short-term liabilities but could potentially allocate additional funds toward other operational or investment activities, enhancing financial flexibility. The substantial variability in the liquidity ratio (as evidenced by the high standard deviation) indicates that while some SACCOs were highly liquid, others may have faced more significant liquidity challenges, which could be reflective of differing management practices, asset allocation strategies, or operational needs. A liquidity ratio above 100% is generally considered a positive indicator of financial health, as it demonstrates the institution's ability to meet its obligations without reliance on external funding sources.

However, it is essential to note that excessively high liquidity could also signal inefficiencies in asset utilization, as funds that are held in liquid form may not be optimally invested to

generate returns (Roe & Bricker, 2018). Therefore, while the high average liquidity ratio indicates the DT-SACCOs' capacity to fulfill short-term liabilities, it is important to monitor whether these liquid assets are being deployed effectively to balance risk management with profitability goals.

4.3.2 Trends Between SASRA Financial Tools and Financial Performance of DT-SACCOs

The relationships examined in the study objective were derived through the application of panel data, focusing on the association between the SASRA financial tools; capital adequacy, asset quality, earnings ability, and liquidity as the independent variables (IVs), and the financial performance of DT-SACCOs over the period from 2018 to 2022. The findings of the study are presented below, accompanied by visual representations that elegantly illustrate the intricate relationships between the key variables. In these graphs, the IVs (capital adequacy, asset quality, earnings capacity, and liquidity) are plotted along the X-axis, while the DV (financial performance of the SACCOs) is depicted on the Y-axis. These graphical representations offer a refined and intuitive depiction of how each financial metric behave in accordance with the financial performance of the SACCOs over the specified period. In this manner, patterns, trends, and the strength of associations between the financial indicators and SACCO performance become more readily apparent, facilitating a deeper comprehension of these dynamics. This analytical approach aligns with established research that underscores the critical role of these financial variables in evaluating the performance and stability of financial institutions (Binner et al., 2014; Njiru & Muchemi, 2021).

These studies emphasize that elements such as capital adequacy, asset quality, earnings capacity, and liquidity are indispensable for assessing the financial health and operational efficiency of SACCOs and similar institutions. The results, as depicted through these graphs, contribute significantly to the understanding of how these variables interact and shape the financial performance of Kenyan DT-SACCOs. Ultimately, the insights gleaned from this analysis reinforce the pivotal role of astute management of capital, assets, earnings, and liquidity in safeguarding the long-term stability and profitability of DT-SACCOs in Kenya.

4.3.2.1 Capital adequacy and Financial Performance

The research comprehensively examined the first objective by analysing the evolving trends in the relationship between capital adequacy and the financial performance of DT-SACCOs. To achieve this, the study investigated how variations in capital adequacy levels relate with the financial outcomes of these SACCOs over time. The results of this analysis were visually represented in a cluster graph, which captures the fluctuations and patterns in both capital adequacy and financial performance over time. The trends observed in this analysis are presented in Figure 3 below, providing a clear illustration of how changes in capital adequacy correlate with the financial outcomes of these institutions.

This approach aligns with the understanding that capital adequacy directly influences the financial stability and sustainability of financial institutions, including SACCOs (SASRA, 2021; Chepkemoi, 2023). The findings depicted in the cluster graph offer insights into the dynamics of capital management and financial performance

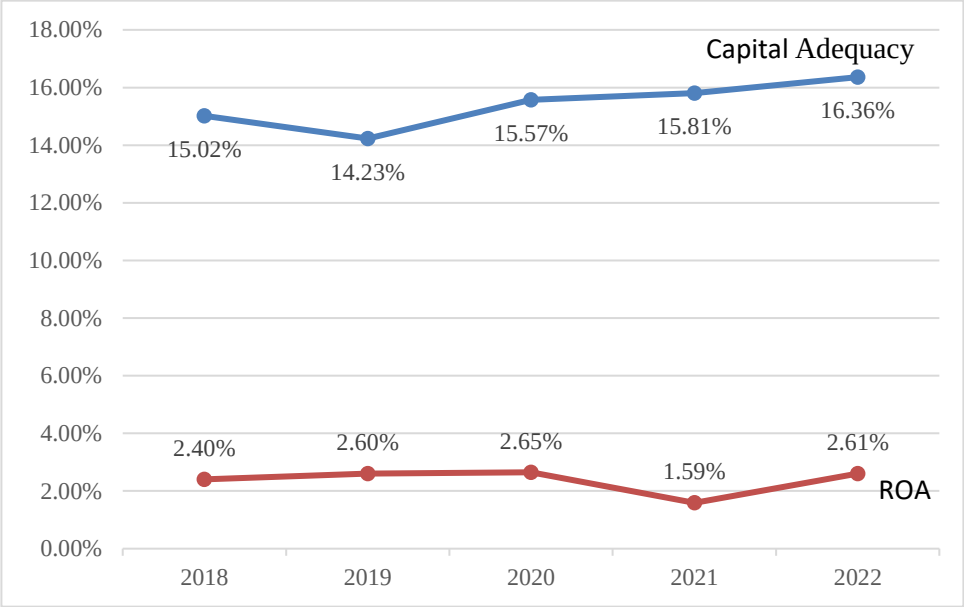

Figure 3: Capital adequacy and ROA

Source: Research Data (2024)

The results depicted in the figure illustrate the trends in capital adequacy and the financial performance of Kenyan DT-SACCOs over the years 2018 to 2022. In 2018, capital adequacy stood at 15.02%, while the financial performance was 2.40%. In 2019, capital adequacy decreased slightly to 14.23%, but the financial performance improved to 2.60%. The year 2020 saw a rise in both capital adequacy to 15.57% and financial performance, which increased to 2.65%. However, in 2021, despite capital adequacy increasing further to 15.81%, the financial performance of DT-SACCOs sharply declined to 1.59%. By 2022, capital adequacy had reached 16.36%, while financial performance recovered to 2.61%. Overall, the results suggest a generally positive, directly proportional relationship between capital adequacy and financial performance, where an increase in capital adequacy is often associated with improved financial outcomes for the DT-SACCOs.

This supports the notion that maintaining sufficient capital is crucial for the stability and financial performance of DT-SACCOs as financial institutions (SASRA, 2021; Chepkemoi, 2023). According to SASRA (2021), maintaining proper capital levels is a regulatory requirement designed to protect members' savings and uphold public confidence in the SACCO sector. Similarly, Chepkemoi (2023) emphasizes that capital adequacy is a key determinant of a SACCO's ability to support growth, meet its obligations, and remain resilient in competitive financial environments. Therefore, assessing capital adequacy is not only a compliance measure but also a strategic factor in promoting financial health and institutional longevity

4.3.2.3 Asset Quality and Financial Performance

In addressing the second objective, the study aimed to investigate the influence of operational efficiency in banks on their financial performance, specifically analysing trends between the years 2012 and 2016. The findings of this analysis were captured and visually represented in Figure 5. This approach aligns with previous research which emphasizes the significant role that operational efficiency plays in determining the financial outcomes of banking institutions. Efficient operations often correlate with reduced costs, improved profitability, and overall financial health (Mutunga & Gatauwa, 2021). The visual representation in Figure 4 provides a clear illustration of how these trends manifest over the period under consideration, offering insights into the operational dynamics that influence DT-SACCO financial performance.

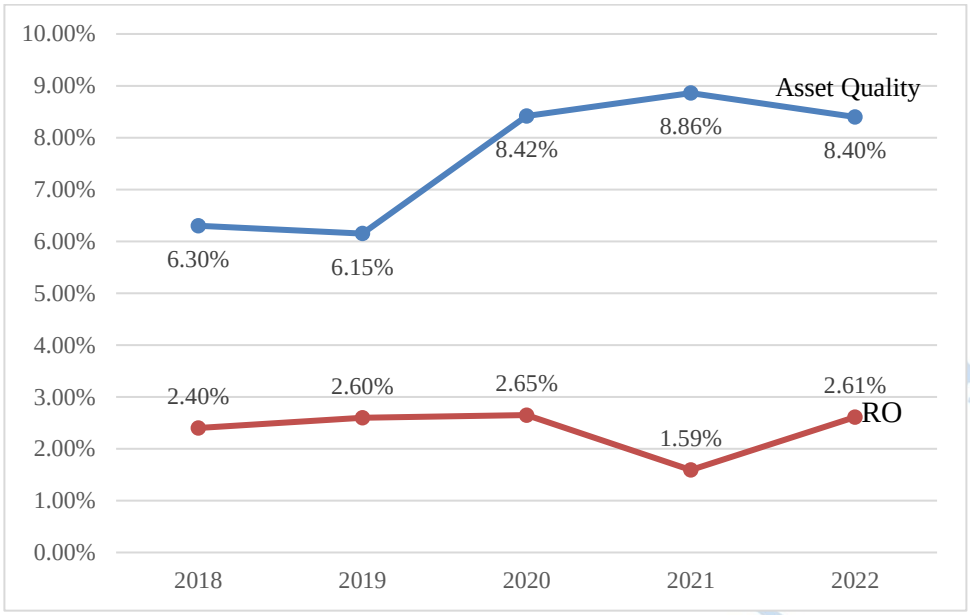

Figure 4: Asset Quality and Financial Performance

Source: Research Data (2024)

The analysis of the asset quality and financial performance of DT-SACCOs in Kenya over the years 2018 to 2022 reveals a fluctuating, inverse relationship between these two variables. In 2018, asset quality was recorded at 6.30%, while the financial performance stood at 2.40%. In 2019, asset quality declined slightly to 6.15%, yet financial performance improved to 2.60%. The year 2020 saw a rise in asset quality to 8.42%, coinciding with an increase in financial performance to 2.65%. However, in 2021, despite an increase in asset quality to 8.86%, financial performance experienced a significant drop to 1.59%. In 2022, asset quality decreased again to 8.40%, but financial performance rebounded to 2.61%.

These results suggest that asset quality and financial performance of DT-SACCOs exhibit an indirect, or negatively proportional, relationship. As asset quality fluctuates, financial performance increases. This pattern indicates that higher asset quality may not necessarily

translate into improved financial performance, and vice versa, highlighting the complex dynamics between asset management and profitability within these financial institutions (Njiru & Muchemi, 2021). As noted by Njiru and Muchemi (2021), some institutions with strong asset quality still struggle to achieve high profitability, while others with weaker asset profiles may report better financial performance due to other influencing factors like interest income strategies, cost management, or market positioning. This highlights the complex and multifaceted relationship between how assets are managed and the overall profitability of financial institutions, suggesting that other internal and external variables also play significant roles in shaping financial outcomes.

4.3.2.3 Earning ability and Financial Performance

In addressing the third objective, the study utilized a sophisticated cluster graph approach to visually capture the evolving relationship between earning ability and the financial performance of DT-SACCOs in Kenya. This method offers a dynamic representation of the trends, providing valuable insights into how earning ability influences financial outcomes. The results, which offer a comprehensive and nuanced overview of these trends, are elegantly presented in Figure 4.

The cluster graph visually captures how fluctuations in earning ability correlate with changes in financial performance over the study period. This approach aligns with established methodologies for analyzing financial performance trends, as seen in similar studies within the banking and financial sectors (Thisaranga & Ariyasena, 2021). The use of graphical presentation is critical for understanding the underlying patterns and the extent to which

earning ability influences the broader financial outcomes of SACCOs, providing valuable insights into the factors that drive profitability within these institutions.

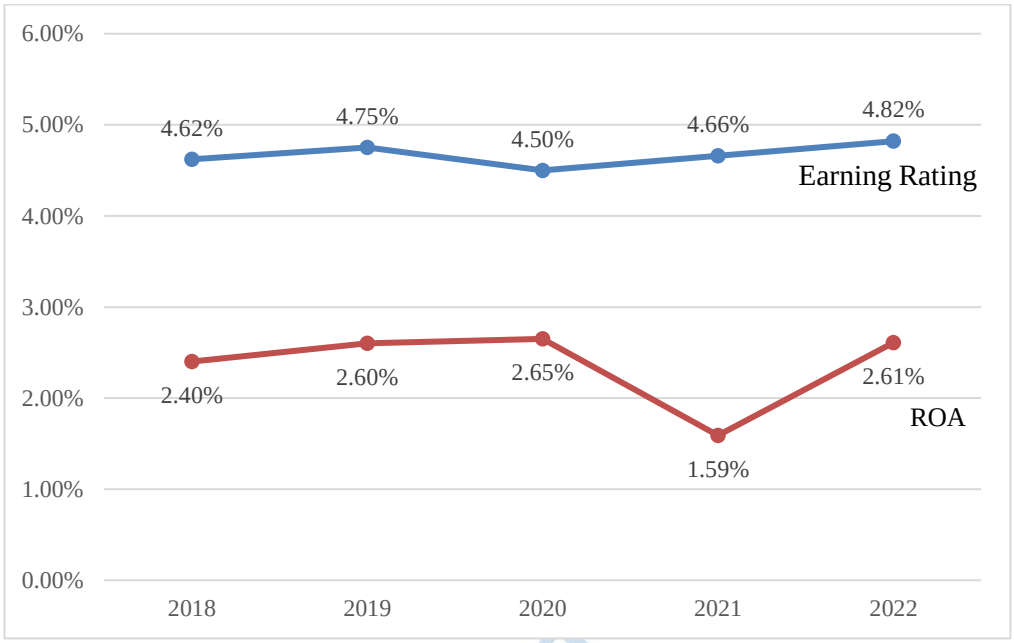

Figure 5: Earning Ability and ROA

Source: Research Data (2024)

The analysis of earning ability and its relationship with financial performance, as presented in Figure 5, reveals a mixed but generally positive trend between the two variables. In 2018, earning ability was recorded at 4.62%, while financial performance stood at 2.40%. In 2019, earning ability increased slightly to 4.75%, which was accompanied by a corresponding increase in financial performance to 2.60%. However, in 2020, despite a slight decrease in earning ability to 4.50%, financial performance rose to 2.65%, indicating a somewhat incongruent relationship in this year. The year 2021 saw a further increase in earning ability to 4.66%, but financial performance sharply declined to 1.59%, signalling a complex

dynamic between these two variables. Finally, in 2022, as earning ability rose to 4.82%, financial performance improved again to 2.61%. Overall, the trend analysis suggests a generally blend of direct/indirect relationship between earning ability and financial performance, as increases in earning ability are typically associated with increases in financial performance. However, the abrupt decline in 2021 suggests that this relationship may not always be linear and may be influenced by other external or internal factors. This finding aligns with existing literature that posits a positive but occasionally volatile correlation between earning capacity and profitability. Thisaranga and Ariyasena (2021), such methodologies provide a structured framework for examining how internal financial factors influence the overall health and stability of financial institutions. These methods typically involve both quantitative analysis, using financial ratios and trend data and comparative assessments across institutions or time periods. Adopting this approach not only ensures methodological rigor but also enhances the reliability and comparability of the findings within the broader context of financial sector research.

4.3.2.4 Liquidity and Financial Performance

In alignment with the fourth research objective, the study delved into the impact of liquidity on the financial performance of DT-SACCOs in Kenya. The analysis focused on tracking liquidity trends over the period from 2012 to 2020, with the results elegantly depicted in the cluster diagram shown in Figure 7. This visual representation highlights the dynamic relationship between liquidity and financial performance, illustrating how variations in liquidity levels corresponded to fluctuations in the SACCOs' financial outcomes.

The study specifically aimed to assess whether higher liquidity was consistently associated with improved financial performance and how it influenced the variability in performance across the study period. The trends observed in this study contribute to the broader understanding of the interplay between liquidity and financial outcomes within the Kenyan DT-SACCO sector

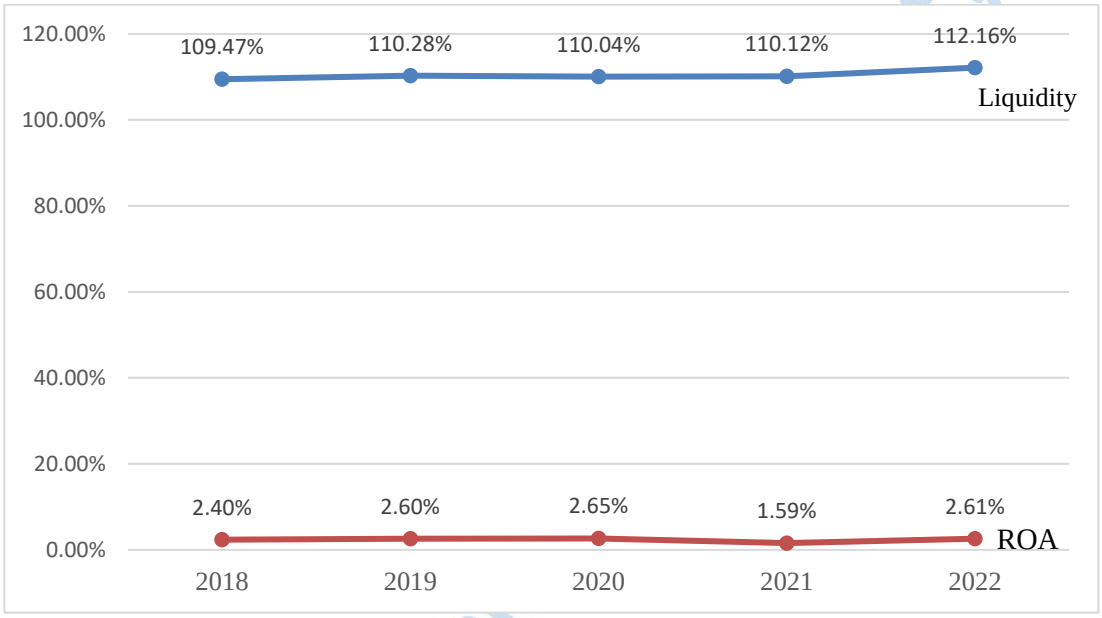

Figure 6: Liquidity and ROA

Source: Research Data (2024)

The analysis presented in Figure 6 unveils a complex and multifaceted relationship between liquidity and financial performance among Kenyan DT-SACCOs throughout the study period. The findings highlight a nuanced interplay, suggesting both direct and indirect connections between liquidity levels and financial outcomes. In 2018, liquidity was recorded at 109.47%, with financial performance standing at 2.40%. As liquidity slightly increased to

110.28% in 2019, financial performance rose to 2.60%, indicating a positive, direct relationship between the two variables during this period.

However, in 2020, despite a marginal dip in liquidity to 110.04%, financial performance continued its upward trajectory, reaching 2.65%. This anomaly suggests that the relationship between liquidity and financial performance may not be entirely direct, with other factors, such as effective management practices or prevailing market conditions, potentially playing a role in influencing the SACCOs' overall performance.

In 2021, although liquidity increased slightly to 110.12%, financial performance sharply declined to 1.59%, highlighting a potential indirect relationship, where higher liquidity did not correspond to improved financial outcomes. This deviation suggests that while liquidity is important, other internal or external dynamics might also play a critical role in shaping financial performance.

Finally, in 2022, liquidity decreased to 112.16%, while financial performance rose to 2.61%, suggesting that the relationship may vary over time, reinforcing the complexity of the liquidity-performance link. This indicates that while there is an observable trend of liquidity being related to financial performance, the nature of this relationship is subject to a variety of factors and is not strictly linear. In their study, Onyekwelu et al. (2018) revealed that liquidity management is a critical factor in determining a bank's financial performance. If a bank maintains too much liquidity, it may miss out on profitable investment opportunities, while too little liquidity can lead to solvency issues and undermine customer confidence. The findings emphasized the importance of achieving an optimal balance, where banks are liquid enough to meet obligations but also strategic in allocating resources to generate income. This

study contributed to the broader understanding of how effective liquidity management can enhance financial health in the banking sector, particularly in developing economies like Kenya.

4.4 Inferential Analysis

This study thoroughly examined the relationships between key financial factors and the financial performance of DT-SACCOs in Kenya, with a significance level set at 5%. Pearson's correlation analysis was employed to explore potential associations between financial performance (dependent variable) and independent variables such as capital adequacy, asset quality, earnings ability, and liquidity. The goal was to assess the strength, direction, and nature of these relationships. Further, MRA was conducted to create a model that captures the combined effects of the financial indicators on the financial performance of DT-SACCOs.

To support the regression analysis, the necessary values for each IV was calculated using simple means. Inferential analysis was applied to these values to identify significant relationships. Through both correlation and regression analyses, the study uncovered the complex interactions between the financial factors and their effect on SACCOs' performance, offering valuable insights into the dynamics shaping their financial outcomes. This insight is invaluable for policy development and financial management in the SACCO sector, providing practical implications for improving the stability and profitability of these institutions.

4.4.1 Testing Classical Linear Regression Model (CLRM) Assumptions

In inferential analysis, ensuring the validity and robustness of the regression model is of utmost importance. This is accomplished by rigorously testing the data to confirm that it adheres to the essential assumptions of the CLRM, as outlined by scholars such as Jeewantha (2021). When these foundational assumptions are satisfied, the data, along with any associated variables, is considered both appropriate and reliable for constructing a robust and credible predictive model, ensuring the integrity and accuracy of the results. However, if the assumptions are violated, the data becomes unsuitable for model estimation and requires modification to normalize it, ensuring its usability in subsequent analyses. Consequently, diagnostic tests for normality, linearity, heteroscedasticity, multicollinearity, and autocorrelation were employed in this study to guarantee the integrity of the regression model and the validity of the conclusions drawn.

4.4.1.1 Normality tests

In the normality testing phase, the Shapiro-Wilk test was used to evaluate the data's distribution, as shown in Table 5. This test is particularly effective for small sample sizes (Shapiro & Wilk, 1965). If the p-value exceeds 0.05, it suggests that the data does not significantly deviate from normality, meaning the residuals follow a normal distribution. Conversely, a p-value less than 0.05 leads to the rejection of the null hypothesis of normality, indicating that the data is not normally distributed (Minitab, 2020). This provides crucial information for the validity of regression models, as violations of normality assumptions may lead to inefficient estimations and misleading statistical inferences (Field, 2013).

Table 4: Analysis by Normality

Item	N	W	V	z	Prob>z
Financial performance of DT-SACCOs in Kenya	871	0.895	58.193	10.006	0.000
Capital adequacy	871	0.731	149.624	12.332	0.000
Asset quality	871	0.983	9.260	5.480	0.000
Earning ability	871	0.916	46.798	9.470	0.000
Liquidity	871	0.952	26.912	8.108	0.000

Source: Research Data (2024)

The normality analysis of the original dataset revealed that only two variables, capital adequacy ($p = 0.067$) and liquidity ($p = 0.148$), followed normal distributions. The remaining variables, financial performance ($p < 0.01$), asset quality ($p < 0.01$), earnings ability ($p < 0.01$), and liquidity ($p < 0.01$), violated the normality assumption, with their distributions significantly deviating from normality. To address this issue, the study employed normalization techniques, including squaring and applying natural logarithms to the non-normally distributed variables. The results of this transformation are shown in Table 6. Normalizing the data was essential for maintaining the validity and robustness of statistical analyses, particularly in regression models. Non-normality can distort the results, leading to biased and inefficient parameter estimates, which could compromise the accuracy of the findings (Hair et al., 2010). Thus, these transformations were necessary to ensure the reliability of the analysis and the robustness of the model's conclusions.

Table 5: Analysis by Normalized Data

Item	N	W	V	Z	Prob>z
Financial performance of DT-SACCOs in Kenya	871	0.999	0.626	-1.152	0.875
Capital adequacy	871	0.997	1.476	0.958	0.169
Asset quality	871	0.998	1.216	0.482	0.315
Earning ability	871	0.998	1.389	0.808	0.209
Liquidity	871	0.999	0.582	-1.332	0.909

Source: Research Data (2024)

The results presented in Table 6 demonstrate that the data was successfully normalized, particularly for the moderated variables. Specifically, the variables, financial performance (p = 0.875), capital adequacy (p = 0.169), asset quality (p = 0.315), earnings ability (p = 0.206), and liquidity (p = 0.909), all exhibited p-values greater than 0.05. These results indicate that the distributions of these variables closely adhered to normality, aligning well with the normal distribution curve. Such findings suggest that following the normalization process, the data met the necessary assumptions for conducting robust statistical analysis. This ensures the validity of the subsequent regression model and enhances the reliability of the study's conclusions.

4.4.1.2 Linearity Tests

Table 6: Linearity Results

		Sum of Squares	df	Mean Square	F	Sig.
Financial Performance * Capital Adequacy	(Combined)	12.739	433	0.029	1.125	0.109
	Linearity	0.037	1	0.037	1.417	0.234
	Deviation from Linearity	12.702	432	0.029	1.125	0.110
Financial Performance * Asset Quality	(Combined)	11.905	423	0.028	1.026	0.393
	Linearity	1.96	1	1.960	71.475	0.000
	Deviation from Linearity	9.945	422	0.024	0.859	0.943
Financial Performance * Earning Rating	(Combined)	11.884	464	0.026	0.847	0.959
	Linearity	0.043	1	0.043	1.418	0.234
	Deviation from Linearity	11.841	463	0.026	0.846	0.960
Financial Performance * Liquidity	(Combined)	9.837	332	0.030	1.113	0.137
	Linearity	0.016	1	0.016	0.607	0.436
	Deviation from Linearity	9.821	331	0.030	1.114	0.134

Source: Research data (2024)

4.4.1.3 Multicollinearity Tests

In this study, multicollinearity was thoroughly assessed to determine whether any interdependencies among the independent variables (IVs) could undermine the reliability and validity of the regression model. Multicollinearity occurs when there are high correlations between two or more independent variables, which can distort the estimation of regression coefficients.

This distortion happens because multicollinearity inflates the standard errors of the regression estimates, which in turn leads to higher p-values and reduced t-statistics for key variables. As a result, important variables may appear statistically insignificant, even though they may have meaningful effects on the dependent variable.

To detect multicollinearity, the study utilized two commonly accepted diagnostic measures: the Variance Inflation Factor (VIF) and tolerance values. The VIF quantifies how much the variance of an estimated regression coefficient is inflated due to collinearity with other independent variables, while the tolerance value represents the proportion of variance in a given independent variable that is not explained by the other independent variables. According to established criteria, a VIF greater than 10 or a tolerance value below 0.1 (10%) suggests problematic multicollinearity (Hair et al., 2019), signalling that the model may be compromised due to excessive correlation among the predictors. The results of the multicollinearity diagnostic tests are presented in Table 7, which includes the relevant VIF and tolerance values for each independent variable in the model. This table provides valuable insights into whether multicollinearity is a concern within the dataset, allowing for the

identification of any variables that may need to be addressed or excluded to ensure the robustness and accuracy of the regression analysis.

Table 7: Testing Multicollinearity Issues

Variable	VIF	Tolerance = 1/VIF
Capital adequacy	1.46	0.687
Asset quality	1.55	0.644
Earning ability	1.41	0.710
Liquidity	1.84	0.545
Year		
2019	2.86	0.350
2020	3.35	0.298
2021	3.20	0.312
2022	3.95	0.253
Mean VIF	2.45	

Source: Research Data (2024)

Founded on Table 7, The findings indicate that there were no multi-collinearity concerns among the IVs, as indicated by the VIFs for capital adequacy (VIF= 1.46), asset quality (VIF= 1.55), earning ability (VIF= 1.41), and liquidity (VIF= 1.84), all of which were less than 10. Moreover, the average VIF was 2.45, which was still below 10.

4.4.1.4 Heteroscedasticity test

The assumption of homoscedasticity stipulates that the variance of the error terms remains constant across all levels of the explanatory variables. In essence, this means that the spread or dispersion of the error terms should be consistent for all values of the independent variables. Should the error terms exhibit varying levels of dispersion, this would signal the presence of heteroscedasticity. To evaluate this assumption, the study employed the Cook-Weisberg test, which detects heteroscedasticity by examining the probability value. A p-

value less than 0.05 indicates the presence of heteroscedasticity, while a p-value greater than 0.05 supports the assumption of homoscedasticity, suggesting no significant issues with the variance of the error terms.

Additionally, the Breusch-Pagan test was employed to further probe potential heteroscedasticity concerns at a 5% significance level. A p-value below 0.05 would suggest the existence of heteroscedasticity, thereby violating the assumption of constant variance. The results of these tests are presented below, offering the statistical evidence needed to assess the homoscedasticity of the model and ensuring the validity of the regression analysis..

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of fincialperformance

chi2(1) = 1.22

Prob > chi2 = 0.2695

The p-value for all the variables (p = 0.2695) exceeded the threshold of 0.05, indicating the absence of heteroscedasticity issues. This result suggests that the variance of the error terms remained constant across all levels of the explanatory variables, in alignment with the assumption of homoscedasticity. Consequently, the model can be considered robust in terms of error variance, ensuring the validity of subsequent inferential analyses (Gujarati & Porter, 2020).

4.4.1.5 Autocorrelation tests

The Durbin-Watson test statistic is a critical diagnostic tool used to assess the presence of autocorrelation in the residuals of a regression model. Autocorrelation refers to the correlation between consecutive error terms, which can undermine the reliability of regression results by violating the assumption of independent errors. The Durbin-Watson statistic measures the degree of correlation between these successive residuals.

A Durbin-Watson value of approximately 2 indicates that there is no autocorrelation, suggesting that the residuals are independent of each other. However, if the value significantly deviates from 2, it signals the presence of autocorrelation. Specifically, values below 2 indicate positive autocorrelation, where consecutive residuals are correlated in the same direction, while values above 2 suggest negative autocorrelation, where consecutive residuals move in opposite directions. The Durbin-Watson test is widely endorsed in econometric analysis for evaluating the independence of residuals, making it a crucial component in ensuring the robustness and reliability of regression findings (Wooldridge, 2016; Gujarati & Porter, 2020). By detecting autocorrelation, the test helps researchers ensure the validity of their regression models and the accuracy of their statistical inferences.

Table 8: Analysis by Autocorrelation

Durbin-Watson
1.713

Source: Research Data (2024)

Durbin-Watson value registered in Table 8 was 1.713. noticeably, 1.713 is greater than 1.5 while it is less than 2.5. That it is not lower than 1.5 and at the same it not surpassing 2.5, the data is not autocorrelating.

4.4.1.6 Hausman Tests

The assumption underlying the analysis posits that the random effects model is the most appropriate for this study. This suggests that individual-level effects are sufficiently captured by the random effects framework, indicating that variations across entities are appropriately modeled. In order to validate this assumption, the study tested the null hypothesis, which posits that random effects are not necessary, and that a fixed effects model may be more suitable. The results of this test revealed significant differences, thereby supporting the appropriateness of the random effects model for this dataset. This approach is consistent with the principles outlined in econometric literature, where random effects models are preferred when individual heterogeneity is presumed to be uncorrelated with explanatory variables (Baltagi, 2013; Wooldridge, 2016).

H_0: There is difference in the results (random effects is appropriate)

The results are Table 9.

Table 9: Hausman Tests

Item	---- Coefficients ---- (b) FE	(B) RE	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Capital adequacy	0.1167065	0.3122803	-0.1955737	
Asset quality	-0.228793	-0.0524261	-0.1763669	
Earning ability	-0.0641173	-0.0666497	0.0025324	0.0055497
Liquidity	0.2968265	0.4843445	-0.187518	

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

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 4644.53

Prob>chi2 = 0.0000

(V_b-V_B is not positive definite)

The results reveal a p-value of less than 0.01, which is significantly below the 0.05 threshold, indicating statistical significance and allowing for the rejection of the null hypothesis. This suggests the presence of a meaningful effect or difference in the study. As a result, the fixed effects model is identified as the preferred analytical approach. It provides consistent estimates, accounts for the panel data structure, and controls for unobserved heterogeneity, thereby enhancing the reliability of the findings and making it well-suited for the data's unique characteristics. Furthermore, the initial hypothesis, which posited that individual-level effects could be appropriately modelled using a fixed-effects approach, is ultimately rejected. This conclusion is drawn from the specification of the current model, indicating that

while random effects may be more suitable for other models, they are not optimal in this particular context (Greene, 2018).

4.4.2 Correlation analysis

In this study, Pearson's Product Moment (PPM) correlation was used to assess the relationships between the IVs and the DV, financial performance of DT-SACCOs in Kenya. The initial analysis involved reviewing the correspondence using Pearson's correlation coefficient to determine if any IVs were significantly related to SACCOs' financial performance. This statistical method helped quantify the strength and direction of linear relationships, providing a comprehensive understanding of how these financial factors interact and influence performance (Pallant, 2020).

Table 10: Analysis by Correlation analysis

	Financial performance	Capital adequacy	Asset quality	Earning ability	Liquidity
Financial performance	1				
Capital adequacy	0.4827	1			
	0.0000				
Asset quality	0.1945	0.1275	1		
	0.0000	0.0002			
Earning ability	-0.1617	-0.1245	-0.1310	1	
	0.0000	0.0002	0.0001		
Liquidity	0.5858	0.3985	0.4160	-0.137	1
	0.0000	0.0000	0.0000	0.000	

Source: Research Data (2024)

The results presented in Table 10 detail the relationships between the dependent variable (DV), which is the financial performance of DT-SACCOs in Kenya, and the independent variables (IVs) including capital adequacy, asset quality, earnings ability, and liquidity. Each of these relationships was found to be statistically significant, with p-values less than 0.01, well below the conventional threshold of 0.05. This provides strong evidence against the null hypothesis, suggesting that the observed relationships are not due to random chance.

Among the independent variables, liquidity exhibited the strongest correlation with financial performance, with a correlation coefficient of r = 0.5858. This indicates a moderate positive relationship, meaning that as liquidity increases, the financial performance of DT-SACCOs tends to improve. In other words, SACCOs with better liquidity management are more likely to experience stronger financial outcomes. Following liquidity, capital adequacy showed a moderately strong positive correlation of r = 0.4827.

While still positive, the relationship between capital adequacy and financial performance was somewhat weaker than that of liquidity, suggesting that capital adequacy also plays a significant role in improving financial performance, but to a lesser degree than liquidity.

In contrast, asset quality and earnings ability showed relatively weak correlations with financial performance. Asset quality had a correlation coefficient of r = 0.1945, indicating a weak positive relationship, while earnings ability exhibited a negative correlation of r = -0.1617. Both of these correlation coefficients are below 0.3, suggesting that these factors have a minor impact on financial performance. The negative correlation for earnings ability is particularly noteworthy, as it implies that higher earnings ability might be inversely related to financial performance, or at the very least, less influential in this context.

The moderate strength of the relationships between liquidity and capital adequacy with financial performance suggests that these two factors have a more significant influence on the financial outcomes of DT-SACCOs. These findings highlight the critical importance of liquidity and capital adequacy in driving financial success for SACCOs. On the other hand, the weaker correlations of asset quality and earnings ability suggest that these variables may have a less direct or significant role in determining financial performance in the context of Kenyan DT-SACCOs.

Overall, the study underscores the varying degrees of influence that different financial characteristics have on SACCO performance, with liquidity and capital adequacy emerging as key determinants of financial success, while asset quality and earnings ability appear to be less significant contributors in this setting..

4.4.3 Regression Analysis

MRA serves a critical function in forecasting variations in the (DV as influenced by changes in the IVs. In this study, MRA was employed to examine the relationships among key variables, specifically focusing on explaining the financial performance of DT-SACCOs. Following the identification of significant relationships, MRA was used to develop a predictive model incorporating all IVs to estimate financial performance, based on a comprehensive underlying equation. This approach enabled the study to assess how capital adequacy, asset quality, earnings ability, and liquidity collectively influence financial performance as shown in Table 11, offer valuable insights into the strength and nature of the relationships between the IVs and DV.

Table 11: Regression Coefficients

Source	SS	df	MS	Number of obs = 871		
				F(8, 862) = 137.21		
Model	0.47308	8	0.05913	Prob > F = 0.000		
Residual	0.37150	862	0.00043	R-squared = 0.5601		
				Adj R-squared = 0.5561		
Total	0.84458	870	0.00097	Root MSE = .02076		
Financial performance	Coef.	Std. Err	t	P>|t|	[95% Conf	Interval]
Capital adequacy	0.11671	0.02952	3.95	0.000	0.05876	0.17465
Asset quality	-0.22879	0.02831	-8.08	0.000	-0.28435	-0.17323
Earning ability	-0.06412	0.02686	-2.39	0.017	-0.11683	-0.01140
Liquidity	0.29683	0.03067	9.68	0.000	0.23664	0.35702
Year						
2019	-0.03389	0.00299	-11.34	0.000	-0.03975	-0.02802
2020	-0.04187	0.00321	-13.02	0.000	-0.04817	-0.03556
2021	-0.04996	0.00314	-15.93	0.000	-0.05612	-0.04381
2022	-0.03479	0.00348	-9.99	0.000	-0.04163	-0.02795
_cons	0.03468	0.00254	13.65	0.000	0.02969	0.03967

Source: Research Data (2024)

The results indicate that the regression model employed to estimate financial performance, incorporating key variables such as capital adequacy, asset quality, earnings ability, and liquidity, demonstrates statistical robustness. This is substantiated by a p-value of less than 0.05 ($p < 0.01$), signifying a strong relationship between the independent variables (IVs) and the dependent variable (DV). The analysis, guided by the beta values derived from equation (i), was designed to test the null hypothesis (H_0: $\beta_i = 0$), which asserts that the coefficients for the IVs are equal to zero, implying no effect on financial performance. In contrast, the alternative hypothesis (H_a: $\beta_i \neq 0$) posits that at least one coefficient is non-zero, suggesting a significant influence of the corresponding variable on financial performance. The rejection of the null hypothesis in favor of the alternative occurs when the p-value is below the critical threshold of 0.05, thereby indicating that the IVs collectively exert a statistically significant impact on the financial performance of the institutions under investigation, reinforcing the validity of the model. These findings align with prior studies that emphasize the importance of statistical significance in regression models related to financial performance (Ojili, 2023). By confirming that at least one IV is meaningfully related to financial performance, the study contributes to the expanding body of literature on the determinants of financial stability in financial institutions.

In this study, the p-value for the regression model falls below the standard significance threshold of 0.05, indicating that at least one of the beta coefficients is significantly different from zero. This conclusion is further supported by the statistical results ($p < 0.01$, $F = 137.21$), which demonstrate a robust relationship between the IVs and the DV. As a result, the null hypothesis (H_0: $\beta_i = 0$), asserting that the coefficients for capital adequacy, asset quality, earnings ability, and liquidity are zero, is rejected.

The rejection of this null hypothesis in favor of the alternative hypothesis (H_a: $\beta_i \neq 0$) affirms that the IVs have a statistically significant effect on the financial performance of Kenyan DT-SACCOs at a significance level of $\alpha < 0.05$.

Further validation of the regression model's robustness is provided through scatter plot analysis, which reveals a close alignment of data points with the line of best fit. This suggests that the regression model effectively captures the relationship between the IVs and the DV—financial performance. Moreover, the p-values for each of the IVs are all below 0.05, confirming that capital adequacy, asset quality, earnings ability, and liquidity each significantly contribute to explaining the financial performance of Kenyan DT-SACCOs.

The coefficient of determination (R^2) value of 0.5601 indicates that the combined effects of the independent variables, capital adequacy ($p < 0.01$), asset quality ($p < 0.01$), earnings ability ($p = 0.017$), and liquidity ($p < 0.01$), account for 56.01% of the variance in financial performance. This suggests that the model, incorporating these financial indicators, is able to explain a substantial proportion of the variability in financial performance, thereby offering relatively accurate predictions based on fluctuations in these key financial metrics. Therefore, changes in capital adequacy, asset quality, earnings ability, and liquidity can reliably predict the financial performance of Kenyan DT-SACCOs. These findings are consistent with the broader body of literature on financial determinants of institutional performance. Notably, Mutunga and Gatauwa (2021) also underscore the value of incorporating multiple financial indicators into regression models to provide valuable insights into performance dynamics and profitability forecasting.

These studies further validate the significant role that variables such as capital adequacy, asset quality, earnings ability, and liquidity play in shaping the financial outcomes of financial institutions.

The study investigated the hypotheses listed below;

H_{01}: Capital adequacy does not have statistically significant effect on financial performance of Savings and credit co-operative societies in Kenya.

The capital adequacy statistics ($\beta = 0.1167$; $p = 0.001$) indicate a p-value below the conventional threshold of 0.05, signifying that capital adequacy plays a crucial role in assessing the financial performance of Kenyan DT-SACCOs. This outcome provides strong support for the rejection of the null hypothesis (H_0) at the $\alpha = 0.05$ significance level, thereby confirming that capital adequacy is significantly different from zero and exerts a substantial positive impact on financial performance. These results are consistent with prior research by Ojili (2023), which identified a significant inverse relationship between capital adequacy and the financial success. Ojili's (2023) study found that insufficient capital contributed to a decline in financial performance, emphasizing the critical role of capital sufficiency in safeguarding member deposits and protecting creditors from potential business losses. Capital adequacy, defined as the availability of sufficient capital to absorb potential losses, is a fundamental determinant of financial stability. Consequently, the findings of this study corroborate those of Ojili (2023), underscoring the importance of adequate capital for the financial health and sustainability of DT-SACCOs. The lack of sufficient capital in the context of Western Kenya had a detrimental effect on the financial outcomes of these

institutions, further reinforcing the necessity for effective capital management within the sector.

The next step in this analysis is to assess the impact of asset quality, guided by the following hypothesis:

H_{02}: Asset quality does not have statistically significant effect on financial performance of Deposit Taking Savings and credit co-operative societies in Kenya

The analysis of asset quality in this study reveals a coefficient (β) of -0.2288, accompanied by a p-value of less than 0.01, which is well below the conventional threshold of 0.05. This statistically significant p-value leads to the rejection of the null hypothesis (H_0), which posits that the coefficient for asset quality is zero. Therefore, at a significance level of $\alpha = 0.05$, there is compelling evidence to support the conclusion that asset quality exerts a significant impact on the financial performance. The negative coefficient associated with asset quality suggests that poor asset quality negatively affects the financial performance of these SACCOs. Specifically, a high level of NPLs or suboptimal asset management practices are correlated with diminished financial outcomes. The findings of this study are consistent with previous research, including Adebayo (2017), which highlighted a significant negative relationship between asset quality and bank performance. Adebayo's research found that poor asset quality, particularly when characterized by a high proportion of non-performing loans (NPLs), directly led to decreased profitability and increased financial instability within banks. Similarly, SASRA (2022) identified that DT-SACCOs with higher levels of non-performing assets experienced reduced profitability and weakened capital adequacy, further underscoring the pivotal role that asset quality plays in shaping financial outcomes.

The results of this study reinforce the critical importance of asset quality in determining financial performance, especially for DT-SACCOs in Kenya. Poor asset quality, marked by an increase in NPLs, can have detrimental effects on the financial health of these institutions. In light of this, the study emphasizes the need for DT-SACCOs to prioritize high-quality assets and implement sound lending practices to maintain their financial stability over the long term. Effective asset management strategies, coupled with prudent lending decisions, are fundamental in minimizing the risks associated with non-performing loans and ensuring the sustainability of these institutions. The study, therefore, highlights that maintaining strong asset quality is not just a financial necessity but a strategic imperative for safeguarding the growth and stability of DT-SACCOs in an increasingly competitive and challenging financial landscape.

The study examined the impact of earnings ability on the financial performance of Kenyan DT-SACCOs by testing the associated hypothesis. The analysis of this relationship was conducted by evaluating the coefficient (β) and corresponding p-value. Earnings ability, a critical financial metric, was found to significantly influence the financial performance of these SACCOs. As demonstrated by the results, a positive coefficient suggests that improvements in earnings capacity are directly linked to better financial outcomes for the SACCOs.

H_{03}: Earning ability does not have statistically significant effect financial performance of Deposit Taking Savings and credit co-operative societies in Kenya.

The analysis of earnings ability in this study yields a coefficient (β) of -0.0641, coupled with a p-value of 0.017, which is well below the conventional significance threshold of 0.05. This

statistically significant result prompts the rejection of the null hypothesis (H_0), which asserts that the earnings ability coefficient is zero.

Consequently, at a significance level of $\alpha = 0.05$, there is compelling evidence to conclude that earnings ability significantly influences the financial performance of Kenyan DT-SACCOs.

The negative coefficient associated with earnings ability indicates an inverse relationship between earnings generation and financial performance in the context of DT-SACCOs. Specifically, the results suggest that a decline in the ability to generate consistent earnings or poor earnings performance negatively impacts the overall financial outcomes of these institutions. This finding aligns with previous research, including studies by Mollah et al. (2014) and Kosmidou et al. (2008), which highlight the critical role of earnings ability in ensuring the profitability and stability of financial institutions. In this context, the inability to sustain robust earnings can undermine the financial health of SACCOs, reinforcing the importance of effective strategies to enhance earnings generation and long-term financial stability.

Mollah et al. (2014) highlight that earnings ability not only boosts profitability but also serves as a buffer against financial instability, particularly in times of economic volatility. This is crucial for financial institutions, including DT-SACCOs, as they need to generate consistent income to weather external shocks. Similarly, Kosmidou et al. (2008) stress that robust earnings are directly correlated with improved financial performance and a bank's long-term viability. These findings underscore the critical importance of enhancing income-generating strategies and improving operational efficiency within DT-SACCOs. By focusing on

strengthening their earning capacity through diversified revenue streams and effective cost management, DT-SACCOs can improve their financial health and ensure long-term sustainability.

This aligns with the broader literature, which suggests that financial institutions must adopt efficient management practices to safeguard profitability and stability over time. Such strategies are essential not only for growth but also for resilience in a competitive and often volatile financial landscape.

In the context of hypothesis testing, this study aimed to explore the influence of liquidity on the financial performance of DT-SACCOs in Kenya. Specifically, the research sought to investigate how liquidity interacts with other critical financial performance indicators, such as capital adequacy, asset quality, and earnings ability. Liquidity has consistently been identified in financial literature as a key determinant of institutional stability, with numerous studies highlighting its essential role in maintaining solvency and facilitating the smooth operation of financial institutions (Hassan & Bashir, 2003; Athanasoglou et al., 2006).

Liquidity is widely regarded as a fundamental factor for financial institutions, as it ensures the capacity to meet short-term obligations without compromising long-term financial stability (Kosmidou, 2008). In this study, the relationship between liquidity and financial performance was carefully examined to ascertain whether it corroborates prior research findings. A positive correlation between liquidity and financial performance would indicate that higher liquidity levels enable SACCOs to effectively navigate operational challenges, mitigate financial risks, and enhance profitability. This finding would further emphasize the critical role liquidity plays in reinforcing the overall financial stability and performance of

DT-SACCOs. By examining liquidity alongside other financial performance factors, the study contributes to the broader discourse on financial determinants in cooperative financial institutions and provides insights into the nuanced relationships between these variables.

H_{04}: Liquidity does not have statistically significant effect financial performance of Deposit Taking Savings and credit co-operative societies in Kenya

The results of the analysis, with a p-value of less than 0.05 and a regression coefficient ($\beta = 0.2968$; $p < 0.01$), provide compelling evidence to reject the null hypothesis (H_0), which posits that liquidity does not significantly impact financial performance. At the 0.05 significance level ($\alpha = 0.05$), these findings demonstrate that liquidity has a statistically significant and positive effect on the financial performance of Kenyan DT-SACCOs. This outcome is consistent with the work of Muriuki (2022), whose study also established a positive and significant relationship between liquidity and the financial performance of DT-SACCOs in Kenya. The positive regression coefficient suggests that higher liquidity levels enable these institutions to better manage their short-term financial obligations, thereby contributing to enhanced financial stability and overall performance. This result underscores the critical role liquidity plays in supporting the operational efficiency and financial health of DT-SACCOs.

This outcome is consistent with broader research on liquidity in financial institutions, which often finds that sufficient liquidity is essential for maintaining solvency, managing risks, and ensuring efficient operations. Numerous studies emphasize the crucial role liquidity plays in determining profitability and the overall financial success of financial institutions, particularly within the banking sector. For instance, Charmler et al. (year) identified a weak

yet positive correlation between liquidity and asset returns, suggesting that while liquidity does influence returns, its impact is relatively minor. The study also highlighted a slight negative relationship between net assets, gross interest-bearing liabilities, and ROE, implying that these factors do not significantly drive profitability in the observed context.

Moreover, the research found that capital adequacy ratios and bank size exhibited positive correlations with various control variables, emphasizing the importance of solid financial fundamentals in influencing bank performance. One key takeaway from the study was the need for banks to strike a balance by identifying an optimal level of liquid assets. While liquidity is necessary to ensure operational flexibility and solvency, excessive accumulation of liquid assets could be detrimental to profitability. Holding too many liquid assets may limit a bank's ability to deploy resources more productively, potentially hindering returns. Therefore, banks must carefully evaluate the point at which increasing liquidity could begin to erode profitability.

This concept aligns with the findings of Onyekwelu et al. (2018), who established a significant and positive relationship between liquidity and profitability ratios in financial institutions. Their research further underscored that efficient liquidity management enhances public confidence in the financial system, bolstering the stability of financial institutions. Low liquidity levels are often attributed to suboptimal management decisions, which can negatively impact a bank’s financial performance. The authors stressed that effective liquidity management is essential for the sustainability of financial institutions, as it helps them navigate financial stress while maintaining investor and customer confidence.

These findings are particularly relevant for DT-SACCOs in Kenya, where liquidity management plays a pivotal role in ensuring profitability and long-term stability. By carefully balancing liquidity with other operational factors, DT-SACCOs can position themselves for sustainable growth while remaining resilient to economic and financial challenges. Ultimately, sound liquidity management is integral to the continued health, profitability, and viability of these institutions, allowing them to foster investor and customer trust while safeguarding their financial well-being..

The regression model is;

$Y = 0.03468 + 0.1167X_1\ 0.2288X_2 - 0.0660 + 0.2039X_4$……(i)

Such that

Financial performance of DT-SACCOs in Kenya = 0.03468 + 0.1167 (capital adequacy) 0.2288 (asset quality) -0.0641 (earning ability) + 0.2968 (liquidity).

The analysis underscores key dynamics between financial performance and various independent variables in Kenyan DT-SACCOs. When all independent variables are zero, the financial performance baseline is 0.03468, representing the inherent financial state before considering the influence of external factors. Based on asset quality ($\beta_1 = -0.2288$). A one-unit increase in asset quality results in a 0.2288-unit reduction in financial performance. This inverse relationship suggests that higher asset quality, often reflected by higher proportions of non-performing loans (NPLs), adversely impacts profitability. This finding highlights the critical need for robust credit management practices to minimize NPLs and enhance financial stability. On earning ability ($\beta_1 = -0.0641$), a one-unit rise in earning ability corresponds to a 0.0641-unit decrease in financial performance.

This counterintuitive result could stem from inefficiencies in income-generating strategies or rising costs associated with earnings expansion that fail to translate into proportional returns. Addressing operational inefficiencies might mitigate this negative impact. Based on capital adequacy ($\beta_1 = 0.1167$), capital adequacy also positively impacts financial outcomes, with a one-unit increment leading to a 0.1167-unit rise in performance. Adequate capitalization ensures the ability to absorb financial shocks and protects member deposits, promoting institutional resilience. With liquidity ($\beta_1 = 0.2968$), liquidity exhibits the strongest positive influence, with a one-unit increase yielding a 0.2968-unit improvement in financial performance. Effective liquidity management enables DT-SACCOs to meet financial obligations while leveraging opportunities for growth, thereby enhancing profitability.

4.5 Discussions

Based on the analytical findings, this research integrates descriptive and inferential statistics to develop a comprehensive discussion. The narrative meticulously references all pertinent tables and figures presented within this chapter, ensuring that the analysis is directly aligned with the study's objectives and hypotheses. Each objective was rigorously examined in relation to its corresponding hypothesis, facilitating a coherent and logical progression of arguments and conclusions. The discussion is further enriched through the integration of insights from the literature reviewed in Chapter Two. By consistently referencing and engaging with cited studies, the analysis provides a critical examination of how the findings of this research align with, or diverge from, the existing body of literature, thus situating the study within the broader academic discourse.

This approach enables a critical evaluation of the results within the broader academic context, identifying areas of alignment or contradiction and offering interpretations grounded in theoretical and empirical evidence. For clarity and structure, the discussion is systematically organized into sections, each dedicated to a specific objective. The sequencing follows the order of the objectives as outlined in the study framework, ensuring logical flow and coherence. This format not only facilitates a focused exploration of each objective but also highlights the interconnections between the findings and the overarching research goals. Through this methodical approach, the study provides a robust framework for understanding the relationships between the variables and their implications for the research problem.

4.5.1 Discussions on Capital Adequacy and Kenyan DT-SACCOs' Financial Performance

The descriptive results from this study suggest a generally positive and directly proportional relationship between capital adequacy and financial performance among DT-SACCOs. Specifically, as capital adequacy increases, financial outcomes for these institutions tend to improve, reinforcing the notion that maintaining sufficient capital is essential for the stability and financial health of DT-SACCOs. This finding is consistent with prior research, including SASRA (2021) and Chepkemoi (2023), which have highlighted the importance of adequate capital in ensuring financial resilience.

The regression results further support this observation, showing that capital adequacy has a statistically significant positive impact on the financial performance of Kenyan DT-SACCOs.

This aligns with the work of Ojili (2023), whose study on DT-SACCOs in Western Kenya revealed a significant inverse relationship between capital adequacy and financial performance. Ojili's research emphasized that inadequate capital is detrimental to financial performance, noting its role in safeguarding member deposits and protecting creditors from potential losses. In this context, capital sufficiency is defined as the maintenance of enough capital to mitigate risks and ensure operational stability.

Moreover, similar findings are reported by Mwangi (2020), who also demonstrated that capital sufficiency positively influenced the financial performance of DT-SACCOs. Mwangi's analysis underscored that adherence to capital adequacy requirements helped reduce operational risks, foster public trust in the financial stability of SACCOs, and created a risk buffer against potential capital losses. These factors collectively contributed to enhanced financial performance and operational success. Thus, the findings of this study reinforce the critical role that capital adequacy plays in supporting the long-term viability and financial health of DT-SACCOs.

The findings presented by Lekaaso, Cherono, and Rintari (2020) offer a contrasting view to the generally accepted notion that capital sufficiency is positively correlated with financial performance. Their study, conducted in Samburu County, found no evidence to support a relationship between capital adequacy and the financial performance of SACCOs.

This divergence from previous research suggests that the impact of capital adequacy may not be universal and could be influenced by specific contextual factors, such as regional dynamics, economic conditions, or the financial health of individual SACCOs. For example, the unique challenges faced by SACCOs in Samburu County, such as limited access to capital

or infrastructure constraints, may undermine the potential benefits of maintaining higher capital levels. Therefore, these findings highlight the importance of considering local contexts when assessing the relationship between capital sufficiency and financial performance.

In contrast, the study by Nyabaga and Wepukhulu (2020) provides broader insights into the complexities surrounding capital adequacy and financial performance. Their research revealed that, while asset quality negatively influenced return on assets (ROA), the effect was not statistically significant. This finding underscores the nuanced nature of asset quality's impact, suggesting that other factors may have a more pronounced effect on ROA. However, Nyabaga and Wepukhulu (2020) found that leverage significantly improved return on equity (ROE) and had a modest positive impact on ROA, indicating that the relationship between leverage and financial performance is more direct and impactful. Additionally, their study affirmed the positive role of bank size and capital adequacy in enhancing financial performance, particularly in terms of institutional resilience and profitability. This supports the view that, while the positive effects of capital sufficiency are broadly acknowledged, the extent of its influence can vary based on other financial and operational variables.

Together, these findings emphasize the complex and context-dependent nature of the relationship between capital adequacy and financial performance. While the general consensus suggests that adequate capital improves financial outcomes by enhancing liquidity, reducing risk, and fostering institutional stability, the divergent results from Lekaaso, Cherono, and Rintari (2020) highlight the importance of considering regional and institutional-specific factors. This reinforces the need for a nuanced approach when

evaluating the role of capital adequacy in the financial performance of SACCOs, acknowledging that its effects may not be uniform across different regions or contexts. Thus, capital sufficiency is just one of many factors that influence the financial performance of SACCOs, and its impact should be assessed in conjunction with other variables such as asset quality, leverage, and the specific challenges faced by individual institutions.

4.5.2 Discussions on Asset Quality and DT-SACCOs' Financial Performance

The results suggest that asset quality and the financial performance of DT-SACCOs exhibit a negatively proportional relationship. Specifically, as asset quality fluctuates, with a deterioration in the quality of assets, there is a corresponding decrease in financial performance. This negative correlation highlights the significant impact of asset quality on the financial outcomes of DT-SACCOs, indicating that poor asset quality, characterized by higher levels of non-performing loans, undermines profitability and overall financial stability. Thus, maintaining high asset quality is critical for sustaining the financial health and operational success of these institutions. This pattern indicates that higher asset quality may not necessarily translate into improved financial performance, and vice versa, highlighting the complex dynamics between asset management and profitability within these financial institutions.

The inferential analysis reveals that asset quality has a statistically significant negative influence on the financial performance of Kenyan DT-SACCOs. These findings align with the work of Adebayo (2017), whose research highlighted a significant negative correlation between asset quality and bank performance. Adebayo (2017) attributed this relationship to

the adverse effects of high levels of non-performing loans (NPLs), which often undermine profitability and overall financial health in financial institutions.

Contrasting findings are presented in the study by Mutunga and Gatauwa (2021), which determined that asset quality positively influenced the financial performance of SACCOs. This positive relationship suggests that SACCOs with higher quality assets, such as performing loans and low levels of non-performing loans (NPLs), may experience better financial outcomes. However, the study's context was limited to Nairobi City County, which may affect the generalizability of its conclusions to other regions with different economic conditions or market dynamics. This limitation raises important questions about whether the observed relationship holds in other regions with different economic conditions, such as rural areas or regions facing financial instability. The discrepancy in findings underscores the need to consider regional economic conditions, operational dynamics, and other local factors when evaluating the relationship between asset quality and financial performance, as these can vary significantly from one region to another.

Further supporting evidence comes from Gadzo et al. (2019), whose research highlighted the significant role of asset quality in improving the performance of banks. Their study underscores the importance of maintaining high-quality assets such as performing loans and well-managed investments because these contribute to enhanced financial stability and operational efficiency. When financial institutions hold a higher proportion of high-quality assets, they are better positioned to weather economic shocks and reduce the risks associated with defaults. Additionally, good asset quality strengthens investor confidence and fosters a more stable financial environment.

Similarly, Ademba (2019) found a significant positive correlation between asset quality and the financial performance of deposit-taking SACCOs. This study reinforces the idea that high-quality assets contribute to improved financial outcomes by reducing the risks associated with default. SACCOs with a higher proportion of high-quality assets are better able to generate steady income streams and reduce the likelihood of incurring substantial financial losses due to bad loans. Moreover, the study suggests that SACCOs with better asset quality gain credibility in the eyes of investors and members, which can lead to increased investment and further financial stability. These findings emphasize that asset quality is a key factor in shaping the long-term sustainability and profitability of SACCOs, particularly in terms of building trust and ensuring operational success. Overall, while findings from different studies may vary, the consensus is clear that asset quality plays a crucial role in the financial health and performance of financial institutions, including SACCOs. The impact of asset quality, however, may depend on contextual factors such as regional economic conditions, institutional characteristics, and the overall management of assets. Therefore, policymakers and financial managers should consider these factors when designing strategies to enhance financial performance through effective asset management.

These varying perspectives highlight the complex interplay between asset quality and financial performance, influenced by institutional characteristics, regional economic conditions, and the specific metrics used to assess asset quality.

While the negative impact observed in this study aligns with concerns about non-performing assets, other research demonstrates the potential for positive outcomes when asset quality is effectively managed.

4.5.3 Discussions on Earning Ability and DT-SACCOs' Financial Performance

The trend analysis reveals a complex and dynamic relationship between earning ability and financial performance among Kenyan DT-SACCOs. Generally, increases in earning ability are associated with improved financial performance. However, the sharp decline observed in 2021 highlights that this relationship is not consistently linear. Factors such as economic disruptions, policy changes, or internal inefficiencies likely contributed to this anomaly, suggesting that the link between earning ability and financial performance is influenced by multifaceted external and internal elements. This aligns with existing literature, which identifies earning capacity as a key but occasionally volatile determinant of profitability.

Inferential analysis indicates that earning ability negatively affects financial performance in Kenyan DT-SACCOs. This conclusion aligns with Zagherd and Barghi's (2017) findings, which highlighted a significant reduction in return on investment attributable to earning capacity under conditions of resource mismanagement or adverse external market pressures. Their research suggests that while earning potential is critical, misaligned strategies or external shocks can undermine its benefits.

Huynh (2018) explored the relationship between company performance and earnings quality, emphasizing that this relationship is conditional and often mediated by variables such as corporate image and reputation. For instance, strong earnings quality, when coupled with a positive corporate reputation, significantly enhances organizational performance. This

underscores the interplay between financial indicators and broader organizational attributes in shaping outcomes.

Conversely, research by Thisaranga and Ariyasena (2021) presents a different perspective, showing that earning potential can significantly enhance performance. This divergence in findings might be attributed to contextual differences, such as regional economic conditions or industry-specific factors, underscoring the variability in the earning ability-performance relationship.

Further insights come from Ndungu (2019), who demonstrated that profits, as measured by return on assets (ROA), positively influence financial distress mitigation. Ndungu's findings suggest that profitability and effective liquidity management are essential for reducing financial distress, reinforcing the role of consistent and robust profits as indicators of organizational sustainability and growth potential.

Thus, while earning ability is a significant determinant of financial performance, its impact varies depending on operational, contextual, and strategic factors. For DT-SACCOs, optimizing earning strategies while considering external influences and aligning them with broader organizational goals is essential for sustainable financial performance.

4.5.4 Discussions on Liquidity and DT-SACCOs' Financial Performance

The assessment of liquidity's impact on the financial performance of Kenyan DT-SACCOs) accentuates their formidable ability to fulfill short-term financial obligations with efficiency and stability. This robust liquidity management ensures that these institutions can navigate immediate financial demands while safeguarding their long-term operational integrity.

Specifically, for every Ksh. 1 in short-term liabilities, these institutions maintained liquid assets equivalent to Ksh. 110.42, significantly surpassing the statutory liquidity threshold of 100%. According to the SACCO Societies Regulatory Authority (SASRA), this liquidity level is classified as exceptionally strong, reflecting sound financial management and operational stability. This indicates that, on average, Kenyan DT-SACCOs possess sufficient cash and cash-equivalent resources to cover their immediate obligations.

The observed relationship between liquidity and financial performance further demonstrates that increased liquidity levels are directly associated with improved financial outcomes for DT-SACCOs. Conversely, any reduction in liquidity tends to adversely affect financial performance, underscoring the importance of effective liquidity management in sustaining operational success.

The inferential analysis supports this by revealing a statistically significant positive relationship between liquidity and financial performance. This finding is consistent with Charmler et al. (2018), who demonstrated a positive correlation between liquidity, capital adequacy, and bank size. Their research underscores the necessity of maintaining an optimal liquidity level, as deviations—either excess liquidity or insufficient liquidity—can hinder profitability and operational efficiency.

Onyekwelu et al. (2018) add to this understanding by showing that liquidity positively and significantly affects profitability ratios and employees' return on capital. Their study highlights the broader impact of effective liquidity management, which not only enhances operational efficiency but also bolsters public confidence in financial institutions. This is

especially critical for financial systems relying on trust and stability, as liquidity positions often serve as a barometer of institutional health.

Furthermore, the strategic management of liquidity extends beyond immediate operational benefits to long-term organizational sustainability. Effective liquidity practices provide a buffer against financial shocks, reduce operational risks, and enhance the institution's ability to innovate and expand. This aligns with the findings of Charmler et al. (2018), who argued that optimal liquidity facilitates consistent profitability while minimizing potential disruptions.

Thus, the evidence strongly underscores the importance of prudent liquidity management as a critical driver of financial performance in Kenyan DT-SACCOs. By maintaining adequate liquidity levels, these institutions not only fulfill their statutory obligations but also position themselves for sustained growth and resilience in the dynamic financial landscape. These findings emphasize the need for ongoing evaluation and optimization of liquidity strategies to maximize profitability and ensure long-term viability.

4.5.4 **Discussions on DT-SACCOs'** Financial Performance

An analysis of the financial performance of Kenyan DT-SACCOs revealed that their average profitability, as measured by the Return on Assets (ROA), was 2.37%. This figure suggests that, on average, for every Ksh. 1 invested in assets, the DT-SACCOs incurred a loss of 4 cents.

Such a low ROA indicates inefficient utilization of assets to generate profit, signalling unfavourable financial performance during the assessment period. The low ROA value underscores a significant challenge in the management of DT-SACCOs' assets, as it reflects

their limited ability to convert asset investments into meaningful financial returns. This implies that the institutions earned substantially low returns from their existing assets, which could hinder their capacity to reinvest and sustain growth. Based on SASRA's rating framework, this level of financial performance is indicative of severe financial weaknesses, classifying these institutions as financially vulnerable. These weaknesses suggest that the DT-SACCOs may not attain robust financial health immediately without targeted interventions.

Such a performance level could be attributed to multiple factors, including suboptimal asset quality, mismanagement of resources, or external economic pressures. Previous studies, such as those by Adebayo (2017) and Ademba (2019), have also linked low financial performance in financial institutions to poor asset utilization and insufficient management strategies. Additionally, it emphasizes the importance of implementing strategic financial reforms aimed at improving asset quality, operational efficiency, and overall governance to enhance profitability. Thus,, while the current financial state of Kenyan DT-SACCOs reflects significant challenges, addressing inefficiencies in asset management and aligning operations with best practices could pave the way for stronger financial resilience and improved ROA in the future. This calls for a concerted effort from policymakers, management teams, and regulators to foster sustainable growth within the sector.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter Five provides a summary, conclusions, and recommendations based on the analysis and findings presented in the previous chapters of this study. In Chapter One, the research problem, objectives, and significance of the study were introduced, laying the foundation for understanding the importance of capital adequacy in the financial performance of DT-SACCOs. Chapter Two reviewed the existing literature on the subject, focusing on theoretical frameworks and empirical studies related to capital adequacy, financial performance, and SACCO operations, providing the context for the study's investigation. In Chapter Three, the research methodology was outlined, detailing the data collection and analysis methods employed, while Chapter Four presented the analysis of the data, discussed the results, and interpreted the findings regarding the relationship between capital adequacy and financial performance.

Building on these previous chapters, this final chapter synthesizes the key insights gained from the research and offers conclusions about the role of capital adequacy in shaping the financial stability and performance of DT-SACCOs. Additionally, recommendations for improving the capital management strategies of SACCOs, as well as suggestions for future research, are provided to enhance the growth and sustainability of SACCOs within the Kenyan financial sector. The insights in this chapter will contribute to better-informed decision-making for SACCO managers, policymakers, and other stakeholders involved in the sector.

The summary offers an overview of the key research outcomes, emphasizing how these findings respond to the research questions and hypotheses. The conclusions section links the findings to broader theoretical frameworks and existing literature, offering a coherent interpretation of the data. The recommendations are divided into policy suggestions aimed at improving regulatory frameworks and operational efficiency, and recommendations for further research to explore gaps or limitations in the current study. These sections collectively ensure a comprehensive understanding of the study's contributions and significance.

5.2 Summary of Findings

This section offers a thorough overview of the study's findings, systematically organized in accordance with the research objectives. The findings reveal significant insights into the factors influencing the financial performance of DT-SACCOs. The analysis highlighted the varying impacts of asset quality, earning ability, liquidity, and capital adequacy on financial outcomes. Specifically, it was found that asset quality and earning ability negatively affected financial performance, while liquidity and capital adequacy contributed positively. These results offer a deeper understanding of the dynamic relationships between these factors, underscoring the importance of effective asset and liquidity management for enhancing financial performance. This summary ties back to the study's objectives, offering a clear narrative that aligns with the hypotheses tested and the overall research focus.

5.2.1 Capital Adequacy and DT-SACCOs' Financial Performance

Based on the findings, Kenyan DT-SACCOs exhibit strong capital adequacy, with an average ratio of 15.40% and a minimal deviation of 9.73%. This indicates that for every Ksh. 1 lost

due to risks or other liabilities, these institutions maintain a robust capital foundation. Although some performance metrics suggest potential financial weaknesses, this solid capital base ensures the stability and resilience of the SACCOs. Capital adequacy plays a pivotal role in supporting the institutions during challenging periods, enhancing their capacity to absorb operational losses and continue lending during crises.

Furthermore, the study reveals a positive significant effects of capital adequacy the financial performance of Kenyan DT-SACCOs ((β = 0.1167; p <0.01). Specifically, a one-unit increase in capital adequacy results in a 0.1167-unit improvement in financial performance, while a one-unit decrease in capital adequacy leads to a corresponding 0.1167-unit decline in performance. This underscores the critical role of capital adequacy in promoting financial stability and operational success, reinforcing its significant positive impact on the performance of Kenyan DT-SACCOs. Thus, capital adequacy has a notable and positive effect on the financial performance of these institutions.

The findings on capital adequacy and the financial performance of Kenyan DT-SACCOs support the goals outlined under Kenya's Vision 2030 economic pillar, which emphasizes the development of a robust and stable financial sector to spur economic growth and improve the standard of living for all Kenyans. Under the economic pillar of Vision 2030, one of the key objectives is to enhance access to financial services and ensure that financial institutions, including SACCOs, are well-capitalized, efficiently managed, and financially sustainable. Capital adequacy directly aligns with this objective, as it ensures that SACCOs have sufficient capital reserves to absorb losses, maintain solvency, and continue providing financial services to their members, particularly in rural and underserved areas. In showing

that strong capital adequacy positively influences financial performance, the study reinforces the idea that financially resilient SACCOs contribute to economic empowerment, promote savings and investment, and support the broader goal of financial inclusion. This aligns with Vision 2030's commitment to building a vibrant and globally competitive financial sector, where institutions are not only compliant with regulatory frameworks (such as those set by SASRA) but are also able to withstand financial shocks and contribute meaningfully to Kenya's socio-economic development.

5.1.2 Assets Quality and DT-SACCOs' Financial Performance

The analysis of asset quality in Kenyan DT-SACCOs reveals a concerning figure of 7.64% for the non-performing loans (NPL) ratio. This ratio is a key indicator of asset quality, as it represents the proportion of non-performing loans relative to the total gross loans held by these institutions. The higher the NPL ratio, the more loans are classified as problematic or likely to default, which can indicate weaknesses in the lending and collection processes. In this case, the NPL ratio of 7.64% is notably above the 5% threshold set by the SACCO Societies Regulatory Authority (SASRA) in 2022, which serves as the maximum acceptable level for financial institutions. This threshold is intended to ensure that financial institutions maintain a healthy loan portfolio, minimizing the risk of default and ensuring financial stability. An NPL ratio above this threshold raises concerns about the financial health of the SACCOs, as it suggests that a larger proportion of their loans are at risk of default, potentially affecting their profitability and overall financial performance. A higher NPL ratio can have several implications. It may indicate ineffective lending practices, poor credit risk management, or a broader economic environment that is challenging for borrowers. It also

exposes SACCOs to increased operational risks, as funds tied up in non-performing loans cannot be used productively. This further underscores the importance of asset quality in maintaining the financial health of SACCOs, as higher NPL ratios can significantly undermine financial performance, stability, and member confidence in these institutions. The excessive NPL ratio indicates a higher than acceptable level of non-performing loans within the Kenyan DT-SACCOs, leading to substantial loss provisions. For every Ksh. 1 in non-performing loans, these SACCOs allocated between Ksh. 7 and 64 cents as provisions, underscoring the financial strain posed by poor asset quality.

The higher-than-recommended asset quality, exceeding the 5% benchmark, is indicative of suboptimal loan performance and reflects a weakening of the financial stability of the institutions. Such a high level of non-performing loans (NPLs) is frequently linked to the failure of DT-SACCOs, as it hampers liquidity and erodes profitability.

Consequently, the findings demonstrate a statistically significant negative impact of asset quality on the financial performance of Kenyan DT-SACCOs ($\beta = -0.2288$, $p < 0.01$). This highlights the critical importance of maintaining high asset quality to safeguard financial health and prevent operational failure, in line with SASRA regulatory standards (SASRA, 2022). The findings of this study emphasize the critical importance of asset quality in ensuring the sustainability and financial performance of SACCOs, and by extension, in advancing key SDGs related to economic growth, employment, and reduced inequalities. the negative impact of asset quality on financial performance also aligns with **SDG 10**, which emphasizes reducing inequalities within and among countries. Poor asset quality in SACCOs can lead to diminished financial services, especially for marginalized groups, potentially

exacerbating economic disparities. By improving asset quality, SACCOs can strengthen their capacity to serve as a vehicle for inclusive financial access, thus supporting the reduction of financial inequalities

5.2.3 Earning Ability and DT-SACCOs' Financial Performance

The analysis revealed that for every Ksh. 1 invested by Kenyan DT-SACCOs, they were able to generate an income of Ksh. 4.67. This level of earning ability suggests a moderate capacity to generate returns, which could potentially support the operational needs of these institutions, maintaining adequate levels of capital and allowances. Such a return, while positive, reflects a moderate earning ability, which may not be sufficient to drive substantial growth or profitability in the long term.

More so, trend analysis suggests a generally blend of direct/indirect relationship between earning ability and financial performance. However, the regression results demonstrate a statistically significant negative effect of earning ability on financial performance of Kenyan DT-SACCOs (β = -0.0641, p = 0.017). This suggests that despite generating returns, the relatively low earnings may not be conducive to optimal financial success. This finding aligns with previous studies which indicate that higher earnings should ideally correlate with better financial performance, but the negative relationship observed here implies that other factors, such as inefficient cost management or external market conditions, could be impeding the potential benefits of earning ability (Zagherd & Barghi, 2017; Huynh, 2018). Therefore, while moderate earnings may support day-to-day operations, they appear insufficient in driving long-term financial growth for these SACCOs.

The finding that earning ability, measured by the Operating Expense to Total Assets ratio, has a statistically significant negative effect on the financial performance of Kenyan DT-SACCOs holds important implications for achieving several Sustainable Development Goals (SDGs), particularly SDG 8: Decent Work and Economic Growth and SDG 9: Industry, Innovation and Infrastructure. A high operating expense ratio indicates inefficiencies in cost management, which can reduce the profitability and financial sustainability of SACCOs. This undermines their ability to provide affordable and accessible financial services to members, particularly in low-income and rural communities. The negative impact on financial performance means that SACCOs may struggle to grow, expand their outreach, or offer new and innovative financial products, all of which are essential for fostering inclusive economic participation and sustainable enterprise development—key targets under SDG 8. From the perspective of SDG 9, which emphasizes building resilient infrastructure and promoting inclusive and sustainable industrialization, efficient SACCOs serve as vital components of financial infrastructure in developing economies like Kenya. When SACCOs minimize operating costs and maximize earning efficiency, they can reinvest savings into improving service delivery, technology adoption, and expanding access to credit for small businesses and entrepreneurs—driving industrial growth and innovation at the grassroots level.

5.1.4 Liquidity and DT-SACCOs' Financial Performance

The study found that the liquidity on Kenyan DT-SACCOs' financial performance shows that or every Ksh.1 short term liabilities, these DT-SACCOs have liquid asset to the tune of Kshs 110 and 42 cents for repay such with lowest standard deviation being 16.32%%. Thus, the availability of cash and cash equivalent assets was Kshs 110 and 42 cents to repay liabilities.

Liquidity of Kshs 110 and 42 cents is very strong and on average, the Kenyan DT-SACCOS have, a higher liquidity position which was somewhat higher than the statutory requirement. Regression results show that liquidity has statistically positive significant effect on financial performance of Kenyan DT-SACCOs ($\beta = 0.2968$; $p < 0.01$) where a unit change of liquidity leads to 0.2968 units rate of change of financial performance of Kenyan DT-SACCOs in the same direction. The finding that liquidity has a statistically significant positive effect on the financial performance of Kenyan DT-SACCOs ($\beta = 0.2968$; $p < 0.01$) is highly significant in supporting Kenya's Vision 2030, specifically Agenda 4 of the Social Pillar, which focuses on enhancing equity, poverty reduction, and social protection through accessible and efficient financial services. Liquidity reflects a DT-SACCO's ability to meet its short-term financial obligations and member withdrawals while continuing to lend and invest. A strong liquidity position ensures financial stability and operational continuity, which are critical for maintaining member trust and expanding financial services, especially in underserved and rural areas. The positive impact of liquidity on financial performance confirms that well-managed liquidity contributes to a DT-SACCO's profitability, enabling it to reinvest in infrastructure, innovate its product offerings, and expand outreach, all of which are essential for socioeconomic empowerment. In the context of Vision 2030 Agenda 4, which promotes a more inclusive and equitable society, strong financial performance backed by sound liquidity management allows SACCOs to better serve their members, particularly youth, women, and small-scale entrepreneurs, by offering affordable credit, promoting savings culture, and supporting income-generating activities. This directly contributes to poverty alleviation and promotes financial inclusion, a core element of Vision 2030's social transformation agenda.

5.2 Conclusions

The study concludes that capital adequacy has a statistically significant positive impact on the financial performance of Kenyan DT-SACCOs ($\beta = 0.1167$; $p < 0.01$), accounting for 11.67% of the variation in financial performance. An increase in capital adequacy by one unit results in a proportional improvement of 0.1167 units in financial performance, underscoring its pivotal role in ensuring financial stability.

In conclusion, asset quality, conversely, exerts a statistically significant negative influence on financial performance ($\beta = -0.2288$, $p < 0.01$), with a negative impact accounting for 22.88% of the variance in financial outcomes. High levels of non-performing loans (NPLs) and elevated loan loss provisions drain financial resources, diverting funds from productive uses and undermining shareholder equity. This results in weakened financial performance, highlighting the urgent need for improved asset quality management among DT-SACCOs.

The study concludes that earning ability, similarly, demonstrates a statistically significant negative effect on financial performance of Kenyan DT-SACCO ($\beta = -0.0641$, $p = 0.017$. The study concludes that an increase in earning ability reduces financial performance, while a reduction in earning ability enhances it. This inverse relationship suggests that excessive earning ability, though indicative of short-term stability, may constrain profitability due to suboptimal asset utilization.

The study concludes that liquidity has a positive statistically significant effect on Kenyan DT-SACCOs' financial performance ($\beta = 0.2968$; $p < 0.01$). For every Ksh.1 short term liabilities, these DT-SACCOs have liquid asset to the tune of Kshs 110 and 42 cents for repay

such. Liquidity leads to 0.2968 units rate of change of financial performance of Kenyan DT-SACCOs in the same direction

Overall, the study emphasizes the critical need for SASRA financial reporting tools to address pressing concerns related to asset quality, earning ability, and liquidity management. These findings affirm the utility of SASRA monitoring and financial reporting tools in evaluating and enhancing financial performance and fostering long-term sustainability in the sector. Immediate strategic interventions in these areas are imperative to optimize the financial health of DT-SACCOs.

5.3 Recommendations

The study suggested policy recommendation guided by the objectives.

5.3.1 Policy Recommendations

This multifaceted analysis illustrates the interplay between key financial variables and performance outcomes. It emphasizes the dual need to capitalize on strengths (liquidity and capital adequacy) while addressing weaknesses (asset quality and earning ability).

Such a balanced approach is pivotal for sustainable growth and financial stability in Kenyan DT-SACCOs. This research suggest the Kenya DT-SACCOS should seek to enhance their ROA, by ensuring that the movements of assets including loans and advances grow with time. These banks should seek to reduce high NPL occurrences through implementing quality management strategies geared towards improving their financial performance. such strategies should emphasis on effectiveness in loan disbursement and collection as well as focusing on capital adequacy lending and collection of disbursed funds

The financial performance demonstrates suboptimal efficiency, as evidenced by an average ROA of 2.37% during the study period. Factors contributing to this low ROA may include suboptimal asset utilization, elevated operating costs, or strategic inefficiencies in asset management. Such findings underscore the importance of implementing targeted strategies to enhance asset productivity and improve overall financial performance within Kenyan DT-SACCOs. These interventions may include robust financial planning, strategic cost management, and capacity building to address the operational challenges faced by the sector.

Based on the significance of capital adequacy in enhancing financial performance and stability, the following recommendations can be made for DT-SACCOs to strengthen their operational resilience and performance: DT-SACCOs should implement robust internal mechanisms to continuously monitor their capital adequacy ratios, ensuring compliance with regulatory requirements and preparing for economic fluctuations, align capital adequacy levels with the SACCOs risk profile by identifying areas of high risk and maintaining proportional capital reserves, and minimise operational inefficiencies to preserve capital and enhance overall profitability.

Based on the analysis of asset quality, which highlights the significant negative impact of high non-performing loan (NPL) ratios on financial performance, the study suggest for DT-SACCOs to enhance asset quality and maintain financial stability:, implement comprehensive credit evaluation mechanisms to ensure loans are granted only to borrowers with a strong repayment capacity, periodically assess the performance of loan portfolios to identify potential default risks early and take corrective action, and leverage credit scoring tools to enhance objectivity and accuracy in evaluating borrower creditworthiness.

Based on the analysis revealing a moderate earning ability and negative relationship with the financial performance of Kenyan DT-SACCOs, the current research recommends that DT-SACCOs should be conducting a comprehensive review of operational costs to identify inefficiencies and reduce unnecessary expenditures. Efficient cost management can improve the net returns from current earnings. They should as well implement advanced financial management systems to streamline operations, reduce transaction costs, and improve service delivery, which may translate into better earnings and profitability. They should invest in high-yield assets and limit the proportion of non-performing loans (NPLs) to maximize returns from existing investments.

Based on the study findings that DT-SACCOs maintain a strong liquidity position, which positively influences their financial performance, the following recommendations are proposed to ensure continued strength in liquidity management and optimize its contribution to financial success; DT-SACCOs should avoid excessive liquidity that could reduce opportunities for earning higher returns through investments or lending as they ensure liquidity levels are consistent with SASRA requirements while optimizing surplus funds for income-generating activities. . They should implement advanced cash flow forecasting tools to anticipate and manage short-term and long-term liquidity requirements effectively. They should continuously monitor liquidity levels and adjust policies to balance cash availability with profitability objectives.

Lastly, the research recommends that Kenyan DT-SACCOs should be employing SASRA financial tools.

5.3.2 Recommendations for Further Study

Based on the findings of this research, several areas for further exploration are suggested:

1. Asset quality was found to be above the prescribed 5% threshold but it was clear the rising NPLs which might have led to this. Accordingly, more studies should be done to establish the factors occasioning the high occurrence of NPLs and means of dealing with asset quality.

2. While the high average liquidity ratio indicates the DT-SACCOs' capacity to fulfill short-term liabilities, it is important to assess whether these liquid assets are being deployed effectively to balance risk management with profitability goals. A longitudinal study could examine the long-term trends in non-performing loans within Kenyan DT-SACCOs and their correlation with financial performance and risk management strategies. This would help in understanding how the accumulation of NPLs over time affects asset quality hence the operational health of SACCOs

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APPENDICES

Appendix II: Participants Introduction Letter

Abdullahi Mohamed
Muhumed
MBA/2019/49172
Mt Kenya University

Dear Respondent

I'm a student at Mount Kenya University working toward a master's degree in business administration. You have been chosen to participate in this research project, which aims to assess Assessing effects of SASRA monitoring and reporting financial tools on financial performance of DT-SACCOs in Kenya. Simply this study will make use of your answers. All data submitted by the participants will be kept confidential. Would you kindly answer the questionnaire honestly? Please read the questions carefully and select the appropriate answer. If at all possible, give a brief response to the given areas.

I thank you in advance for your cooperation and involvement.

Yours truly,

Abdullahi Mohamed Muhumed
MBA/2019/49172
Mt Kenya University

Appendix II: Consent for Participation in The Research

Assessing effects of SASRA monitoring and reporting financial tools on financial performance of DT-SACCOs in Kenya

Dear participant,

I invite you to participate in this research entitled (Assessing effects of SASRA monitoring and reporting financial tools on financial performance of DT-SACCOs in Kenya). I am currently enrolled in Master's degree in business administration at Mount Kenya University and am currently in the process of writing my Master's project. The purpose of the project is to assess: (How SASRA monitoring and reporting financial tools affects financial performance of DT-SACCOs in Kenya).

The enclose questionnaire has been designed to collect on the assessing (How SASRA monitoring and reporting financial tools affects financial performance of DT-SACCOs in Kenya)

Your participation in the research is completely voluntarily. You may decline altogether or leave any questions you don't want to answer. There are no known risks to participation beyond those encountered in everyday life. Your responses will remain confidential and anonymous. Data from the research will be place under lock and key and reported only as collective combined total. No one other the research will know your answers to the questionnaire. There are no direct benefits to you for participating in the research. However, you may find it interesting talking about the issues addressed and it may be beneficial to the field and to the future clients and individuals who may have experienced similar concerns.

If you agree to participate in this project, please answer the questions in the questionnaire the best you can. It should take approximately 30 minutes to compete. Please return the questionnaire as soon as possible to enable me complete the project report.

If you have any questions about this project feel free to contact the investigator, (Abdullahi Mohamed Muhumed Tel: +254722404677, email: com and investigator: Dr. Clement O. Olando, Thika Kenya, Telephone +254(0)729163116 email: olandock@gmail.com). If you have questions about your rights as a research participant please be in touch with the chairman, Mount Kenya University, Ethical Review Committee, P. O. Box 342-01000, Thika Thank you for your assistance in this important endeavour

CONSENT

I have read and in understand the provided information and have the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cots. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study

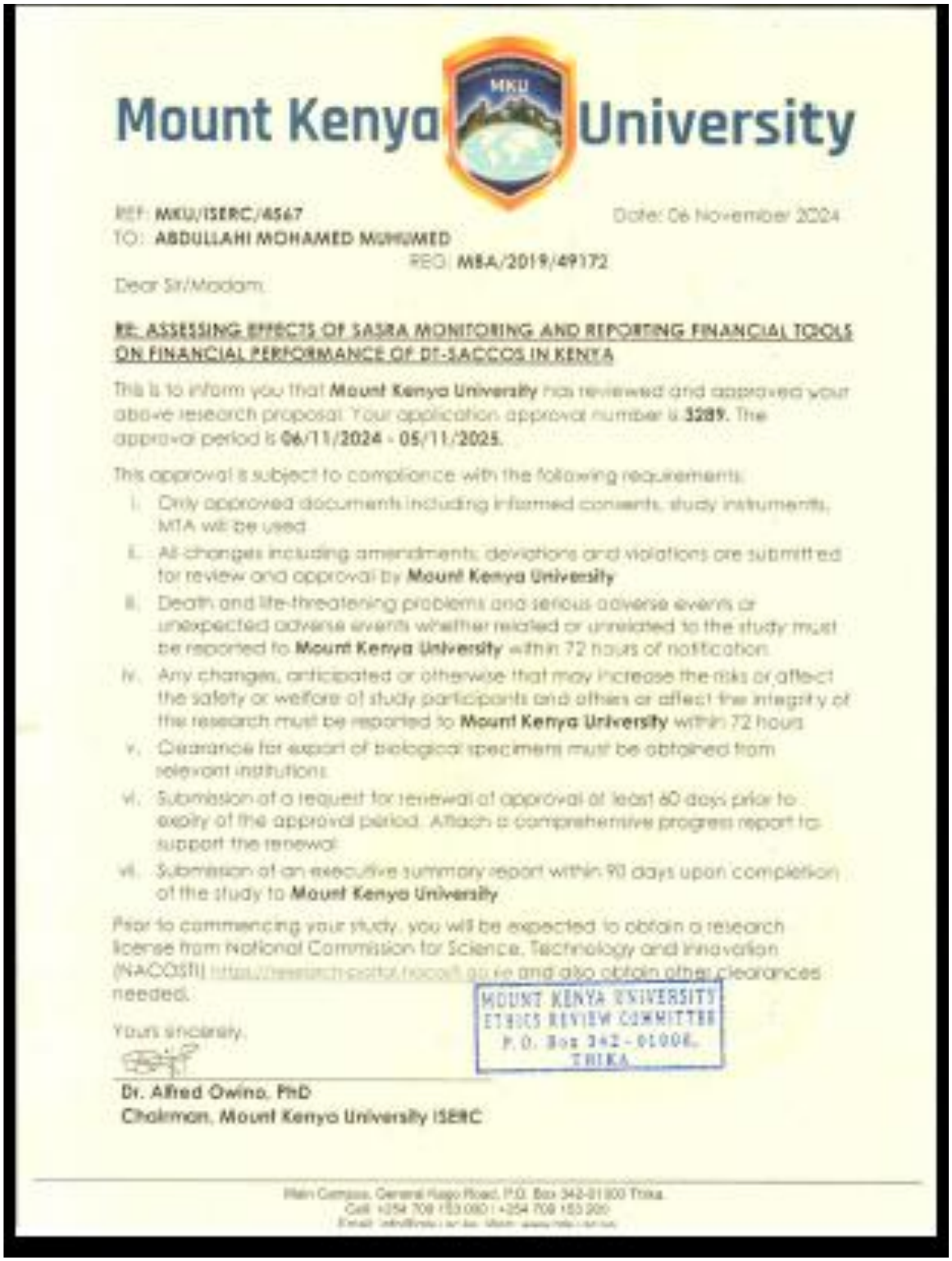
Participant's signature_____ Date _____

Interrogator's signature_____ Date _____

Appendix III: Institutional Tool (Data Collection Tool)

Year / Item	2018	2019	2020	2021	2022
Capital Adequacy					
Core Capital					
Total Assets					
Assets quality					
Non-Performing Loans					
Gross loans					
Earning Ability					
Operating Expense					
Total assets					
Liquidity					
Total Loans					
Total deposits					
Financial performance of Deposit Taking SACCOs in Kenya					
Return on Assets (ROA)					

Appendix IV: ERC



Mount Kenya University

REF: MKU/ISERC/4567 Date: 06 November 2024

TO: ABDULLAHI MOHAMED MUHUMED

REG: MBA/2019/49172

Dear Sir/Madam,

RE: ASSESSING EFFECTS OF SASRA MONITORING AND REPORTING FINANCIAL TOOLS ON FINANCIAL PERFORMANCE OF DT-SACCOS IN KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **3289.** The approval period is **06/11/2024 - 05/11/2025.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including informed consents, study instruments, MTA will be used
ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

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

MOUNT KENYA UNIVERSITY
ETHICS REVIEW COMMITTEE
P. O. Box 342 - 01000,
THIKA

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Main Campus, General Kago Road, P.O. Box 342-01000 Thika
Cell: +254 708 153 080 | +254 708 153 300
Email: info@mku.ac.ke Web: www.mku.ac.ke

Appendix V: Introduction Letter

Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MBA/2019/89172

27th November, 2024

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki Way, Upper Kabete,
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: ABDULLAHI MOHAMED MUHUMED – REGISTRATION NO. MBA/2019/89172

The purpose of this letter is to introduce the above named student who is pursuing **Master of Business Administration** in the department of **Accounting and Finance** in the school of **Business and Economics.**

The title of the research is "**Assessing Effects of Sasra Monitoring and Reporting Financial Tools on Financial Performance of DT-SACCOS in Kenya.**" It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **December, 2024 and February, 2025.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University
P. O. Box 342 - 01000, THIKA
Office of the Director,
Graduate Studies

Dr. Simon M. Karanja, PhD
Director, Graduate Studies
Enc.

Main Campus, General Kago Road, P.O. Box 342-01000 Thika
Cell: +254 708 165 000 | +254 709 165 200

Appendix VI: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 786718

Date of Issue: 16/December/2024

RESEARCH LICENSE

This is to Certify that Mr.. Abdullahi Mohamed Muhumed of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Wajir on the topic: ASSESSING EFFECTS OF SASRA MONITORING AND REPORTING FINANCIAL TOOLS ON FINANCIAL PERFORMANCE OF DT-SACCOS IN KENYA for the period ending : 16/December/2025.

License No: NACOSTI/P/24/414534

786718

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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

See overleaf for conditions

Appendix V1: List of Licensed Dt-Saccos in Kenya

NAME
STIMA
KENYA POLICE
HARAMBEE
AFYA
METROPOLITAN NATIONAL
UNAITAS
UNITED NATIONS
UKULIMA
IMARISHA
IG
BANDARI
TOWER
GUSII MWALIMU
IMARIKA
KENYA BANKERS
HAZINA
MENTOR
BORESHA
NEW-FORTIS
SAFARICOM SACCO
SHERIA
COSMOPOLITAN
MAGEREZA SACCO
MOMBASA PORT
WINAS
BINGWA
KITUI TEACHERS

NACICO
OLLIN SACCO
SOLUTION
WAUMINI
TRANS NATION
JAMII
KWETU (MASAKU TEACHERS)
K-UNITY
CHAI
CAPITAL
YETU
MAISHA BORA
UNISON
TAIFA
FORTUNE
AMICA
NYATI
KENYA HIGHLANDS
SHIRIKA
NDEGE CHAI
KENVERSITY
KENPIPE
TEMBO
TAI
EGERTON
ASILI
NG'ARISHA
THE NOBLE
NSSF

CHUNA
GDC
UKRISTO NA UFANISI
ARDHI
QWETU
NAWIRI
NATION SACCO
MWITO SACCO
DIMKES
WAKENYA PAMOJA
TRANS-NATIONAL TIMES
BIASHARA
AZIMA
WANANDEGE
TELEPOST SACCO
SHOPPERS SACCO
SKYLINE
SIMBA CHAI
WANANCHI SACCO
KINGDOM
WANAANGA
SOUTHERN STAR
ELIMU SACCO
SMARTLIFE
KITE
ECO-PILLAR
TRANS ELITE
DAIMA
FARIDI

UNIVERSAL TRADERS
TAQWA
FUNDILIMA
MAFANIKIO
CENTENARY
GOOD HOPE SACCO
COMOCO
ORIENT
2NK
SUKARI
PRIME-TIME
ACO
MUKI
TABASAMU
MWINGI MWALIMU
KIMBILIO DAIMA
TIMES U
K-PILLAR
DHABITI
MAGADI SACCO
JITEGEMEE SACCO
MMH
BI-HIGH
THAMANI
VISIONPOINT
NAFAKA
PATNAS
COUNTY
TARAJI

WAKULIMA COMMERCIAL
NYALA VISION
SIRAJI
NRS
SUPA SACCO
WEVERSITY
KENYA ACHIEVAS
GOLDEN PILLAR (IMENTI)
LAINISHA SACCO
KMFRI
TENHOS
BARAKA
PUAN
SMART CHAMPIONS
NDOSHA
VISION AFRIKA
MUDETE
FARIJI
NYAMIRA TEA FARMERS
DUMISHA
JOINAS SACCO
UFANISI
NYAMBENE ARIMI
LAMU TEACHERS
JUMUIKA SACCO**
SOTICO
STAWISHA
VIKTAS
LENGO SACCO

NANDI HEKIMA**
WASHA
STAKE KENYA
NUFAIKA
ENEA
FORTITUDE
KENYA MIDLAND SACCO
TRANSCOUNTIES
ILKISONKO
RACHUONYO TEACHERS
JACARANDA SACCO
KIPSIGIS EDIS
KOLENGE TEA
AGROCHEM
BARATON
NANYUKI EQUATOR
ALL CHURCHES SACCO
NANDI FARMERS
MWIETHERI SACCO
NEXUS
UNI-COUNTY
AINABKOI SACCO**
THE APPLE
BIASHARA TOSHA
KORU
GOODFAITH SACCO
VIHIGA COUNTY FARMERS
GOODWAY
UCHONGAJI

MILIKI SACCO**

Appendix VII: Turn it In Report

14/01/2025

ABDULLAHI MOHAMED

ASSESSING EFFECTS OF SASRA MONITORING AND REPORTING FINANCIAL TOOLS ON FINANCIAL PERFORMAN...

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Mount Kenya University

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