THE EFFECTS OF DIVIDEND POLICY ON THE SUSTAINABILITY OF DEPOSIT-TAKING SACCOS IN KENYA: THE MODERATING ROLE OF INFLATION

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DECLARATION

I declare that this dissertation has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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DEDICATION

This dissertation is firstly dedicated to my family, who have been a great pillar of support and encouragement through this journey. I also dedicate this work to my mentors for their invaluable and timely wisdom and guidance, to my fellow colleagues for their partnership and support, and to myself for dedication and perseverance that made the completion of this work possible.

ABSTRACT

Deposit-taking Savings and Credit Cooperative Organizations (SACCOs) in Kenya play a critical role in financial inclusion, yet they face the challenge of balancing dividend distribution with long-term sustainability. This study investigates the effect of dividend policy on the sustainability of deposit-taking SACCOs, with a particular focus on the moderating role of inflation. Drawing on Signaling, Agency, and Pecking Order theories, the study utilizes a descriptive research design and secondary panel data from 176 SACCOs regulated by the Sacco Societies Regulatory Authority (SASRA) between 2018 and 2023. Key variables examined include dividend payout ratios, retained earnings, member returns, and capital adequacy. Regression analysis, supported by diagnostic tests, was employed to assess the strength and significance of relationships. The findings indicate a strong relationship between dividend policy variables and sustainability. Dividend payouts, member returns, capital adequacy, and inflation were found to have significant positive effects, while retained earnings had a negative and statistically insignificant impact in the general model. Although inflation had a significant direct effect on SACCO sustainability, its moderating influence on the dividend policy-sustainability relationship was marginal. The study concludes that structured dividend policies, adequate capitalization, and strategies to cushion against inflation are critical for SACCO sustainability. It recommends that SACCOs strengthen their capital bases and align dividend practices with long-term objectives. Policymakers should provide clear guidelines on dividend policy and enhance regulatory oversight. Further research should consider the role of technological innovation and conduct comparative analyses across financial institutions.

KEYWORDS:

Dividend policy, financial sustainability, SACCO (Savings and Credit Cooperative Organizations), retained earnings, capital adequacy, regression analysis.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

Abbreviation	Full Form
CAR	Capital Adequacy Ratio
DT-SACCOs	Deposit-taking SACCOs
GDP	Gross Domestic Product
GLS	Generalized Least Squares
ICA	Institution Capital to Total Assets
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
KNBS	Kenya National Bureau of Statistics
KUSCO	Kenya Union of Savings and Credit Cooperatives
LLC	Levin, Lin, and Chu (Unit Root Test)
NACOSTI	National Commission for Science, Technology, and Innovation
ROA	Return on Assets
SACCOs	Savings and Credit Cooperatives
SASRA	SACCO Societies Regulatory Authority
VIF	Variance Inflation Factor

DEFINITION OF TERMS

Dividend Payout Ratio: The proportion of net earnings distributed to SACCO members as dividends, usually expressed as a percentage of total profits.

Retained Earnings: Portion of net income that is not distributed as dividends but is instead reinvested in the SACCO to support growth and sustainability.

Member Returns: The financial benefits or earnings SACCO members receive from their contributions, including interest on deposits and dividends on shares.

Capital Adequacy: A measure of a SACCO's financial strength, typically expressed as the ratio of its capital to its risk-weighted assets, indicating its ability to absorb losses.

Sustainability of Deposit-Taking SACCOs: The ability of SACCOs to maintain long-term operations, meet member needs, and remain financially stable and solvent over time.

Inflation: The general increase in prices of goods and services over time, which can erode the purchasing power of returns and impact financial planning within SACCOs.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Savings and Credit Cooperative Organizations (SACCOs) are member-owned financial institutions that mobilize savings and provide credit facilities, playing a significant role in promoting financial inclusion and economic empowerment (Mutua, 2016). In Kenya, SACCOs are classified into Deposit-Taking (DT) and Non-Deposit Taking (NDT) categories. DT-SACCOs, also referred to as Front Office Service Activities (FOSAs), accept deposits, provide savings accounts, and offer loans, with deposits being withdrawable on demand. Conversely, NDT-SACCOs only mobilize savings that serve as collateral for credit facilities, which are not withdrawable until the member exits the SACCO (Olando, Jagongo, & Mbewa, 2013). The member-owned structure of SACCOs creates a dual challenge of balancing profitability with member satisfaction. Members expect competitive dividends on their savings and access to affordable credit, which can strain financial resources (Mwangi & Muturi, 2016). A carefully crafted dividend policy is crucial for addressing this challenge, as it impacts both the SACCO's profitability and its long-term sustainability. By ensuring adequate returns to members while retaining earnings for growth, SACCOs can maintain financial stability and meet their members' needs effectively, even during economic uncertainties.

The profitability and long-term sustainability of Savings and Credit Cooperatives (SACCOs) are pivotal concerns in the global financial landscape, given their dual mandate to provide returns to members while ensuring institutional stability (Tarus & Simiyu, 2024). Globally, SACCOs and cooperatives contribute to financial inclusion, wealth distribution, and local economic growth, employing approximately 9.46% of the world's workforce (ICA, 2017). However, sustaining these impacts requires prudent financial management, particularly in balancing dividend payouts with reinvestment for future growth (National Credit Union Administration, 2020). In regions such as Europe and the Americas, cooperatives prioritize moderate dividend policies, which enhance their profitability and resilience, demonstrating that sustainable practices are crucial for their long-term survival (European Commission, 2020; National Credit Union Administration, 2020).

In Africa, the challenge of balancing profitability with sustainability is even more pronounced, as SACCOs play a vital role in combating financial exclusion and alleviating poverty. By providing affordable credit and fostering financial independence, SACCOs support smallholder farmers, micro-enterprises, and rural development initiatives (Wanyama et al., 2018). However, the pressure to deliver immediate returns often conflicts with the need for reinvestment, creating sustainability challenges. Limited access to capital, competition from banks, and stringent regulatory requirements further strain SACCOs, making financial decision-making, particularly around dividend policies, a critical determinant of their long-term viability (Sikalumbi & Muchemwa, 2015).

In Kenya, the tension between profitability and long-term sustainability is highly evident, as SACCOs play a central role in economic empowerment and financial inclusion. Kenyan SACCOs are renowned for their high dividend payouts, ranging between 12% and 21%, often exceeding returns from commercial banks (SASRA, 2022). While these payouts attract and retain members, they also deplete reserves needed for reinvestment and regulatory compliance, threatening operational stability (Mwangi et al., 2018). With increasing competition and regulatory demands, Kenyan SACCOs face mounting pressure to reconcile member expectations for high returns with the imperative to sustain profitability and long-term growth. This dual challenge underscores the critical need to assess how dividend policies impact the sustainability of deposit-taking SACCOs in Kenya.

Recent data from the Sacco Societies Regulatory Authority (SASRA, 2023) reveals a growing concern over the sustainability of DT-SACCOs in Kenya, with some institutions reporting declining core capital ratios and increasing loan default rates amidst high dividend payouts. Despite the sector's impressive asset base of over KES 900 billion and a membership exceeding 6 million, nearly 20% of SACCOs failed to meet the minimum capital adequacy thresholds in the 2022/2023 financial year, signaling potential risks to financial stability. Furthermore, rising inflation and economic volatility have exacerbated liquidity constraints, making it more difficult for SACCOs to balance immediate member returns with long-term financial security. While previous studies (e.g., Olando et al., 2013; Mwangi & Muturi, 2016) have explored financial performance and member satisfaction, limited empirical research has examined how specific components of dividend policy—such as payout ratios, retained earnings, and member returns—

affect sustainability, especially in the face of macroeconomic shocks like inflation. This study addresses this gap by assessing the effect of dividend policy on the sustainability of deposit-taking SACCOs in Kenya, with a particular focus on the moderating role of inflation, thus contributing to more informed policy and management decisions within the cooperative sector.

1.1.1 Dividend policy

Dividend policy is a crucial financial decision-making area that influences how an organization allocates its profits between distributing returns to shareholders and retaining earnings for reinvestment. In SACCOs, this decision has unique implications, given their dual mandate of providing financial returns to members and ensuring institutional sustainability (Oh & Park, 2021). The relationship between dividend policy and sustainability is bi-directional; while an optimal dividend policy enhances financial stability, excessive payouts can weaken reinvestment capacity, potentially harming long-term sustainability. Dividend policies are not just tools for profitability; they reflect the financial health, operational priorities, and long-term strategies of these cooperatives (Biza-Khupe & Themba, 2016). By balancing these dynamics, dividend policies significantly impact SACCOs' ability to meet their objectives and remain competitive in an evolving financial landscape.

Globally, SACCOs adopt varying dividend strategies to balance member expectations with long-term stability. Conservative dividend policies, typically seen in regions like Europe, prioritize institutional sustainability by retaining a substantial portion of profits for reinvestment (National Credit Union Administration, 2020). This approach enables SACCOs to invest in technological advancement, expand loan portfolios, and build resilience against economic shocks. However, in regions like Kenya, SACCOs are known for their relatively higher dividend payouts, often exceeding 12%, compared to the global average of 2–5% (SASRA, 2022). While this attracts members and boosts deposits, it raises concerns about the long-term sustainability of such aggressive dividend strategies (See Figure 1 below).

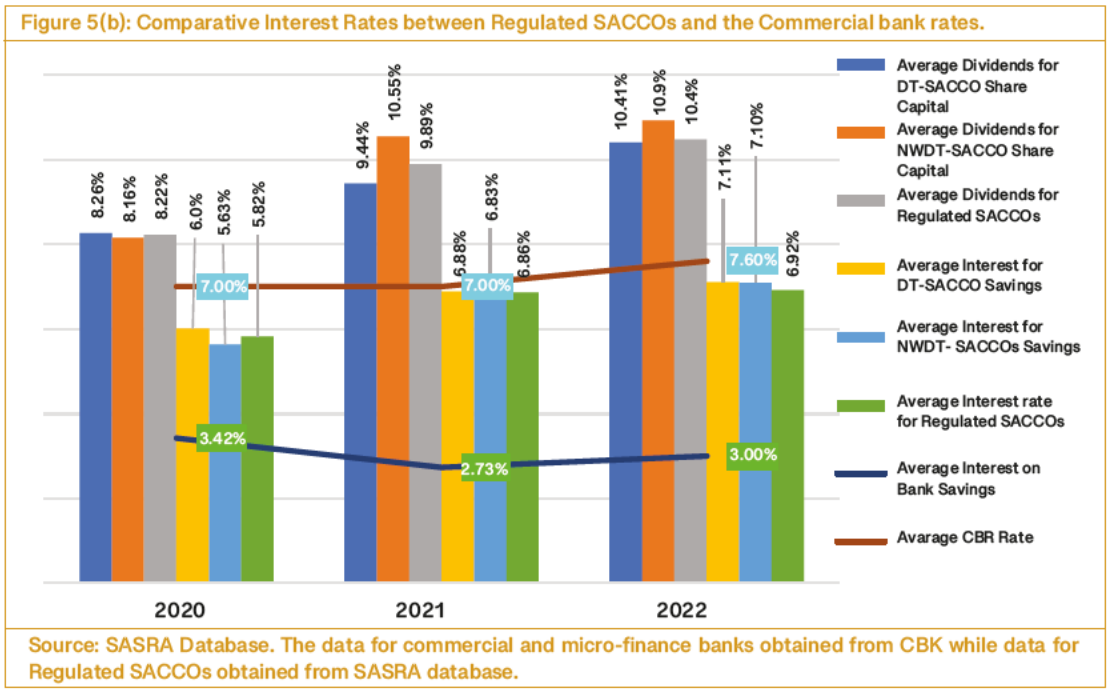

Figure 1.1: Comparative interest rates for regulated SACCOs. ***Source: (SASRA, 2022)***

The graph provides a comparative analysis of interest rates and dividend payouts between SACCOs and commercial banks in Kenya for the period 2020 to 2022. The graph highlights how deposit-taking SACCOs consistently offered higher dividend rates on share capital and interest on savings compared to non-deposit-taking SACCOs and commercial banks. This behavior makes SACCOs a more attractive option for members seeking higher financial returns. While the high dividend payouts by SACCOs have been a source of pride and a testament to their strong performance, numerous questions have been raised concerning the long-term viability and possible hazards of these large returns.

Dividend policy decisions in SACCOs are influenced by various factors, including profitability, liquidity, and regulatory requirements. High dividend payouts can signal financial health and stability to members, attracting more deposits and reinforcing member loyalty (Spence, 1973). Conversely, excessive payouts can deplete funds needed for reinvestment, hindering operational efficiency and compliance with prudential regulations, such as those imposed by SASRA (2022). This dual effect highlights a complex interdependent relationship rather than a one-way causality between dividend policy and sustainability, necessitating a balance between short-term profitability and long-term viability. This makes dividend policy a critical area of focus for

SACCO managers, as it directly affects their ability to achieve both short-term profitability and long-term sustainability.

In the context of Kenyan SACCOs, dividend policy decisions often revolve around striking a balance between satisfying member expectations and maintaining capital adequacy for operational growth. SACCOs offering competitive dividend rates attract higher deposits and increase member retention. However, the pressure to sustain high payouts can limit their capacity for reinvestment in critical areas such as technology, staff training, and loan portfolio expansion (Njuguna et al., 2020). Studies have shown that SACCOs with higher dividend payouts may experience reduced profitability, as funds available for growth-oriented investments are constrained (Kiragu & Okibo, 2021).

Dividend policy is conceptualized through key elements, including dividend payout ratios, retained earnings, member returns, and capital adequacy. However, capital adequacy is not a direct component of dividend policy but rather a financial stability measure that interacts with dividend decisions. Dividend payout ratios capture the proportion of profits allocated to dividends versus reinvestment, directly affecting operational sustainability (Musiega et al., 2013). Retained earnings reflect the funds SACCOs reinvest to strengthen their financial base and foster growth (Chepkorir, 2016). Member returns, encompassing dividends and interest rates on savings, measure how well SACCOs meet member expectations and attract loyalty (Olando et al., 2013). Meanwhile, capital adequacy represents a SACCO's ability to absorb risks and comply with financial regulations, ensuring resilience during economic downturns (Muriuki, 2020). While dividend policy influences capital adequacy indirectly, the two concepts are distinct and should be clearly defined in the conceptual framework. Each of these aspects provides a focused lens for understanding the interplay between dividend policies, profitability, and long-term sustainability in Kenyan SACCOs.

1.1.2 Dividend payout ratios

Dividend payout ratios are a key financial metric that directly impact a SACCO's ability to grow and sustain operations. This ratio represents the percentage of a SACCO's earnings distributed to members as dividends. A high payout ratio may signal a SACCO's commitment to providing

immediate benefits to its members, but it could limit reinvestment in the organization's expansion. Conversely, a low payout ratio suggests that a SACCO may prioritize long-term growth over immediate returns to members, fostering internal growth (Kibet, 2022). In Kenya, SACCOs with high payout ratios are often seen as financially healthy and reliable, while those with low ratios might be viewed with skepticism by their members (Mutua & Musyoka, 2021).

In Kenya, SACCOs exhibit diverse dividend payout patterns. According to SASRA (2022), deposit taking SACCOs recorded an average dividend payout ratio of 45%, with variations ranging from 30% to 80% across different SACCOs. For instance, Kenya Police SACCO and Stima SACCO reported payout ratios of 70% and 65%, respectively, while Mwalimu SACCO maintained a more conservative 40% payout, reinvesting the rest into capital reserves. SACCOs with high payout ratios are often perceived as financially strong and attractive to members seeking immediate returns, whereas those with lower ratios may be viewed with skepticism unless justified by strategic reinvestment plans (Mutua & Musyoka, 2021).

However, the sustainability of high payout ratios has been questioned in various studies. Research has shown that SACCOs with higher payout ratios tend to experience higher member satisfaction in the short term but struggle with long-term financial sustainability (Karanja & Gathuru, 2020). This is because such SACCOs may lack sufficient retained earnings to weather economic downturns or invest in necessary upgrades. In Kenya, SACCOs that distribute a significant portion of their profits as dividends might face capital constraints, affecting their ability to fund new projects and operational needs (Gachanja, 2023). A study by Gachanja (2023) found that SACCOs with payout ratios exceeding 60% had lower capital adequacy ratios, averaging 10.5%, compared to more conservative SACCOs, which maintained a capital adequacy ratio above the SASRA minimum requirement of 15%. This indicates that excessive dividend payouts can strain capital reserves, affecting the SACCO's ability to expand lending portfolios or withstand financial shocks.

A balance between payout and retention of earnings is essential to ensure long-term financial stability. SACCOs in Kenya, particularly those that focus on community welfare, may use dividend payout ratios to align with member expectations. Kamau et al. (2022) analyzed 50 SACCOs and found that those maintaining a payout ratio between 40% and 55% demonstrated stronger asset growth and profitability over five years. This suggests that a moderate payout ratio

allows SACCOs to distribute competitive returns while preserving enough capital for future expansion.

Internationally, dividend payout policies are influenced by the regulatory environments and market conditions in which SACCOs operate. According to a study by Liu et al. (2023), financial cooperatives in countries like Canada and the UK face greater regulatory scrutiny on payout ratios, which helps maintain capital adequacy and financial health. For example, credit unions in Canada are required to maintain a minimum capital-to-assets ratio of 10%, ensuring financial resilience even with relatively stable dividend payouts. The global best practice suggests that SACCOs should prioritize the long-term financial security of their organizations over short-term dividend expectations (Policy Vault., 2023). These practices could be adapted by Kenyan SACCOs to ensure that they don't sacrifice future profitability in favor of short-term member rewards.

The payout ratio also reflects the strategic direction of the SACCO. SACCOs with high payout ratios often prioritize immediate member satisfaction, which might make them less flexible when responding to economic changes or shifts in market conditions (Mutiso & Gikonyo, 2022). For instance, SACCOs that maintained high dividend payouts in 2020 faced liquidity challenges during the COVID-19 pandemic, as reduced member contributions and loan defaults strained capital reserves (SASRA, 2021). Kenyan SACCOs, which are predominantly member-driven, face the challenge of balancing this need with the necessity for capital reserves that ensure their long-term survival and competitiveness. Thus, determining an optimal dividend payout ratio requires evaluating both external economic conditions and internal financial health to ensure SACCOs remain resilient and competitive in the evolving financial landscape.

1.1.3 Retained earnings

Retained earnings play a pivotal role in SACCOs' long-term growth, providing funds for reinvestment and financial stability. This element of dividend policy allows SACCOs to allocate profits back into the business rather than distributing them as dividends. According to SASRA (2022), Kenyan SACCOs retained an average of 55% of their net surplus, with some SACCOs like Harambee SACCO and Unaitas SACCO retaining over 60% to strengthen their capital base. In contrast, SACCOs with lower retained earnings often face liquidity constraints, limiting their

ability to expand financial services. In Kenya, SACCOs with robust retained earnings can fund expansion, invest in new technologies, and weather financial uncertainties (Otieno & Kihoro, 2022). Retained earnings are a key indicator of a SACCO's ability to reinvest in its own future, which can lead to sustained operational growth.

In the context of SACCOs, retained earnings are critical to ensuring financial health during economic downturns. For instance, during the COVID-19 pandemic, SACCOs with higher retained earnings demonstrated greater resilience, maintaining loan disbursements and operations without external borrowing (SASRA, 2021). Kenyan SACCOs, especially those in rural areas, are often heavily reliant on retained earnings to maintain cash flow during periods of low membership activity or economic instability. Research by Juma (2021) highlights that SACCOs with high retained earnings are more likely to survive economic shocks without resorting to borrowing or reducing member services. This is particularly relevant for SACCOs in Kenya, where financial instability can occur due to factors like fluctuating commodity prices or inflation.

Furthermore, retained earnings help SACCOs to enhance capital adequacy. According to SASRA (2022), SACCOs that retained at least 50% of their annual surplus had an average capital adequacy ratio of 16%, surpassing the regulatory requirement of 15%. In contrast, SACCOs with high dividend payouts had lower capital adequacy ratios, averaging around 12%. By retaining a portion of profits, SACCOs can increase their capital base, which is essential for complying with regulatory capital requirements and reducing financial risk. Studies have shown that SACCOs with a solid retained earnings base are less vulnerable to external shocks and regulatory pressures (Ochieng & Mugwe, 2023). This underscores the importance of prudent financial management in Kenyan SACCOs, where excessive payout to members could jeopardize long-term capital requirements.

An interesting finding from international studies is that SACCOs in developing economies, such as Kenya, often face tension between paying dividends to members and retaining earnings for reinvestment. A study by Singh et al. (2023) concluded that cooperatives with high dividend payouts tend to have lower retained earnings, which can undermine their ability to respond to unforeseen financial difficulties. For example, SACCOs in the UK maintain retained earnings at an average of 65% to ensure capital stability, compared to Kenyan SACCOs, where retained

earnings vary widely between 30% and 70% (Liu et al., 2023). SACCOs in Kenya, therefore, need to ensure that their retention policies align with long-term strategic goals rather than focusing on short-term member gratification.

The proportion of profits retained also has implications for the governance of SACCOs. Strong governance structures ensure that decisions about dividend payouts and retained earnings are made with a clear understanding of the SACCO's long-term goals. A study by Mwaura et al. (2022) found that SACCOs with structured financial policies and governance frameworks retained an average of 58% of their earnings, compared to 40% for SACCOs with weaker governance structures. According to Mwaura et al. (2022), SACCOs with effective governance mechanisms tend to have better strategies for managing retained earnings, which supports sustained growth and stability. SACCOs in Kenya that embrace transparency and strategic planning in their financial decisions are better positioned to retain earnings for future reinvestment.

Thus, the effect of retained earnings on sustainability cannot be overstated. Data from SASRA (2022) indicates that SACCOs that retained more than 50% of their earnings experienced an average annual growth rate of 12% in member deposits, compared to 7% for SACCOs with lower retention rates. Kenyan SACCOs that reinvest in their operations through retained earnings often see a stronger capital position, enabling them to offer more competitive loan products or better member services. According to Ouma (2023), SACCOs that prioritize retained earnings rather than immediate payouts tend to have higher growth rates in both membership and capital accumulation over the long term.

1.1.4 Member returns

Member returns are a direct measure of the satisfaction and value that SACCOs provide to their members. This includes dividends and interest rates on savings, which are important for fostering loyalty and engagement within the SACCO. According to SASRA (2022), the average dividend payout among deposit taking SACCOs in Kenya ranged between 10% and 14%, with leading SACCOs such as Stima SACCO and Mwalimu SACCO consistently offering over 12% in dividends. In contrast, SACCOs with lower returns—averaging below 8%—experienced higher member attrition rates. In Kenya, member returns are a key determinant of SACCO success, as

they are central to the organization's value proposition (Munyiri & Njeru, 2023). SACCOs that offer attractive member returns are more likely to retain members and attract new ones, which is vital for their long-term growth.

High member returns, particularly in the form of dividends and interest on savings, also serve as a competitive tool for SACCOs. Research by Gitau et al. (2022) found that SACCOs that offer higher returns on savings are perceived as more reliable and trustworthy, thereby enhancing their reputation in the market. For instance, Metropolitan SACCO reported a 15% increase in membership in 2022 after increasing its dividend payout from 10% to 13%, demonstrating the direct impact of returns on member attraction and retention (SASRA, 2023). This is especially true in Kenya, where SACCOs are an integral part of the financial ecosystem and are seen as community-driven institutions that prioritize the welfare of their members.

In addition, member returns are a reflection of SACCO profitability. SACCOs with strong profitability can afford to offer higher returns to their members. However, balancing high returns with the need for reinvestment is crucial. Studies have shown that SACCOs that focus too much on high member returns may neglect long-term sustainability (Njuguna, 2020). Data from SASRA (2022) indicates that SACCOs allocating more than 70% of their profits to member returns often struggle with capital adequacy, averaging a capital-to-assets ratio of 10%, compared to the 15% threshold required by regulators. This is evident in some Kenyan SACCOs that, despite offering high member returns, face difficulties in maintaining their capital adequacy and long-term growth.

Internationally, SACCOs that maintain a healthy balance between member returns and reinvestment tend to perform better in the long run. According to a study by White et al. (2022), SACCOs that provide reasonable member returns while also reinvesting in business expansion tend to have a stronger financial foundation. For example, Canadian SACCOs retain at least 40% of their earnings for reinvestment while offering average member returns of 8% to 10%, ensuring both sustainability and competitiveness (Canadian Credit Union Association (CCUA, 2022). The study suggests that Kenyan SACCOs could benefit from similar strategies by focusing on member returns that reflect both the financial health of the SACCO and the sustainable growth of its operations.

Member returns also play a role in the economic empowerment of SACCO members. A report by the Kenya Union of Savings and Credit Cooperatives (KUSCCO, 2023) found that SACCOs with competitive savings returns led to a 20% increase in member deposits over five years, directly enhancing access to affordable credit. According to a study by Omondi (2023), SACCOs that offer competitive returns on savings contribute to poverty alleviation and economic empowerment by increasing members' financial capabilities and providing access to affordable loans.

Therefore, member returns are influenced by broader economic conditions. For example, during periods of economic inflation, SACCOs may be forced to adjust interest rates or dividend payouts to remain competitive. Between 2020 and 2022, SACCOs that failed to adjust returns in response to inflation saw a 7% decline in deposits, while those that offered inflation-adjusted returns maintained stable growth (SASRA, 2023). In Kenya, SACCOs must also factor in the cost of living when determining member returns. Research by Chege et al. (2023) found that SACCOs that adapted to economic conditions by adjusting their return policies were better able to retain members and maintain financial stability.

1.1.5 Capital adequacy

Capital adequacy is a critical measure of a SACCO's financial stability, ensuring that it can meet its obligations and withstand economic shocks. In Kenya, the SACCO Societies Regulatory Authority (SASRA) requires deposit-taking SACCOs to maintain a minimum core capital of KES 10 million and a core capital-to-total assets ratio of at least 10% (SASRA, 2023). SACCOs with a strong CAR are more resilient to fluctuations in their financial environment, which is especially important given the volatile economic conditions in Kenya (Mutua & Wanjiru, 2022). SACCOs with a CAR above 15% experience lower financial distress and have higher loan disbursement capacity compared to those operating near the regulatory minimum (Munyiri & Njeru, 2023).

The importance of capital adequacy extends beyond regulatory compliance. It plays a fundamental role in mitigating risk and ensuring operational continuity. A SACCO's ability to absorb losses during adverse periods depends largely on the size of its capital base. For instance, a 2022 study on Kenyan SACCOs found that institutions with a CAR of 20% or higher were 30% more likely to sustain growth and member services during economic downturns than those with lower capital

reserves (Kamau et al., 2022). Moreover, SACCOs with a low CAR—below 10%—reported an increase in non-performing loans (NPLs) and reduced ability to attract external financing (Gachanja, 2023).

Capital adequacy also affects the cost of borrowing and access to financial markets. SACCOs with higher capital adequacy ratios are perceived as lower risk by lenders and investors, making it easier for them to access favorable loan terms and financing options. According to Ochieng & Mugwe (2023), SACCOs with CARs exceeding 15% secured loans at interest rates up to 2% lower than their counterparts with lower capital reserves. This strengthens their ability to remain competitive and sustain their operations in a growing financial ecosystem.

Moreover, SACCOs with strong capital adequacy are better able to fulfill their obligations to members, particularly during periods of increased demand for loans or financial services. When SACCOs experience growth in membership or an uptick in borrowing activity, having a solid capital base enables them to meet these demands without compromising their financial health. Data from SASRA (2023) indicates that SACCOs with total capital exceeding KES 500 million processed member loan applications 40% faster than those with capital below KES 100 million, demonstrating the direct impact of capital adequacy on service efficiency.

Internationally, capital adequacy is also a vital part of SACCOs' financial sustainability. Studies from countries like India and Uganda show that SACCOs with higher capital adequacy ratios tend to experience higher levels of trust from their members, which directly impacts member retention and satisfaction (Singh et al., 2023). In Canada, SACCOs retain at least 40% of their earnings for reinvestment while offering average member returns of 8% to 10%, ensuring both sustainability and competitiveness (Canadian Credit Union Association [CCUA], 2022). These findings are consistent with Kenyan SACCOs, where members place significant trust in the financial management of their SACCOs. SACCOs that demonstrate strong capital reserves reassure members that their savings are secure, and that the SACCO can continue to operate effectively over the long term.

Accordingly, SACCOs that prioritize capital adequacy tend to invest more in innovation and technological advancements, which enhance operational efficiency. A study by Juma (2021) found that SACCOs with CARs above 18% were twice as likely to adopt mobile banking and digital loan

processing platforms compared to those with lower CARs. This is particularly relevant in the Kenyan context, where digital transformation is critical for SACCOs to stay relevant and competitive. A strong capital base allows SACCOs to diversify their services and expand their reach, contributing to both financial stability and growth.

Additionally, the relationship between capital adequacy and dividend payouts is a subject of ongoing debate. A study by (Njeru, et al, 2021) in observing the influence of profitability on dividend pay-out among deposit taking SACCOs in Kenya between 2012 to 2019 highlighted that for SACCOs dividend payouts often serve as a critical tool for attracting and retaining members. For example, SACCOs offering dividend payouts above 12% reported 25% higher membership growth rates than those offering lower payouts. However, this strategy came at the expense of reinvestment in capital reserves. This approach is usually used because most of the members join these SACCOs with the expectation of receiving regular dividends. The pressure from members for payouts frequently drives SACCOs to prioritize dividends, sometimes at the expense of reinvestment. This study examined profitability from the lense of return on equity (ROE) ratio and found there to be a negative relationship between return on equity and dividend payout.

Another study by Yegon et al. (2014), focused on understanding the effects of dividend policy on the financial performance of listed manufacturing firms in Kenya. This study employed return on capital employed (ROCE) as a profitability metric and found a significant positive relationship between dividend policy and profitability. The findings suggest that while high dividend payouts may enhance short-term profitability, they must be carefully balanced with reinvestment needs.

Yet another study by Opondo (2022) focused on the determinants of financial self-sufficiency in deposit-taking SACCOs in Kenya. The study suggested that SACCOs should create efficient dividend payment plans, as large dividend disbursements while beneficial for member retention could weaken long-term financial stability. Similarly, Ali et al. (2021) highlighted that SACCOs operating in the same market vary significantly in dividend payouts, with some prioritizing reinvestment while others emphasize member benefits. The study recommended further research to establish a clearer dividend policy framework to balance profitability, capital adequacy, and long-term sustainability.

1.1.6 Inflation and its impact on SACCOs

Inflation is a critical economic factor influencing the financial performance and long-term sustainability of Savings and Credit Cooperative Organizations (SACCOs). In Kenya, SACCOs operate in an economic environment characterized by fluctuating inflation rates, which significantly affect their profitability, dividend policies, and overall financial stability. The sector has experienced substantial growth, with deposits increasing from KES 380 billion in 2018 to KES 622 billion in 2022, and total assets surpassing KES 900 billion (SASRA, 2023). However, inflationary pressures can erode the real value of savings, reduce disposable income for members, and impact SACCOs' ability to generate sustainable returns.

High inflation reduces the purchasing power of SACCO members, affecting their ability to save and borrow. Between 2021 and 2023, Kenya's annual inflation rate averaged 7.6%, leading to a decline in SACCO deposit growth from 13% in 2021 to 8.4% in 2023 (SASRA, 2023). According to Njeru (2021), SACCOs respond to inflationary pressures by adjusting their dividend payout ratios to maintain member satisfaction, which in turn affects their liquidity and long-term sustainability. For instance, SACCOs that incorporated inflation-adjusted dividend policies in 2022 maintained an average dividend payout of 12.3%, whereas those that did not adjust for inflation reduced their payouts to 9.1% (Mwangi & Wambui, 2022). This demonstrates how SACCOs strategically modify their dividend distribution in response to inflation to balance financial sustainability and member expectations.

Inflation also influences SACCOs' retained earnings and reinvestment strategies. During periods of high inflation, SACCOs may prioritize capital retention over dividend distribution to safeguard against rising operational costs and potential liquidity shortages. Mwangi and Wambui (2022) found that SACCOs with higher retained earnings during inflationary periods maintained greater financial stability compared to those that prioritized high dividend payouts. For example, in 2021, SACCOs that reduced their dividend payout by 15% to adjust for inflation retained 20% more earnings, which strengthened their liquidity position and operational resilience (Mwangi & Wambui, 2022). This highlights the trade-off SACCOs must manage between ensuring adequate member returns and maintaining financial stability during inflationary periods.

The impact of inflation extends to SACCOs' loan portfolios and credit risk. As inflation rises, borrowing costs increase, leading to a decline in loan demand and higher default rates. Kamau et al. (2022) noted that in 2021, when inflation in Kenya surged by 2.3%, SACCO loan disbursement contracted by 9%, and loan default rates increased by 8%. This decline in lending activity negatively affected SACCO profitability, forcing many institutions to revise their dividend payout policies downward to preserve capital. Furthermore, as inflation erodes the real value of loan repayments, SACCOs may experience reduced interest income, limiting their ability to sustain high dividend payouts and reinvestment in business expansion (Kamau et al., 2022).

Member behavior in response to inflation also affects SACCO sustainability. During inflationary periods, members tend to withdraw savings or reduce deposits, seeking alternative investment options that offer higher returns. Ochieng (2022) found that in 2021, a 5.7% decline in SACCO deposits was directly linked to a 2.3% rise in inflation, as members sought to preserve their purchasing power by diverting funds to assets perceived as inflation-proof. This reduction in deposits impacts SACCOs' ability to lend and generate revenue, ultimately influencing their profitability and sustainability. Conversely, during periods of low inflation, SACCOs experience increased deposit inflows, which enhances their lending capacity and enables them to offer competitive dividends (Mutua & Wanjiru, 2023).

Regulatory adjustments in response to inflation further shape SACCO operations. The Sacco Societies Regulatory Authority (SASRA) monitors inflationary trends and, during periods of economic instability, may implement policies to enhance SACCOs' financial resilience. For example, in 2020, SASRA introduced temporary capital buffer measures that allowed SACCOs to maintain lower capital adequacy ratios to absorb financial shocks during the COVID-19-induced inflation surge (Karanja et al., 2020). These policy interventions help SACCOs navigate inflationary challenges, ensuring they maintain adequate liquidity while balancing dividend distribution.

In summary, inflation plays a moderating role in the relationship between SACCOs' dividend policies and financial sustainability by influencing member deposits, loan demand, capital retention strategies, and regulatory adjustments. During inflationary periods, SACCOs must strategically balance dividend payouts and retained earnings to maintain financial stability, sustain

member confidence, and ensure long-term sustainability. This dynamic underscores the importance of inflation-sensitive financial policies in SACCO operations.

1.1.7 Dividend payouts and sustainability

Sustainability refers to the capacity of an institution to maintain its operations and financial health over the long term while continuing to meet stakeholder needs. For SACCOs, sustainability is determined by their ability to generate sufficient income to cover operational expenses, maintain adequate capital reserves, and comply with regulatory requirements (Nthaga, 2017). Sustainable SACCOs ensure continuous service provision, expand financial outreach, and contribute to socio-economic development (Oxford Policy Management, 2012). Key indicators of SACCO sustainability include capital adequacy, asset quality, liquidity, and operational efficiency (USAID, 2006; Mutiso, 2019).

In Kenya, the SACCO sector has experienced substantial growth, with deposits rising from KES 380 billion in 2018 to KES 622 billion in 2022, while total assets exceeded KES 900 billion (SASRA, 2023). However, sustainability remains a concern, especially given the sector's reliance on member deposits for growth. Regulatory requirements mandate that deposit taking SACCOs maintain a minimum capital adequacy ratio of 15% to ensure financial stability (SASRA, 2022). Despite this, SACCOs with high dividend payout ratios often struggle to meet this requirement, potentially undermining their sustainability.

Dividend policies play a crucial role in SACCO sustainability. While competitive dividend payouts attract members, increase deposits, and strengthen liquidity, excessive payouts can deplete reinvestment resources and hinder long-term growth (KUSCCO, 2021). Members are more likely to save with SACCOs that provide attractive returns, increasing the financial base and lending capacity. For instance, SACCOs offering dividend rates above 10% experienced a 14% increase in membership, whereas those offering below 8% saw a 7% decline (Mwangi & Wambui, 2022). Furthermore, SACCOs that consistently increased dividends reported an average deposit growth rate of 12%, whereas those with declining dividends saw a deposit contraction of 5% (SASRA, 2023). These trends suggest that moderate and well-structured dividend policies contribute to SACCO sustainability by attracting and retaining members.

However, excessive dividend payouts pose significant risks to SACCO sustainability. SACCOs with payout ratios above 70% have reported an average capital adequacy ratio of 14%, falling below the regulatory minimum of 15% (SASRA, 2022). This shortfall increases the risk of financial instability and potential penalties. Additionally, high payout ratios limit funds available for reinvestment in critical areas such as technology, staff training, and risk management, thereby reducing operational efficiency (Waithira & Wepukhulu, 2020). A study by Ali et al. (2021) found that SACCOs with high dividend payouts (above 70%) had an average return on assets (ROA) of 3.2%, compared to 5.1% for those with lower payouts, indicating that excessive payouts can strain financial performance and sustainability.

Furthermore, high dividend payouts may encourage SACCOs to engage in aggressive lending to generate necessary profits, increasing their exposure to credit risk. SACCOs that offered dividends exceeding 12% in 2021 recorded a 9% rise in non-performing loans, compared to a sector-wide average of 6.3% (SASRA, 2022). This trend highlights the trade-off between short-term member returns and long-term financial stability. Overextending dividend payments can force SACCOs into risky financial practices, which may compromise their sustainability.

The organizational structure of SACCOs also presents sustainability challenges. According to Marwa (2015), the homogeneity of SACCO membership exposes them to systematic risks, limiting diversification and scalability. Ensuring sustainability requires SACCOs to adopt strategic reinvestment policies that balance dividend payouts with institutional stability. SACCOs that maintained a dividend payout ratio of 40%-60% in 2022 reported an average capital adequacy ratio of 18%, compared to 14% for those exceeding 70% payouts (SASRA, 2023). This suggests that moderate payout strategies enhance financial resilience and regulatory compliance.

To strengthen sustainability, SACCOs should consider adopting Dividend Reinvestment Plans (DRIPs) rather than prioritizing cash dividend payments. DRIPs enable SACCOs to retain more earnings while still rewarding members, thereby improving their financial position and regulatory compliance (KUSCCO, 2021). A strategic approach to dividend policy ensures that SACCOs remain competitive while securing long-term viability. SACCOs offering dividends between 8% and 12% have shown the highest retention and growth rates, while those exceeding 14% often experience liquidity pressures and rising loan default rates (SASRA, 2023).

1.1.8 Dividend policy and sustainability issues in play

The challenges of balancing sustainability amidst high dividends to members are more real for some of the SACCOs in Kenya. The regulator of this sector, SASRA, requires that the Institution Capital to Total Assets (ICA) ratio is always maintained above eight per cent. At this point, the SACCO's capital surplus would be considered large enough to absorb losses in case of economic shocks, hence a sign of financial health and potential financial sustainability. According to the supervisory report by SASRA (2023), at least five top-tier SACCOs including Mwalimu National SACCO, Ukulima SACCO, Boresha SACCO, Kimisitu SACCO and Safaricom SACCO exhibited poor financial health after failing to maintain the required capital levels. The sector supervisor implored deposit taking SACCOs to put in place strategies that not only promoted distribution of surpluses, but also the retention of larger proportions of the surpluses in order for SACCOs to build resilience and cushion themselves from emergent economic shocks that may arise in the course of their operations (SASRA, 2023).

This research was anchored on three key theories: Agency Theory (Jensen & Meckling, 1976), Signaling Theory (Spence, 1973), and Pecking Order Theory (Myers & Majluf, 1984). Agency Theory provides insight into the conflicts between SACCO management and members regarding dividend decisions and long-term sustainability. Signaling Theory explains how dividend policies act as signals to members and the market about a SACCO's financial health and future prospects. Pecking Order Theory contributes to understanding SACCOs' internal financing preferences, highlighting why some may rely more on retained earnings versus external funding. Together, these theories offer a robust framework for analyzing the strategic, communicative, and financial roles of dividend policies in managing SACCO operations, member expectations, and institutional sustainability.

The agency theory illuminates the governance challenges SACCOs face in managing the competing interests of their stakeholders, highlighting the strategic role of dividend policies in balancing member satisfaction and financial stability. By distributing dividends, SACCOs can reduce agency costs by aligning the interests of managers and members, ensuring that retained earnings are not misallocated (Muhanguzi, 2019). However, this reduction in agency costs often comes at the expense of long-term sustainability. High dividend payouts may limit the resources

available for reinvestment in critical areas such as loan portfolio growth, technological advancement, and compliance with regulatory requirements. This trade-off poses significant risks to the SACCO's ability to maintain financial resilience and achieve sustainable growth. Meanwhile, signaling theory offers insights into the communicative function of dividend policies, emphasizing their impact on member perceptions and behavior. By paying consistent or increasing dividends, SACCOs send a positive signal of financial health, attracting new members and encouraging higher deposits from existing ones (Lotfi, 2019). However, this emphasis on signaling financial strength can compromise long-term sustainability. Excessive dividend payouts, while appealing to members in the short term, may reduce retained earnings needed for reinvestment, eroding the SACCO's capital base and increasing its vulnerability to economic shocks. The pressure to maintain high dividends as a competitive strategy can lead SACCOs to prioritize short-term member attraction over the stability and sustainability of their operations.

These theories jointly highlight the inherent tension SACCOs face in managing dividend policies. While dividend policies serve as tools for reducing agency conflicts and signaling financial health, their overuse can detract from sustainability. This study leveraged these theoretical perspectives to explore how SACCOs optimized dividend policies to balance short-term member satisfaction with long-term financial sustainability.

1.2 Statement of the problem

SACCOs are unique in that they operate with a dual mandate: to provide competitive returns to their members while ensuring their own financial sustainability (Njuguna, 2022). However, this dual focus often creates a tension between short-term member satisfaction, driven by high dividend payouts, and the need for long-term capital retention to support growth and financial stability. Conceptually, the sustainability of SACCOs hinges on their ability to balance the immediate financial rewards offered to members with the necessary reinvestment for long-term strategic development (Karanja et al., 2020). A key component of this is the impact of dividend policies on SACCOs' financial health, capital adequacy, and resilience in the face of external shocks or economic downturns (Mutua & Wanjiru, 2023).

In Kenya, SACCOs have become an integral part of the financial ecosystem, particularly in rural areas where access to traditional banking services is limited. These cooperatives provide essential

services like savings accounts, loans, and insurance, and are vital for financial inclusion (Kibuti, 2022). However, the growing pressure to offer high dividends to members has placed SACCOs in a precarious financial position, with evidence showing that some SACCOs sacrifice financial sustainability to meet member expectations. According to SASRA (2023), several large SACCOs, including Mwalimu National SACCO, Ukulima SACCO, and Safaricom SACCO, failed to meet the required institutional capital to total assets (ICA) ratio of 8%, raising concerns about their long-term stability. SASRA recommended that SACCOs should prioritize sustainable dividend policies and retain a larger portion of earnings to build financial resilience (SASRA, 2023). For instance, SACCOs that paid dividends above 12% in 2021 recorded a 9% rise in non-performing loans, compared to a sector-wide average of 6.3% (SASRA, 2022).

Several studies have explored the relationship between dividend policies and SACCOs' financial sustainability. For instance, Kibuti (2022) and Kibor (2018) emphasize that aggressive dividend payout policies can undermine SACCOs' ability to retain earnings for growth, risking financial sustainability. Ali et al. (2021) argue that SACCOs must balance high payouts with the need to preserve capital for operational sustainability, particularly in challenging economic conditions like inflation. In line with this, studies by Yegon et al. (2014) and McNally and Soth (2020) illustrate that while generous dividends improve member satisfaction in the short term, they can lead to long-term liquidity issues, weakening financial sustainability. Similarly, research by Kamau et al. (2022) underscores the importance of capital adequacy for SACCOs' survival, indicating that excessive dividend payouts negatively affect capital reserves, thereby limiting growth and long-term stability. Meanwhile, international studies by Reyes et al. (2021) and Uche et al. (2023) confirm that SACCOs in other developing nations face similar challenges in balancing member returns with long-term financial sustainability.

Despite the valuable insights provided by prior studies, clear and specific gaps remain. Conceptually, while previous research has considered financial performance proxies such as ROE and ROCE (Kibor, 2018; Yegon et al., 2014), there is limited empirical analysis linking dividend policies to broader indicators of sustainability—particularly capital adequacy, retained earnings, and the ability of SACCOs to remain resilient during economic shocks. Contextually, most local studies (e.g., Kibuti, 2022; Kamau et al., 2022) focus on either financial returns or member satisfaction, but do not adequately evaluate how specific components of dividend policy—such as

member returns or retained earnings—impact the long-term sustainability of deposit-taking SACCOs in Kenya. Moreover, capital adequacy, which is critical to institutional survival and regulatory compliance, remains underexplored as an outcome of dividend policy decisions. Methodologically, there is also a scarcity of integrated models assessing how inflation—a key macroeconomic variable—moderates the relationship between dividend policy and sustainability, particularly in developing financial systems such as Kenya's. Furthermore, the dependent variable, sustainability, has not been sufficiently investigated beyond financial performance metrics; there is a lack of comprehensive measurement that includes capital buffers, loan performance, and compliance with regulatory benchmarks like institutional capital ratios.

Thus, this research aims to fill these conceptual, contextual, and methodological gaps by providing a holistic analysis of the effects of dividend policies on SACCOs' financial sustainability, with an emphasis on capital adequacy, reinvestment capacity, and regulatory compliance.

1.3 Research objectives

1.3.1 General objective

The general objective of this study is to examine the effects of dividend policies on the sustainability of deposit taking SACCOs in Kenya

1.3.2 Specific objectives

i. To assess the effect of dividend payout ratios on the sustainability of deposit taking SACCOs in Kenya.
ii. To examine the effect of retained earnings on the sustainability of deposit taking SACCOs in Kenya.
iii. To analyze the effect of member returns on the sustainability of deposit taking SACCOs in Kenya.
iv. To determine the influence of capital adequacy on the sustainability of deposit taking SACCOs in Kenya.
v. To evaluate the moderating effect of inflation on the relationship between dividend policies sustainability of deposit taking SACCOs in Kenya.

1.3.3 Research Hypotheses

H_{01}: Dividend payout ratios have no significant effect on the sustainability of deposit-taking SACCOs in Kenya.

H_{02}: Retained earnings have no significant influence on the sustainability of deposit-taking SACCOs in Kenya.

H_{03}: Member returns have no significant effect on the sustainability of deposit-taking SACCOs in Kenya.

H_{04}: Capital adequacy has no significant impact on the sustainability of deposit-taking SACCOs in Kenya.

H_{05}: Inflation does not significantly moderate the relationship between dividend policies and the sustainability of deposit-taking SACCOs in Kenya.

1.4 Scope of the study

The study focused on analyzing the effect of dividend payout policies on the financial sustainability of deposit taking SACCOs in Kenya. Secondary data was drawn from the 176 SACCOs regulated by SASRA, ensuring a comprehensive assessment of the sector. This study covered a five-year period from 2018 to 2023, capturing trends and developments in dividend payout policies before, during, and after the Covid-19 pandemic, which significantly impacted the financial and economic sectors in Kenya. By defining this scope, the study aims to provide a focused and relevant analysis of how dividend policies impact the long-term sustainability of SACCOs, offering valuable insights for both theory and practice in cooperative finance.

1.5 Significance of the study

The significance of this study is multifaceted, with contributions to theoretical knowledge, practical management, and policymaking in the SACCO sector.

1.5.1 Policy makers

For policymakers, this study provides empirical evidence on the impact of dividend policies on SACCOs' financial sustainability**.** Regulatory bodies such as SASRA can leverage these insights to refine policies on capital adequacy, retained earnings, and dividend reinvestment strategies**.**

Understanding the relationship between dividend policies and long-term sustainability will enable policymakers to implement effective monitoring and intervention measures that prevent financial distress. Additionally, this research will help identify early warning signs of financial instability in SACCOs, allowing regulators to enforce policies that promote sustainable dividend distributions while safeguarding SACCOs' resilience (Shibutse et al., 2019; Wanjiru & Kamau, 2023).

1.5.2 Researchers and academic scholars

This study expands academic literature by bridging the gap between dividend payout policies and financial sustainability in SACCOs**.** Existing research has largely focused on financial performance indicators such as return on equity (ROE) and return on capital employed (ROCE)**,** with limited attention to return on assets (ROA) and capital adequacy**,** which are critical for sustainability. By addressing this gap, the study contributes to the development of theoretical frameworks that examine the long-term effects of dividend policies on SACCO stability**.** Future researchers can build on these findings to explore sustainable financial management models tailored for cooperative institutions (Ali et al., 2021; Kamau et al., 2022).

1.5.3 Investors and deposit taking SACCOs (DT SACCOs)

SACCO management will benefit from the study's insights into how dividend policies influence long-term financial sustainability. By understanding the trade-off between dividend payouts and retained earnings, SACCO managers can develop strategic policies that enhance financial stability while maintaining member satisfaction. This would help them optimize dividend policies to strengthen capital reserves, improve liquidity, and ensure resilience against economic shocks.

Furthermore, SACCO members who directly benefit from dividend payouts will gain a better understanding of how sustainable dividend policies contribute to the long-term success of their SACCOs. Ensuring financial sustainability means SACCOs can offer stable and consistent returns over time, reinforcing trust and loyalty among members.

Additionally, investors in SACCOs would find this study valuable in assessing the long-term viability of their investments. Understanding the role of dividend policies in financial sustainability will enable them to make informed investment decisions aligned with their risk appetite and return

expectations. This study would, therefore, provide both SACCO management and investors with critical insights to foster a more sustainable financial ecosystem within the cooperative sector.

1.6 Chapter Summary

This chapter has introduced the study by outlining the critical background on Savings and Credit Cooperative Organizations (SACCOs) and their unique financial challenges, particularly regarding dividend policies and sustainability. It highlighted the key variables under investigation—dividend payout ratios, retained earnings, member returns, capital adequacy, and inflation—and their relevance to the sustainability of deposit-taking SACCOs in Kenya. The statement of the problem clarified the existing gaps in understanding how dividend policies impact SACCO sustainability, especially in the Kenyan context, emphasizing the need for this study. Research objectives and hypotheses were clearly articulated to guide the inquiry. Finally, the scope and significance of the study were discussed, underlining its value to policymakers, academics, and SACCO stakeholders. The next chapter will review the relevant literature, providing theoretical and empirical foundations for the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explores the theoretical and empirical underpinnings of the study, focusing on the relationship between dividend policy and the sustainability of deposit taking SACCOs in Kenya. It begins by presenting the theoretical framework, which outlines key theories such as signaling theory, agency theory, and pecking order theory, providing a foundation for understanding the dynamics of dividend policy decisions. The chapter then reviews empirical literature on the effects of various aspects of dividend policy, including dividend payout ratios, retained earnings, member returns, and capital adequacy, on organizational performance. It also examines the moderating role of inflation in this relationship. A summary of literature gaps, the conceptual framework, and the operationalization of study variables are provided to guide the research process and establish a clear link between theory, empirical evidence, and the study objectives.

2.2 Theoretical framework

The theoretical framework provides a foundation for understanding the relationship between dividend policies and financial sustainability in deposit taking SACCOs. This study is anchored on three key theories: Signaling Theory, which explores how dividend payouts serve as indicators of a SACCO's financial stability and long-term sustainability; Agency Theory, which examines how dividend policies align the interests of SACCO members (principals) and management (agents) to promote sustainable financial practices; and the Pecking Order Theory, which highlights the prioritization of internal financing (retained earnings) over external sources in maintaining financial resilience. These theories provide a structured approach to analyzing how dividend payout decisions impact the long-term sustainability of deposit taking SACCOs in Kenya.

2.2.1 Signaling theory

The signaling theory was first introduced by Michael Spence in 1973 as a framework for understanding how individuals or organizations convey information to reduce information

asymmetry (Spence, 1973). The theory was initially applied in the labor market, where job candidates signal their qualifications to potential employers through their educational qualifications and certifications. Over time, it has been widely adopted in finance, marketing, and corporate governance to explain how signals influence stakeholder perceptions and behavior. Within the field of corporate finance, the signaling theory has been used to study dividend policies.

According to (Bhattacharya, 1979), a company's dividend policy may be interpreted as a source of information indicating that profitable companies with strong investment prospects will differentiate themselves from rivals with less successful investment projects by increasing their dividend payments. This premise was further supported by the work of Miller and Rock (1985), as well as John and Williams (1985), who supported the notion that dividends serve as clear indications of future profits. An increase (or decrease) in current dividends would therefore be interpeted as a likelihood of a rise (or fall) in the future earnings of a firm. Overall, these studies conclude that managers purposefully use dividend payments to communicate about the stability of their operations.

In further exploring the signaling theory and its role in dividend payments, Fama and French (2001) introduce the concept of disappearing dividends which suggests that over time, companies are now less likely to distribute dividends. In extending this work, Hobbs and Schneller (2012) examine the concept of disapperaring dividends and raise concerns that dividends vaished over time, not only because firms were less like to initiate them, but also because, once initiated, dividend payments were less likely to be sustained. These premises therefore lay the foundation for thorough investigation into the whole concept of dividend payouts and especially the long-term viability of these payments.

Unlike conventional corporations that balance dividends with shareholder expectations, Kenyan SACCOs operate under a cooperative model where sustainability is critical for long-term member benefits rather than short-term profit maximization. Many SACCOs in Kenya rely on member deposits for funding, and dividend payouts serve as a key indicator of financial health. However, excessive dividend payouts may reduce retained earnings, potentially undermining capital adequacy and long-term sustainability (Muriithi & Waweru, 2022). The challenge for Kenyan SACCOs is therefore to strike a balance between signaling financial stability through dividends

and maintaining adequate reserves to ensure resilience against economic shocks (e.g., the COVID-19 pandemic). This study investigated how SACCOs in Kenya navigate this delicate trade-off, ensuring that dividend policies contribute to sustainable financial growth rather than short-term member gratification.

Within the context of deposit taking Saccos in Kenya, given that SACCO members are also the shareholders of the SACCO, management always strives to maintain a steady and increasing dividend payout as a decline in the amount of dividends paid would be intepreted as a negative signal (Kathuo, Oluoch, & Njeru, 2021). Better dividends declared by a Sacco are seen to boost member confidence and therefore leading to the SACCO attracting even more customers while securing loyalty from current members (Muchira & Mwangi, 2019).

The Signaling Theory is highly relevant to this study as it underscores the role of dividend policies in conveying information about the financial health and prospects of deposit-taking SACCOs in Kenya. Since SACCOs operate in a cooperative model where members are both shareholders and customers, dividend payouts act as a signal of operational stability and profitability. Consistent and attractive dividends foster member confidence, enhance loyalty, and attract new members, thus aligning with the dual mandate of SACCOs to deliver returns while ensuring long-term sustainability (Kathuo et al., 2021; Muchira & Mwangi, 2019).

2.2.2 Agency theory

According to Jensen and Meckling (1976), an agency relationship is a legal arrangement wherein one party (the principal) hires the other (the agent) to carry out specific tasks on their behalf, hence granting the agent some degree of decision-making authority. By its very nature, the agency relationship could potentially be very problematic if the personal interests of the principal and the agent's are not well aligned. In deposit taking Saccos, (and Saccos in general) members who are also the owners of the Saccos are the principals, whereas the management they hire are the agents. The prominence of agency theory in Saccos is influenced by firstly, the separation of the Sacco into two conceptual participant groups of owners and managers, and secondly the suggestion that the owners and managers will each pursue self interests (Daily, Dalton, & Cannella, 2003). Members of Sacco's anticipate that their agents will act and decide in the best interest of the

principals; however this is not always the case, as agents may give in to self-interest, opportunistic behaviour, or failure to maintain a balance between the principal's interests and the agent's goals (Padilla, 2002). The principal therefore would be willing to incur agencycosts in a bid to limit the opportunisitc behaviours of the agent, or incentivise the agent into good behaviour (Zogning, 2017).

Agency theory further posits that dividend mechanisms provide an incentive for managers to reduce the overall operational expenses associated with the principal/agent relationship. Distributing dividends force managers to look for outside capital and expose themselves to the scrutiny of the capital markets, thus causing them to lessen any agency costs (Moh'd, Perry, & Rimbey, 1995). Dividends payouts in Saccos can therefore be seen as a mechanism to converge Sacco members' interest with those of managers. By distributing free cash flow as dividends, Saccos can reduce any surplus funds that would have otherwise been used for potential managerial opportunism, thereby promoting financial discipline and accountability (Mbuki, 2010; Haye, 2014).

In Kenya, the agency problem in SACCOs is particularly pronounced due to weak governance structures, information asymmetry, and cases of mismanagement (Olando, Mbewa, & Jagongo, 2012). Many SACCOs have struggled with issues of fraud, financial misappropriation, and inefficient resource allocation, where managers prioritize personal interests over member welfare (Wanyama, 2009). The use of dividend policies as an agency control mechanism is crucial in addressing these governance challenges. By ensuring that a portion of surplus funds is distributed as dividends, SACCOs reduce free cash flows that could be misused by management while simultaneously reinforcing member trust. However, excessive dividend payouts could also weaken SACCO sustainability by reducing retained earnings required for reinvestment and operational growth (Muriithi & Waweru, 2022). Therefore, Kenyan SACCOs must balance dividend distributions with long-term sustainability objectives, ensuring that financial discipline does not come at the cost of capital adequacy and future resilience.

The Agency theory is particularly relevant to this study as it highlights the inherent conflicts between SACCO members (principals) and management (agents) concerning the use of financial resources. Dividend payouts act as a mechanism to mitigate these conflicts by aligning the interests

of both parties. For SACCOs, distributing dividends not only ensures that members, as shareholders, receive a tangible return on their investments but also limits the free cash flow available for potential managerial opportunism, fostering financial discipline and accountability (Moh'd et al., 1995; Mbuki, 2010).

2.2.3 Pecking order theory

The Pecking Order Theory, introduced by Myers and Majluf (1984), provides an insightful perspective on how firms prioritize their financing options. The theory posits that firms prefer to fund their activities using internal resources (retained earnings) first, followed by debt, and finally equity as a last resort. This financing hierarchy is driven by the principle of minimizing the costs associated with information asymmetry. Internal financing incurs no additional costs, while debt and equity financing involve external scrutiny, which may expose the firm to adverse selection issues and signaling costs.

A critical tenet of the Pecking Order Theory is its emphasis on internal funds as the primary source of financing. Firms that generate sufficient retained earnings are less reliant on external sources, enabling them to avoid the signaling effects that may arise when seeking external capital. For deposit-taking SACCOs, retained earnings represent a vital pool of funds that can be reinvested into operations, technology upgrades, and loan portfolio expansion, enhancing their long-term sustainability (Myers & Majluf, 1984). However, the distribution of dividends depletes these retained earnings, creating a tension between satisfying member expectations and maintaining adequate internal funds for growth.

The theory also highlights the role of debt in the financing hierarchy. SACCOs often turn to debt as a secondary option when retained earnings are insufficient. However, increased reliance on debt may lead to higher financial risk and impact the SACCO's sustainability. This dynamic underscores the importance of prudent dividend policies to ensure that sufficient funds are retained to minimize the need for external borrowing, which can strain financial health over time (Fama & French, 2002).

Equity financing, according to the Pecking Order Theory, is the least preferred option due to its high costs and potential dilution of ownership. While SACCOs do not typically issue equity in the

traditional corporate sense, member contributions can be likened to equity funding. Excessive reliance on member contributions without adequate returns in the form of dividends or other benefits may erode member trust and loyalty, further complicating the sustainability equation (Donaldson, 1961).

Despite its strengths, the Pecking Order Theory has been critiqued for its assumption of universal applicability. Some researchers argue that it may not adequately capture the unique dynamics of financial institutions like SACCOs, where member-driven objectives and cooperative principles play a significant role. For instance, SACCOs prioritize the well-being of their members, often making dividend payouts a key performance indicator despite the implications for retained earnings (Frank & Goyal, 2003).

In the Kenyan SACCO sector, the tension between dividend distribution and retained earnings is particularly pronounced due to regulatory requirements, competitive pressures, and member expectations (SASRA, 2021). Many SACCOs face challenges in balancing attractive dividend payouts with the need to retain sufficient earnings for operational expansion and financial stability (Olando, Jagongo, & Mbewa, 2013). Given the capital-intensive nature of SACCO lending operations, excessive dividend distribution may weaken liquidity and slow loan portfolio growth, undermining long-term sustainability (Muriithi & Waweru, 2022). Conversely, SACCOs that prioritize retained earnings over dividends risk member dissatisfaction and reduced participation, as dividends serve as a key incentive for continued member engagement (Muchira & Mwangi, 2019).

Furthermore, the reliance on debt financing among Kenyan SACCOs has been increasing, with many SACCOs seeking external funding to supplement their capital base (KUSCCO, 2020). However, this reliance raises concerns about financial risk and debt servicing costs, particularly in the wake of fluctuating interest rates and economic downturns. In this context, the Pecking Order Theory provides a critical framework for understanding how SACCOs navigate these financial challenges by emphasizing the importance of internal capital reserves in ensuring long-term sustainability. The study explored how SACCOs in Kenya structure their dividend policies to strike a balance between member satisfaction and financial resilience, ensuring they remain competitive and sustainable in the dynamic financial landscape.

The Pecking Order Theory is highly relevant to this study as it provides a framework to analyze the financial decisions SACCOs make regarding dividend payouts and retained earnings. By prioritizing internal financing over external debt, SACCOs can maintain financial discipline and reduce their risk exposure, aligning with long-term sustainability goals. The theory underscores the delicate balance SACCOs must achieve in meeting member expectations for dividends while ensuring sufficient retained earnings for reinvestment and operational growth. This theoretical lens guided the investigation into how dividend policies impact sustainability in the unique context of Kenyan SACCOs. The theory connects to the variables retained earnings, capital adequacy, and external borrowing (debt). Kenyan SACCOs prefer financing through retained earnings to minimize financial risk and avoid costly external borrowing. However, high dividend payouts reduce retained earnings, forcing SACCOs to rely more on debt financing, which can increase financial vulnerability. This theory underscores the importance of balancing dividends and retained earnings to maintain liquidity and operational capacity essential for long-term sustainability.

2.3 Empirical review

The empirical review examines various studies on the effects of dividend policies, retained earnings, member returns, and capital adequacy on the sustainability of deposit taking SACCOs. Additionally, the review explores how inflation moderate these relationships. Through a combination of local and international perspectives, the empirical review highlights both consistent trends and contextual differences, thereby offering a comprehensive understanding of SACCO financial behavior.

2.3.1 Effect of dividend payout ratios on the sustainability of DT SACCOs

Several studies have examined the relationship between dividend payout ratios and financial performance, often linking dividends to firm stability, investor confidence, and long-term success. However, most of these studies focus primarily on profitability rather than sustainability, which creates a research gap that necessitates further exploration. For instance, a study by Zheng (2020) analyzed the relationship between dividend payout ratios and firm performance in China's manufacturing sector. The findings indicated that higher dividend payouts signaled financial

strength and stability, which in turn boosted investor confidence and profitability. While the study provided valuable insights into the signaling effect of dividends, it lacked a long-term perspective on sustainability, as it did not assess how firms maintained financial health beyond immediate profitability. This limitation is particularly relevant for SACCOs, where member-driven financial models require a delicate balance between dividend payouts and retained earnings for long-term growth.

Similarly, Yamada (2022) examined how dividend policies influenced sustainability in Japan's retail sector. The study found that firms with consistent dividend payouts achieved better long-term financial performance, reinforcing the argument that dividends act as a signal of stability. However, the study was limited in scope, as it focused on publicly listed firms and did not address member-owned financial institutions such as SACCOs, where capital accumulation through retained earnings plays a crucial role in sustainability. The lack of analysis on non-traditional corporate structures leaves a gap in understanding how dividend policies impact cooperative financial models.

In the banking sector, Al-Malkawi (2019) investigated the effect of dividend payout ratios on financial sustainability in Saudi Arabian banks. The study concluded that higher dividends helped mitigate financial risks and signaled stability to investors, even during economic downturns. However, the research primarily considered external investors, whereas SACCOs rely on internal member contributions and retained earnings for expansion. The study also did not explore how increased dividend payouts could potentially weaken liquidity and slow down lending operations, which are critical for SACCO sustainability.

In Kenya, Ouma (2020) assessed how dividend policies influenced profitability across industries listed on the Nairobi Securities Exchange. While the findings confirmed that higher dividends enhanced investor confidence and corporate governance, the study lacked a specific focus on SACCOs, whose cooperative model differentiates them from typical profit-driven firms. The research also failed to examine how dividend policies impacted liquidity constraints and loan portfolio growth, which are essential to SACCO sustainability.

A Nigerian study by Juma (2021) analyzed dividend payout ratios across diverse sectors, finding that higher dividend payouts improved financial stability in capital-intensive industries. However,

the study overlooked alternative financing strategies used by non-traditional firms like SACCOs, which rely on member deposits and internal reserves rather than external capital markets. This omission creates a gap in understanding how cooperative financial institutions balance dividend payouts with capital accumulation to ensure long-term sustainability.

In South Africa, Okereke (2022) investigated the impact of dividend payout ratios on corporate sustainability. The study found that firms with high dividend policies were less likely to experience financial distress, as dividends fostered trust among investors and ensured easy access to capital. However, the research was conducted in a corporate setting, where access to equity financing is readily available. This limits its applicability to SACCOs, which do not raise equity in the same way and must carefully manage retained earnings to sustain operations.

A more relevant study by Mwangi (2022) examined the impact of dividend payout ratios on SACCO profitability in Kenya. The findings indicated that SACCOs with higher dividend payouts experienced better financial performance, as payouts aligned member interests with management discipline. However, the study primarily focused on short-term profitability without adequately addressing the long-term sustainability of SACCOs that may face liquidity constraints if they prioritize immediate payouts over retained earnings.

Another Kenyan study by Wambua (2021) explored the relationship between dividend payouts and corporate sustainability in companies listed on the Nairobi Securities Exchange. The study confirmed that higher dividends strengthened investor confidence, allowing firms to secure capital and reinvest in growth initiatives. However, it did not fully consider how high dividend payouts might deplete internal reserves, affecting financial resilience in economic downturns. This concern is particularly relevant for SACCOs, which depend on stable liquidity for loan issuance and operational sustainability.

Finally, Chege (2020) analyzed dividend payout policies among SMEs in Kenya, finding that consistent dividend payments improved financial stability by fostering investor confidence. However, SACCOs differ from SMEs in their member-based structure, where financial decisions must balance short-term member returns with long-term capital adequacy. The study did not explore this trade-off, leaving a gap in understanding how SACCOs manage dividend payouts while ensuring financial resilience.

Although previous research acknowledges that dividend payout ratios have an impact on financial performance, there remains a notable lack of emphasis on how these payouts affect long-term sustainability, particularly in the context of SACCOs. A prominent limitation in the existing literature is the tendency to concentrate on short-term profitability outcomes, often overlooking the broader issue of enduring financial stability. Most investigations assess how dividend distributions influence current financial results but do not consider the possible compromises SACCOs must make between distributing earnings and retaining capital for future growth. Furthermore, research has predominantly centered on corporate and commercial banking institutions, with limited attention given to SACCOs, which operate under distinct cooperative principles and financial dynamics. Since SACCOs are structured around member ownership and service, they must balance the delivery of member benefits with the necessity of maintaining sufficient capital reserves an equilibrium that requires specialized analytical consideration. Additionally, the interaction between macroeconomic factors, such as inflation, and SACCO sustainability remains underexplored, especially in the context of dividend distribution practices. Understanding this relationship is essential, as economic instability can exacerbate liquidity challenges, making financial resilience even more essential. Finally, while some studies link dividends with profitability, they frequently ignore how dividend policies affect a SACCO's capital adequacy and its reliance on external financing both of which are critical components of long-term sustainability in the cooperative sector.

2.3.2 Effect of retained earnings on the sustainability of DT SACCOs

The literature on retained earnings and their role in sustainability presents a variety of conclusions based on different economic settings. While earlier research underscores the importance of retained earnings in promoting financial stability and enhancing the ability to invest, the majority of studies tend to focus more on immediate profitability instead of examining the broader scope of sustainability. Additionally, there is a noticeable gap in research concerning retained earnings within SACCOs, as most studies have concentrated on corporate firms and small-to-medium-sized enterprises (SMEs), which operate under different financial frameworks and priorities. This section offers a critical analysis of previous studies, pointing out their strengths and weaknesses, and emphasizing the need for further research on how retained earnings contribute to the long-term financial health of SACCOs.

A study by Gupta and Kumar (2021) in India explored the relationship between retained earnings and financial sustainability, emphasizing that firms with higher retained earnings experienced greater stability. The study's strength lies in its extensive dataset and rigorous regression analysis, which demonstrated how retained earnings reduce reliance on external financing. However, it primarily examined profitability rather than sustainability, overlooking the long-term impact of retained earnings on financial resilience and adaptability. This limitation is particularly relevant to SACCOs, where sustainability is influenced by the need to balance retained earnings with member benefits.

Lee and Kim (2022) studied South Korean SMEs, finding that retained earnings played a crucial role in ensuring financial stability and resilience to economic shocks. The study effectively combined qualitative and quantitative approaches, offering deeper insights into how internal financing supports long-term sustainability. However, the research focused on SMEs, which operate under different financial models than SACCOs. Unlike SMEs, SACCOs must maintain liquidity to serve members while ensuring long-term stability. The study did not address the potential downside of excessive retained earnings, such as liquidity constraints or reduced member payouts, which could affect SACCO sustainability.

A study by Al-Malkawi (2020) analyzed retained earnings in Middle Eastern banks, concluding that banks with higher retained earnings demonstrated stronger risk management and long-term financial sustainability. The study's strength lies in its focus on capital adequacy, a key component of financial sustainability. However, its findings may not fully apply to SACCOs, as banks operate under strict capital regulations and have different stakeholder structures. The study also assumed that firms could freely retain earnings without resistance, which may not be the case for SACCOs, where members expect periodic returns. Additionally, it did not explore how external economic shocks influence retained earnings' role in sustainability.

Odhiambo (2020) examined the impact of retained earnings on the financial sustainability of firms listed on the Nairobi Securities Exchange. The research found that firms with higher retained earnings maintained stable financial health, reducing reliance on external debt. While the study is relevant to financial sustainability, it primarily focused on listed companies, which differ from SACCOs in governance and financial management. SACCOs must balance retained earnings with

liquidity needs and member benefits, a dynamic that was not addressed in the study. Additionally, the study did not consider how external factors, such as inflation and regulatory changes, affect retained earnings' contribution to sustainability.

Ali and Rizvi (2021) investigated the role of retained earnings in family-owned businesses in Pakistan, finding that reinvestment of earnings contributed to long-term stability. The study highlighted the benefits of financial independence, but its applicability to SACCOs is limited due to the differences in governance structures. Unlike family-owned businesses, SACCOs must align retained earnings with collective member interests. The study also failed to address how retained earnings impact liquidity management, a crucial factor in SACCO sustainability.

Adeyemi (2020) explored the relationship between retained earnings and sustainability in Nigerian manufacturing firms. The study concluded that firms with higher retained earnings invested more in innovation and capital projects, enhancing their long-term financial health. While this research supports the sustainability argument, manufacturing firms differ from SACCOs in their capital structures. SACCOs rely heavily on member contributions and loan issuance, requiring a careful balance between retained earnings and liquidity. The study did not assess whether excessive earnings retention could negatively affect SACCO liquidity or member trust.

Osei and Asamoah (2022) studied the role of retained earnings in Ghanaian SMEs, demonstrating that retained earnings enhanced financial resilience and long-term stability. However, the research focused on SMEs, which, unlike SACCOs, do not have the same member-driven financial obligations. The study failed to consider how retained earnings impact SACCOs' ability to maintain liquidity while sustaining growth. Additionally, it did not examine how external inflation affect the sustainability of retained earnings as a financial strategy.

Botha and Kotze (2020) analyzed South African construction firms, finding that retained earnings were essential for sustaining large-scale projects and financial stability. While the study highlighted the importance of internal financing for long-term sustainability, it focused on a capital-intensive industry, making its findings less applicable to SACCOs. Unlike construction firms, SACCOs must balance earnings retention with liquidity management and member returns. The study did not explore how retained earnings affect SACCOs' ability to provide consistent financial services while ensuring long-term stability.

Muturi (2022) specifically examined retained earnings in Kenyan SACCOs, finding that SACCOs with higher retained earnings could expand services and maintain financial stability. While this study is directly relevant, it primarily focused on profitability rather than long-term sustainability. It did not assess potential risks associated with excessive retained earnings, such as liquidity challenges or reduced member satisfaction. Additionally, the study lacked an analysis of external economic factors that influence the sustainability of retained earnings as a financial strategy for SACCOs.

The existing literature establishes a strong connection between retained earnings and financial stability, yet significant gaps remain. Most studies emphasize short-term profitability rather than long-term sustainability. Additionally, research on SACCOs is limited, with most findings drawn from corporate entities and SMEs, which operate under different financial structures. A key gap in the literature is the failure to assess how external factors, such as economic downturns, regulatory changes, and inflation, affect the sustainability of retained earnings in SACCOs. Furthermore, few studies examine how SACCOs balance retained earnings with member expectations and liquidity needs, a crucial factor in cooperative financial management.

Future research should explore how SACCOs can optimize retained earnings to ensure financial sustainability without compromising member benefits. Additionally, studies should assess how macroeconomic conditions such as inflation influence the sustainability of retained earnings as a financial strategy. Understanding these dynamics provided a more comprehensive view of how SACCOs can achieve long-term financial resilience while fulfilling their core mandate to serve members.

2.3.3 Effect of member returns on the sustainability of DT SACCOs

The empirical literature on member returns and sustainability presents a general consensus that competitive member returns contribute positively to financial performance and long-term viability. However, most studies primarily focus on profitability rather than the broader concept of sustainability. While higher member returns are often linked to increased deposits, member loyalty, and operational efficiency, existing research does not fully explore the trade-offs involved, such as the potential strain on liquidity and capital reserves. Additionally, the majority of studies

examine general cooperatives, with limited research focusing specifically on SACCOs. This section critically reviews prior studies, identifying their strengths and weaknesses while highlighting gaps in understanding how member returns impact the sustainability of SACCOs.

A study by Liu and Wang (2020) examined the effect of member returns on the financial performance of cooperatives in China, finding a significant positive correlation between higher member returns and profitability. The study's strength lies in its broad sectoral coverage, as it analyzed cooperatives from different industries, providing a more generalized perspective. However, its focus on general cooperatives rather than SACCOs limits its applicability. Unlike other types of cooperatives, SACCOs must carefully manage liquidity to balance member returns with operational sustainability. The study did not explore whether excessive member returns could compromise financial reserves, which is a critical consideration for SACCOs.

Atieno and Muniu (2021) investigated the impact of member returns on SACCO sustainability in Kenya, using data from 80 SACCOs over a five-year period. Their findings reinforced the idea that competitive returns attract more members and increase loan uptake, ultimately improving financial performance. The study's strength lies in its focus on SACCOs, making its findings more directly relevant. However, the study did not assess how SACCOs balance sustainability when setting member returns. It also failed to analyze the long-term implications of maintaining high returns during economic downturns, where financial stability might be threatened.

In Uganda, a study by Ntibirwa et al. (2020) analyzed 60 SACCOs and found that higher member returns were positively associated with profitability and financial sustainability. The research effectively applied panel data regression techniques, strengthening its quantitative reliability. However, it did not account for external economic factors such as inflation or interest rate fluctuations, which can impact the sustainability of high member returns. The study assumed a linear relationship between member returns and sustainability, overlooking the potential risks of excessive returns, such as liquidity constraints or reduced capital adequacy.

Olorunfemi et al. (2020) examined cooperatives in Nigeria, finding that member returns significantly influenced financial health by attracting deposits and fostering loyalty. The study's strength lies in its inclusion of both agricultural and financial cooperatives, allowing for a cross-sector comparison. However, by grouping financial cooperatives with agricultural cooperatives,

the study may have overlooked key differences in financial management strategies. SACCOs, unlike agricultural cooperatives, operate in highly regulated financial environments, requiring a more nuanced understanding of how member returns affect sustainability.

Akintoye et al. (2021) conducted a study in Ghana, demonstrating that SACCOs offering higher member returns retained more members and achieved better profitability. While the study successfully linked member returns to financial stability, it lacked an in-depth analysis of the risks associated with prioritizing high returns over liquidity. The study also did not consider the role of regulatory requirements in shaping SACCO financial strategies, a crucial factor for sustainability.

Botha and Kotze (2021) analyzed financial cooperatives in South Africa, finding that higher member returns enhanced financial stability by increasing member deposits and loyalty. The study effectively combined qualitative and quantitative methodologies, offering a comprehensive perspective. However, it assumed that financial cooperatives have unlimited capacity to increase returns without negatively impacting liquidity. In reality, SACCOs must balance the need for attractive returns with maintaining adequate reserves for operational sustainability, an aspect not fully addressed in the study.

Ngugi (2022) analyzed 70 SACCOs in Kenya, finding that attractive member returns contributed to higher profitability by encouraging savings and loan uptake. While the study confirmed the financial benefits of competitive member returns, it did not explore how SACCOs manage this strategy during financial downturns. Moreover, the study did not account for how regulatory restrictions on dividend payments influence SACCO decisions on member returns, a crucial factor in cooperative financial management.

Kimani (2020) examined 50 SACCOs in Kenya and found that higher member returns helped SACCOs maintain a competitive edge by attracting new members and retaining existing ones. However, the study primarily focused on membership growth and did not sufficiently address the sustainability challenges SACCOs may face when increasing returns. For instance, excessive distribution of earnings to members may reduce the SACCO's ability to reinvest in operational improvements, digital transformation, or loan diversification, which are essential for long-term sustainability.

Mungai and Njeru (2021) investigated the relationship between member returns and SACCO profitability in Kenya, concluding that higher returns contributed to better financial performance. While the study provided strong empirical evidence of the benefits of member returns, it did not address the potential downside of high returns in terms of capital erosion and financial risk. The study also failed to explore whether there is an optimal level of member returns that balances sustainability without overextending SACCO financial resources.

While the existing literature establishes a strong link between member returns and financial performance, several critical gaps remain. Most studies emphasize profitability rather than long-term sustainability, failing to assess how SACCOs can maintain competitive returns while safeguarding liquidity and capital reserves. Additionally, few studies examine the external economic factors that impact SACCO decisions on member returns, such as inflation, regulatory policies, and interest rate fluctuations. Another significant gap is the limited research on the optimal balance between member returns and reinvestment in SACCO operations to ensure sustainable growth.

2.3.4 Effect of capital adequacy on the sustainability of DT SACCOs

Capital adequacy plays a vital role in determining the financial sustainability of SACCOs, as it affects their capacity to absorb unexpected financial disturbances, manage risks, and ensure liquidity. It also serves as an essential factor in the development of dividend policies, as SACCOs need to find an equilibrium between retaining earnings to strengthen their capital and distributing dividends to members. While sufficient capital adequacy fosters financial stability and compliance with regulations, retaining too much capital at the expense of member payouts could lead to dissatisfaction among members due to lower dividends. The existing body of research consistently suggests a positive link between capital adequacy and sustainability. However, the majority of these studies tend to prioritize short-term profitability over the broader concept of sustainability, which includes aspects such as financial stability, regulatory adherence, and long-term operational endurance. This section offers a critical review of existing studies, pointing out their strengths and weaknesses, while also identifying areas where further research is needed to understand the full impact of capital adequacy on the long-term sustainability of SACCOs.

A study by Ofori and Osei (2020) examined the effect of capital adequacy on the sustainability of financial institutions in Ghana, using data from 50 commercial banks over a 10-year period. While the study provided valuable insights into how capital adequacy supports financial resilience, it primarily focused on banks rather than SACCOs. Given the structural and operational differences between banks and SACCOs, the study's findings may not be fully generalizable. Banks have access to diverse capital-raising mechanisms, whereas SACCOs rely mainly on member contributions, which can limit their ability to increase capital reserves.

Moyo and Gumede (2021) investigated capital adequacy in South African SACCOs, finding that higher capital adequacy ratios correlated with increased profitability and stability. The study effectively highlighted the importance of capital adequacy in reducing insolvency risk and protecting member investments. However, it did not address the potential trade-offs associated with maintaining high capital reserves, such as reduced capacity to offer competitive member returns or provide affordable credit. Additionally, the study assumed that SACCOs with higher capital reserves would always perform better, overlooking the possibility that excessive capital requirements could restrict lending activities, thereby affecting revenue generation.

In Kenya, Jebet and Sikalieh (2020) analyzed the impact of capital adequacy on SACCO sustainability, concluding that well-capitalized SACCOs were more financially stable. While the study provided empirical evidence supporting the positive role of capital adequacy, it lacked an in-depth examination of regulatory challenges. In Kenya, SACCOs operate under strict regulatory frameworks, including capital adequacy requirements set by the SACCO Societies Regulatory Authority (SASRA). The study did not explore how compliance with these regulations affects SACCO profitability and sustainability, particularly for smaller SACCOs that may struggle to meet capital adequacy thresholds.

Ochieng and Wanjiru (2021) examined capital adequacy and profitability in Kenyan SACCOs, finding that higher capital reserves enhanced financial performance, particularly in terms of return on assets (ROA) and return on equity (ROE). The study's strength lies in its use of regression models to quantify the impact of capital adequacy on profitability. However, it failed to consider external economic factors such as inflation, interest rate fluctuations, or changes in lending policies, all of which can influence SACCOs' ability to maintain adequate capital reserves.

Furthermore, the study primarily focused on short-term profitability metrics without evaluating how capital adequacy contributes to long-term sustainability.

In Uganda, Tusuubira (2021) explored the relationship between capital adequacy and SACCO sustainability, emphasizing that adequate reserves facilitated better loan servicing and increased member confidence. The study effectively highlighted the role of capital adequacy in building trust among SACCO members. However, it did not explore whether higher capital reserves come at the expense of SACCOs' ability to expand services or invest in technological advancements. Maintaining large capital reserves might limit funds available for lending, reducing income generation opportunities and potentially impacting SACCO sustainability.

A study by Abubakar and Mohammed (2021) in Nigeria confirmed that SACCOs with higher capital adequacy ratios demonstrated better financial performance. The study effectively identified capital adequacy as a risk-mitigation tool, particularly in managing credit and liquidity risks. However, it did not assess the impact of capital adequacy on member returns. SACCOs must balance maintaining sufficient capital reserves with ensuring that members receive competitive dividends. The study also overlooked the role of governance structures in ensuring that SACCOs maintain optimal capital adequacy while fulfilling their primary mandate of serving members' financial needs.

Mwangwe and Shubba (2021) examined capital adequacy in Tanzanian SACCOs, concluding that stronger capital positions enhanced profitability and sustainability. The study's strength lies in its consideration of economic fluctuations and how SACCOs with higher capital adequacy ratios were better equipped to navigate financial downturns. However, the study did not account for the variations between urban and rural SACCOs. Urban SACCOs often have higher-income members and access to diverse financial resources, while rural SACCOs may struggle to accumulate sufficient capital, affecting their sustainability.

Wambugu et al. (2020) analyzed 80 Kenyan SACCOs, highlighting that adequate capitalization was essential for financial viability in a competitive environment. The study effectively linked capital adequacy to financial resilience, demonstrating how well-capitalized SACCOs managed financial shocks such as loan defaults and interest rate fluctuations. However, it did not assess how SACCOs balance capital adequacy with service delivery. While maintaining high capital reserves

strengthens financial stability, it may also limit SACCOs' ability to expand credit facilities or introduce new financial products, which are essential for member satisfaction and growth.

Mwangi et al. (2022) studied 50 Kenyan SACCOs and reaffirmed the positive relationship between capital adequacy and sustainability. The study emphasized that capital adequacy minimizes operational risks and ensures regulatory compliance. However, it failed to explore the challenges SACCOs face in meeting regulatory capital requirements, especially smaller SACCOs with limited financial resources. Additionally, the study did not consider alternative capital-raising strategies, such as partnerships with development finance institutions or innovative financial instruments that could enhance SACCOs' capital adequacy without overburdening members.

While existing studies establish a strong link between capital adequacy and financial sustainability, several gaps remain unaddressed. One key limitation is the overemphasis on profitability, with most research focusing on metrics such as return on assets (ROA) and return on equity (ROE) while neglecting broader sustainability factors. Financial sustainability extends beyond profitability to include liquidity management, risk mitigation, and long-term operational stability, which are often overlooked. Future research should adopt a more holistic approach to analyzing sustainability in SACCOs.

Additionally, limited attention has been given to the regulatory challenges associated with capital adequacy. Many studies fail to consider the impact of capital adequacy regulations on SACCO operations, particularly for smaller SACCOs that may struggle to meet capital requirements. Understanding how regulatory frameworks influence financial strategies and sustainability is essential for a more comprehensive analysis.

Another gap in the literature is the neglect of trade-offs associated with capital adequacy. While most studies assume that higher capital adequacy always benefits SACCOs, they do not sufficiently explore potential downsides. Holding excessive capital reserves may limit funds available for lending, restrict service expansion, and reduce returns to members, potentially leading to dissatisfaction. Future research should investigate how SACCOs can strike a balance between maintaining adequate capital reserves and ensuring continued service delivery and member satisfaction.

Moreover, the literature predominantly focuses on single-country contexts, with little comparative analysis of capital adequacy strategies across different regulatory environments. A cross-country study would provide deeper insights into best practices for maintaining capital adequacy while ensuring financial sustainability in diverse financial landscapes.

Another gap is the lack of consideration for macroeconomic factors. Few studies assess how external economic conditions, such as inflation influence SACCOs' ability to maintain adequate capital levels. Given that economic conditions directly impact financial institutions, future research should integrate macroeconomic variables into capital adequacy analyses to provide a more realistic assessment of sustainability.

Finally, existing studies largely focus on internal capital accumulation while paying limited attention to alternative capital-raising strategies. There is a need for research on innovative ways to enhance SACCO capital adequacy without overburdening members, such as institutional partnerships, impact investment, or government support. Exploring alternative funding mechanisms could provide SACCOs with more sustainable options to strengthen their capital base while maintaining financial viability.

2.3.5 Moderating effect of inflation on the relationship between dividend policies and sustainability of DT SACCOs

The moderating role of inflation in the relationship between dividend policies and the sustainability of Savings and Credit Cooperative Organizations (SACCOs) has gained increasing attention in recent years. Inflationary pressures affect SACCOs' financial strategies by influencing purchasing power, operational costs, interest rates, and overall economic stability. As SACCOs operate within a member-driven financial model, their ability to balance dividend payments with long-term sustainability is significantly shaped by inflationary trends. Several studies have explored this relationship, offering valuable insights while also highlighting notable gaps and limitations.

Adetunji and Egbunike (2022) examined the influence of macroeconomic factors, including inflation, on dividend policies in banks, finding that high inflation reduced firms' ability to sustain dividend payouts over time. Their study emphasized the risks posed by economic instability but focused primarily on the banking sector, leaving a gap in understanding how inflation impacts

SACCOs, which operate under different governance structures. Moreover, the study did not explore how financial institutions strategically adjust dividend policies to maintain sustainability amid rising inflation, leaving room for further research on adaptive financial strategies.

Similarly, Oduor et al. (2021) analyzed the relationship between dividend policies and financial stability in Kenyan firms, concluding that firms were more likely to sustain dividend payouts during periods of low inflation than during high inflation. While the study provided valuable insights, it primarily assessed corporate firms and did not account for the unique governance structure of SACCOs, where dividend policies are closely tied to member contributions and financial resilience. Additionally, the study assumed a direct relationship between inflation and dividend reductions without sufficiently addressing how SACCOs might counteract inflation through strategies such as adjusting lending rates or diversifying investment portfolios.

Nguimkeu and Jang (2020) extended this analysis to financial institutions across Africa, concluding that during inflationary periods, firms prioritize liquidity retention over dividend payouts to ensure long-term financial stability. While their findings reinforce the importance of financial prudence, the study lacks specificity regarding SACCOs, which differ from traditional financial institutions due to their cooperative governance and member-focused financial model. Furthermore, the study does not explore whether larger SACCOs with diversified portfolios might be better positioned to sustain dividend payments despite inflationary pressures.

In contrast, Nkamnebe et al. (2020) found that stable inflationary conditions strengthen the relationship between dividend policies and financial sustainability, as firms are more likely to maintain or increase dividend payouts, boosting member confidence. While this study highlights the benefits of low and stable inflation, it does not account for SACCOs that might still struggle with internal inefficiencies despite favorable macroeconomic conditions. Additionally, the study overlooks how firms operating in different regulatory environments respond to inflation fluctuations, a crucial factor in comparative economic analyses.

Njiru and Ochieng (2021) specifically examined SACCOs in Kenya, offering essential insights into how the sector responds to inflation. The study found that during periods of low inflation, SACCOs maintained stable dividend policies, leading to greater financial sustainability and member retention. However, during high inflation, such as the COVID-19 period, SACCOs

reduced dividend payouts to preserve liquidity and ensure long-term survival. While this study provides valuable sector-specific insights, it lacks a broader comparative perspective, leaving unanswered questions about how SACCOs in different economies adjust their dividend strategies in response to inflationary pressures. Additionally, the study does not explore potential risk mitigation strategies that could enable SACCOs to sustain dividends during inflationary periods, such as inflation-hedging investments or strategic cost management.

Despite the contributions of existing studies, several gaps remain in understanding the moderating effect of inflation on the relationship between dividend policies and sustainability in SACCOs. One significant limitation is the limited focus on SACCO-specific dynamics. Many studies analyze inflation in the context of commercial banks or corporate firms, overlooking the unique financial model of SACCOs, where sustainability is a primary concern, and member welfare plays a crucial role. This gap leaves open the question of how SACCOs balance dividend payouts and long-term resilience amid inflationary pressures.

Another gap lies in the lack of research on adaptive dividend strategies. While existing studies acknowledge that firms adjust dividends in response to inflation, few provide a detailed analysis of the strategies that enable firms to sustain payouts while maintaining financial stability. Without a comprehensive exploration of these strategies, it remains unclear how SACCOs can effectively navigate inflationary challenges while continuing to offer returns to their members.

Additionally, most studies focus on single-country contexts, limiting the generalizability of findings across different economic and regulatory environments. Since inflation dynamics vary by country due to differences in monetary policy, fiscal frameworks, and financial sector regulations, a comparative analysis of SACCOs in diverse economies could offer deeper insights into best practices for managing inflation-driven dividend fluctuations.

Furthermore, there is insufficient attention to internal operational factors that influence how SACCOs respond to inflation. While macroeconomic conditions are acknowledged as critical moderators, studies rarely assess how internal inefficiencies, governance structures, or technological innovations impact SACCOs' ability to adjust dividend policies during inflationary periods. Understanding these internal factors is essential for designing resilient financial strategies.

Finally, a critical gap exists in the exploration of regulatory influence. Regulatory frameworks play a significant role in shaping SACCOs' financial decisions, particularly regarding capital adequacy requirements and dividend policies. However, most studies fail to analyze how different regulatory environments impact SACCOs' ability to sustain dividend payouts amid inflation. Future research should examine the interplay between inflationary trends, regulatory policies, and SACCOs' financial sustainability.

2.4 Summary of literature and gaps

Table 2.1: Summary of literature and gaps

Author	Study Objective/Title	Focus/Variable	Key Findings	Limitations/Gaps	Relevance to SACCOs
Zheng (2020)	Investigate the signaling effect of dividend payout in Chinese manufacturing firms	Dividend payout ratio	Higher dividends signal financial strength, boost investor confidence	Focused on profitability, lacked long-term sustainability perspective	SACCOs need long-term sustainability balance
Yamada (2022)	Examine long-term impact of consistent dividend policies in Japanese retail firms	Dividend policies	Consistent dividends linked to better long-term performance	Focused on publicly listed firms, not member-owned institutions	SACCOs differ from publicly listed firms
Al-Malkawi (2019)	Assess role of dividends in risk reduction and signaling stability in Saudi banks	Dividend payout ratio	Dividends mitigate risk, signal stability	Focused on external investors, did not assess liquidity or lending impact	SACCOs rely on internal members, liquidity critical
Ouma (2020)	Analyze the impact of dividend policies on confidence and	Dividend policies	Higher dividends improve confidence	No specific focus on SACCOs, did not explore liquidity or loan growth	SACCOs have unique cooperative models

Author	Study Objective/Title	Focus/Variable	Key Findings	Limitations/Gaps	Relevance to SACCOs
	governance in Kenya		and governance		
Juma (2021)	Evaluate the stabilizing effect of dividend payouts in capital-intensive sectors in Nigeria	Dividend payout ratio	Higher dividends improve stability in capital-intensive industries	Overlooked alternative financing models used by SACCOs	SACCOs rely on deposits and internal reserves
Okereke (2022)	Examine dividends' role in reducing financial distress in South African corporations	Dividend payout ratio	High dividends reduce financial distress, foster trust	Corporate setting, easier equity access than SACCOs	SACCOs must manage retained earnings carefully
Mwangi (2022)	Analyze profitability effects of dividend payouts in Kenyan SACCOs	Dividend payout ratio	Higher dividends linked to better profitability	Focused on short-term profitability, overlooked long-term liquidity concerns	Direct SACCO focus but limited on sustainability
Wambua (2021)	Assess investor confidence from dividend policies in NSE-listed firms	Dividend payout ratio	Dividends strengthen investor confidence	Did not consider depletion of reserves or economic downturn risks	SACCO liquidity and resilience essential
Chege (2020)	Evaluate financial stability impacts of dividend payout policies in SMEs	Dividend payout policies	Consistent dividends improve financial stability	SMEs differ from SACCOs; lacked member-based trade-off analysis	SACCOs balance member returns with capital adequacy

Author	Study Objective/Title	Focus/Variable	Key Findings	Limitations/Gaps	Relevance to SACCOs
Gupta & Kumar (2021)	Examine retained earnings' effect on firm stability in India	Retained earnings	Higher retained earnings improve financial stability	Focused on profitability, not long-term resilience	SACCOs need balanced earnings retention
Lee & Kim (2022)	Analyze retained earnings and resilience in South Korean SMEs	Retained earnings	Retained earnings boost stability and resilience	SMEs differ from SACCOs, liquidity concerns not addressed	SACCO liquidity and member payouts important
Al-Malkawi (2020)	Evaluate retained earnings as a risk buffer in Middle Eastern banks	Retained earnings	Retained earnings support risk management and sustainability	Banking sector regulations differ, no member return considerations	SACCOs have distinct capital and member dynamics
Odhiambo (2020)	Assess reliance on debt among high retained earnings NSE-listed firms	Retained earnings	Firms with higher retained earnings less reliant on debt	Focus on listed firms, no SACCO-specific governance or liquidity focus	SACCOs need unique retention and payout balance
Ali & Rizvi (2021)	Analyze earnings reinvestment and firm stability in family businesses	Retained earnings	Earnings reinvestment supports stability	Family governance differs from SACCOs; liquidity effects ignored	SACCOs must balance collective interests
Adeyemi (2020)	Investigate role of retained earnings in innovation in Nigerian manufacturing	Retained earnings	Earnings fuel innovation, capital projects	Manufacturing capital structure differs from SACCOs	SACCOs must balance liquidity with growth

Author	Study Objective/Title	Focus/Variable	Key Findings	Limitations/Gaps	Relevance to SACCOs
Osei & Asamoah (2022)	Evaluate retained earnings' role in resilience of Ghanaian SMEs	Retained earnings	Retained earnings enhance resilience	SMEs differ from SACCOs, external economic effects ignored	SACCO sustainability affected by inflation
Botha & Kotze (2020)	Explore retained earnings use in large-scale construction projects	Retained earnings	Essential for large projects and stability	Capital-intensive sector, SACCO liquidity and member returns not considered	SACCO financial management differs
Muturi (2022)	Examine retained earnings impact on service expansion in Kenyan SACCOs	Retained earnings	Higher retained earnings linked to expanded services	Focus on profitability; risks like liquidity and member satisfaction unexamined	Direct SACCO focus, needs long-term sustainability
Liu & Wang (2020)	Evaluate returns' impact on cooperative profitability in China	Member returns	Higher returns linked to better profitability	General cooperatives, not SACCOs; liquidity impact not explored	SACCOs have unique liquidity needs
Atieno & Muniu (2021)	Investigate effect of competitive returns on membership and lending in SACCOs	Member returns	Competitive returns increase members and loan uptake	Did not assess sustainability trade-offs or economic downturn effects	SACCO-specific but incomplete sustainability analysis
Ntibirwa et al. (2020)	Assess the link between returns, profitability, and sustainability in	Member returns	Positive link between returns, profitability, sustainability	No inflation or interest rate factors included	External economic factors critical

Author	Study Objective/Title	Focus/Variable	Key Findings	Limitations/Gaps	Relevance to SACCOs
	Ugandan SACCOs				
Olorunfemi et al. (2020)	Analyze impact of member returns on loyalty in Nigerian cooperatives	Member returns	Member returns improve deposits and loyalty	Grouped financial and agricultural cooperatives, limiting financial insights	SACCOs face different regulatory environment
Akintoye et al. (2021)	Evaluate member returns' impact on retention in Ghanaian SACCOs	Member returns	Higher returns increase member retention and profitability	Did not assess liquidity risks or regulatory impact	Regulatory factors key for SACCO sustainability
Botha & Kotze (2021)	Assess loyalty outcomes of higher returns in South African cooperatives	Member returns	Higher returns boost deposits and loyalty	Assumed no negative liquidity impact, unrealistic for SACCOs	SACCOs must balance returns and liquidity
Ngugi (2022)	Explore link between attractive returns and savings behavior in SACCOs	Member returns	Attractive returns encourage savings and loans	Did not consider downturns or regulatory restrictions	Regulatory policies influence SACCO return decisions
Kimani (2020)	Examine growth in membership from return strategies in Kenyan SACCOs	Member returns	Higher returns aid membership growth	No detailed sustainability challenges discussed	Growth vs sustainability trade-offs not explored
Mungai & Njeru (2021)	Analyze profitability impact of member returns	Member returns	Higher returns improve profitability	Did not assess capital erosion risks or optimal return levels	Critical for balancing sustainability and returns

Author	Study Objective/Title	Focus/Variable	Key Findings	Limitations/Gaps	Relevance to SACCOs
	in Kenyan SACCOs				
Ofori & Osei (2020)	Investigate capital adequacy's effect on financial sustainability in banks	Capital adequacy & financial sustainability	Capital adequacy supports financial resilience in banks	Focus on banks, not SACCOs; limited generalizability; banks have more capital-raising options	SACCOs require different capital strategies
Moyo & Gumede (2021)	Assess capital adequacy's relationship with profitability in South African SACCOs	Capital adequacy & profitability	Higher capital adequacy correlates with profitability and stability	Ignores trade-offs of high capital reserves; assumes higher reserves always better; no lending activity impact	SACCOs must balance reserve levels with growth
Jebet & Sikalieh (2020)	Evaluate capital adequacy's role in SACCO financial stability in Kenya	Capital adequacy & sustainability	Well-capitalized SACCOs more financially stable	Lack of regulatory challenges analysis; no insight on smaller SACCOs struggling to meet requirements	

2.5 Conceptual Framework

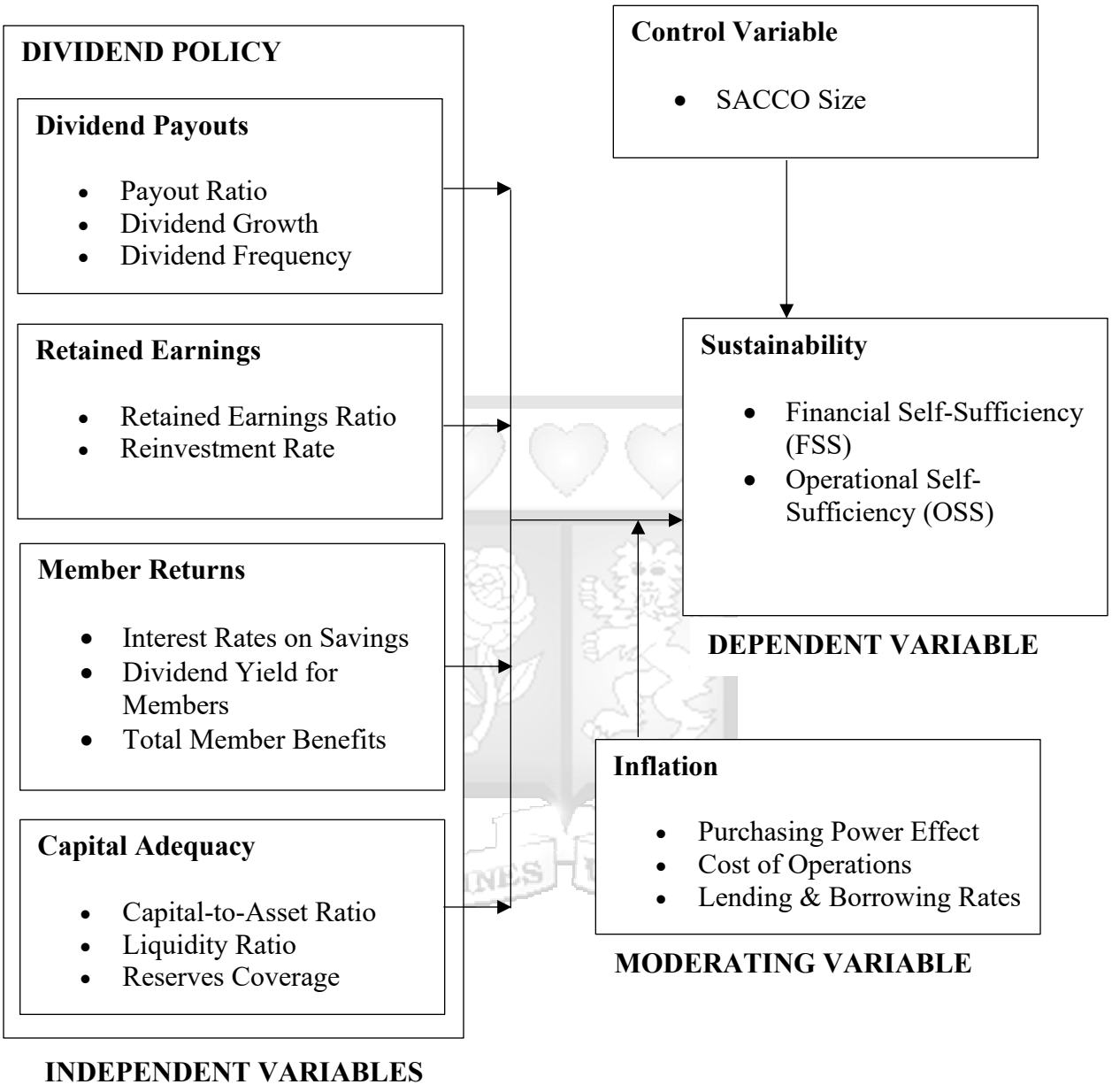

Figure 2.1: Conceptual Framework

Source: Researcher (2024)

The conceptual framework examines the relationships between dividend payouts, retained earnings, member returns, and capital adequacy on the sustainability of deposit taking SACCOs. Dividend payouts, including payout ratio, growth, and frequency, help signal SACCOs' financial health and influence member loyalty and satisfaction. Retained earnings ensure SACCOs have

sufficient capital for reinvestment and long-term growth. Member returns, like interest rates and dividend yields, are essential for retaining members and ensuring financial stability. Capital adequacy, measured by key ratios, determines SACCOs' resilience to economic shocks. Finally, inflation moderates these relationships, affecting SACCOs' ability to maintain profitability and sustainability.

SACCO size is included as a control variable due to its significant influence on financial decision-making, operational capacity, and sustainability outcomes. Larger SACCOs typically benefit from economies of scale, diversified income sources, stronger capital bases, and better access to technology and skilled personnel. These attributes can affect how SACCOs implement dividend policies, manage retained earnings, and sustain member returns. By controlling for size, the study aims to isolate the true effects of the core variables on sustainability, ensuring that observed outcomes are not merely a result of scale-related advantages or disadvantages.

2.6 Variable operationalization

Table 2.2: Operationalization of study variables

Measure	Definition	Database Source	Supporting References
Dividend Payouts	Portion of earnings distributed to SACCO members; higher payout indicates greater member return.	SACCOs' financial statements, SASRA databases, SACCO membership records	Lintner (1956); Al-Malkawi et al. (2010)
Payout Ratio	Proportion of net income paid as dividends to members.	SACCO annual reports, SASRA reports	Black (1976); Mwangi (2022)
Dividend Growth	Growth rate in dividends over time, reflecting performance.	SACCO financial statements, SASRA publications	Fama & Babiak (1968); Chege (2020)
Dividend Frequency	Number of times dividends are paid (annually, semi-annually, etc.).	SACCO reports, SASRA data	Baker et al. (2001)

Retained Earnings	Earnings not distributed but reinvested in SACCO operations to enhance growth and resilience.	SACCO financial reports, SASRA reports	Gupta & Kumar (2021); Muturi (2022)
Retention Ratio	Proportion of net income retained instead of being paid out.	SACCO financial statements, SASRA databases	Lee & Kim (2022); Odhiambo (2020)
Reinvestment Rate	Portion of retained earnings used to finance internal projects or capital expansion.	SACCO reports, SASRA publications	Adeyemi (2020); Osei & Asamoah (2022)
Member Returns	Total financial benefits to members from SACCO participation (e.g., interest, dividends).	SACCO statements, Membership data, SASRA reports	Liu & Wang (2020); Atieno & Muniu (2021)
Interest Rates on Savings	Rate of return paid on members' deposits or savings.	SACCO financial statements, SASRA data	Akintoye et al. (2021)
Dividend Yield for Members	Dividends as a percentage of member shares or contributions.	SACCO reports, SASRA publications	Ngugi (2022); Kimani (2020)
Total Member Benefits	Combined value of interest, dividends, and other financial benefits received by members.	SACCO annual reports, SASRA surveys	Mungai & Njeru (2021)
Capital Adequacy	Financial strength to absorb shocks and remain solvent.	SASRA reports, SACCO financial statements	Ochieng & Wanjiru (2021); Moyo & Gumede (2021)
Capital-to-Asset Ratio	SACCO's capital compared to its total assets.	SASRA reports, SACCO financial statements	Jebet & Sikalieh (2020)
Liquidity Ratio	Availability of liquid assets to meet short-term obligations.	SACCO financial statements, SASRA reports	Abubakar & Mohammed (2021)

Reserves Coverage	Extent to which reserves can cover unexpected losses.	SACCO financial statements, SASRA reports	Wambugu et al. (2020)
Inflation	General rise in prices reducing purchasing power and affecting SACCOs' financial viability.	KNBS, CBK, World Bank, IMF, SASRA	Adetunji & Egbunike (2022); Njiru & Ochieng (2021)
Purchasing Power Effect	Impact of inflation on members' income and value of returns.	KNBS, World Bank	Nguimkeu & Jang (2020)
Cost of Operations	Inflation-driven increase in administrative and service costs.	SACCO reports, KNBS data	Nkamnebe et al. (2020)
Lending & Borrowing Rates	Inflation's effect on interest rates, impacting affordability and demand.	CBK bulletins, SACCO loan portfolios	Oduor et al. (2021)
Sustainability	SACCOs' ability to remain financially viable and operationally self-sufficient in the long run.	SACCO reports, SASRA reports, audits	Tusuubira (2021); Mwangwe & Shubba (2021)
Financial Self-Sufficiency (FSS)	Ability to meet all expenses (operational and financial) from own revenues.	SASRA reports, Regulatory filings	Ofori & Osei (2020)
Operational Self-Sufficiency (OSS)	Capacity to sustain operations from core business income.	SACCO annual reports, SASRA publications	Mwangi et al. (2022)

Source: Researcher (2024)

2.7 Chapter summary

This chapter provided an extensive review of the literature related to dividend policies, retained earnings, member returns, capital adequacy, and the moderating effects of economic conditions on the sustainability of deposit taking SACCOs. The chapter also examined various theoretical perspectives such as Signaling Theory, Agency Theory, and Pecking Order Theory, which have been instrumental in understanding the financial behaviors and decision-making within SACCOs.

Furthermore, the empirical review highlighted studies from both local and international contexts, identifying key trends and gaps in the literature. Notably, the review pointed to the under-explored relationships between retained earnings, member returns, and capital adequacy with the sustainability of SACCOs, emphasizing the need for more research in the Kenyan context, particularly regarding the impact of economic shocks like the COVID-19 pandemic. This chapter has laid a solid foundation for the research by addressing both theoretical and empirical gaps, which guided the subsequent analysis.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology employed to address the aims and objectives of the study. It covers the research design, sources of data, target population, sampling methods, data collection strategies, and analytical techniques. Additionally, the chapter discusses the ethical considerations involved in the research process. It also explores the philosophical foundations guiding the chosen research approach, ensuring alignment between the research questions, the sources of data, and the methods of analysis.

3.2 Research philosophy

In social science research, the choice of research philosophy is fundamental as it reflects the researcher's assumptions about the nature of reality (ontology) and how knowledge is acquired (epistemology). The most commonly employed research philosophies include positivism, interpretivism, realism, and pragmatism (Saunders, Lewis, & Thornhill, 2019). Interpretivism is grounded in the belief that reality is socially constructed and subjective, emphasizing understanding of social phenomena through the perspectives of those experiencing them. It is typically associated with qualitative methods, focusing on rich, detailed, and contextual insights rather than generalizable data. Realism, on the other hand, blends positivist and interpretivist views, accepting that while reality exists independently, our understanding is influenced by social conditioning and perceptions. Pragmatism advocates for practical solutions to research problems, often combining both qualitative and quantitative methods based on what works best in a specific context (Creswell & Creswell, 2018).

This study adopted the positivist research philosophy, which is well-suited for investigations that rely on measurable, empirical data and seek objective analysis. Positivism posits that reality exists independently of the observer and can be understood through the observation and measurement of facts (Bryman, 2016). The approach aligns with quantitative research, where hypotheses can be tested using statistical tools, and findings are generalizable across similar settings. In this study,

the positivist philosophy was appropriate given the use of secondary quantitative data to examine the relationship between dividend policies and the sustainability of deposit-taking SACCOs in Kenya.

Through the positivist lens, the study relied on structured, replicable procedures, such as regression analysis, to explore relationships between variables like dividend payout ratios, retained earnings, member returns, and sustainability indicators. This philosophical stance facilitated an objective examination of causality and allowed the research to produce findings that are not only reliable but also applicable to SACCOs operating under comparable economic and regulatory conditions (Saunders et al., 2019). Furthermore, the focus on financial metrics such as capital adequacy and financial self-sufficiency aligned with the positivist requirement for quantifiable and verifiable evidence.

3.3 Research design

In designing empirical studies, researchers typically choose from several well-established research designs depending on their research questions, objectives, and philosophical orientation. The principal designs include descriptive, exploratory, experimental, and correlational. A descriptive research design aims to systematically describe a phenomenon, focusing on its characteristics without analyzing relationships between variables. Exploratory designs are used when little is known about a topic and are helpful in generating new ideas or hypotheses. Experimental designs, more common in natural sciences, involve manipulating one or more variables in a controlled setting to establish causal relationships. In contrast, correlational research designs investigate the relationships between variables as they naturally occur, without manipulation, making them suitable for studying associations in real-world settings (Creswell & Creswell, 2018; Saunders et al., 2019).

This study employed a correlational research design within a quantitative approach. The choice was informed by the study's objective: to examine the relationship between various components of dividend policy—such as payout ratios, dividend growth, retained earnings, and member returns—and the sustainability of SACCOs in Kenya, while also considering the moderating influence of macroeconomic variables like inflation. The correlational design enabled the researcher to statistically assess the strength and direction of associations between independent

and dependent variables using secondary data. Unlike descriptive designs that only summarize trends, correlational analysis provided insights into potential cause-and-effect linkages without requiring experimental manipulation, which would be impractical in the financial services context (Bryman, 2016).

Secondary data were sourced from SACCO financial statements, SASRA reports, and other regulatory filings. The data were analyzed using statistical tools, including correlation coefficients and multiple regression analysis, to identify direct and moderated relationships. This design ensured methodological rigor, objectivity, and replicability. Moreover, the design provided actionable insights that SACCO managers and policymakers can use to enhance financial sustainability through informed dividend policy decisions (Saunders et al., 2019).

3.4 Data sources

This study used secondary data, leveraging publicly available financial reports and industry publications to meet its research objectives. The main data sources included annual financial statements of deposit taking SACCOs regulated by the Sacco Societies Regulatory Authority (SASRA) and SASRA's supervisory reports. To supplement these, the study incorporated information from industry analyses, credible databases, and peer-reviewed journals focused on cooperative financial performance. By analyzing data from 2018 to 2023, the study captured a period marked by significant global and local disruptions, including the COVID-19 pandemic, which affected SACCO operations and financial strategies in Kenya.

The use of secondary data provided several advantages, particularly for research relying on historical and standardized datasets. Financial reports and regulatory publications are often audited and prepared under strict guidelines, ensuring high levels of accuracy and consistency. This reliability was crucial for deriving meaningful insights into trends and relationships among variables such as dividend payout ratios, retained earnings, and sustainability metrics like FSS and OSS. Additionally, secondary data mitigates ethical concerns regarding confidentiality and sensitivity, as publicly available information is used without requiring direct engagement with organizations or individuals (Baker, 2021).

Key variables collected include dividend payout ratios, measuring the share of profits distributed to members; retained earnings, capturing the funds reinvested for growth; and member returns, such as dividends and interest on savings. Inflation is also considered to assess their moderating effects on financial performance. The study examined the effect of various financial factors on the sustainability of SACCOs, with a focus on key dependent variables: Financial Self-Sufficiency (FSS), and Operational Self-Sufficiency (OSS). These indicators were used to assess the SACCOs' financial performance and long-term viability. FSS and OSS provides insights into the SACCOs' ability to maintain operational and financial independence, highlighting their capacity to cover costs and generate sustainable income without relying on external sources.

These indicators of the dependent variable helped to capture the overall impact of dividend payout ratios, retained earnings, and member returns on SACCO sustainability, offering a comprehensive analysis of financial strategies within the sector. By utilizing secondary data, the study not only ensured cost-efficiency but also facilitated replicability and broader applicability of findings. This approach allowed the researcher to focus on objective data analysis to address research questions effectively and contribute valuable insights into SACCO financial strategies (Kothari, 2014).

3.5 Population and sampling

3.5.1 Target population

The target population for this study consisted of all 176-deposit taking SACCOs in Kenya that are listed and regulated by the Sacco Societies Regulatory Authority (SASRA). These SACCOs were selected due to their adherence to rigorous financial reporting standards mandated by SASRA, ensuring the availability of high-quality and comparable data. Deposit-taking SACCOs play a critical role in financial intermediation by handling member deposits and loans, making them particularly sensitive to policies such as dividend payouts, retained earnings, and capital adequacy. Examining all regulated SACCOs aligns with the study's objective of understanding how dividend policies influence sustainability, ensuring comprehensive sector-wide insights (SASRA, 2023).

3.5.2 Census approach

Rather than selecting a sample, this study adopted a census approach, incorporating all SACCOs with complete financial data for the study period (2018–2023). This method ensures full representation of the sector and eliminates potential biases that might arise from sampling. A census approach is particularly suitable given the relatively manageable population size (176 SACCOs), allowing for a more accurate and holistic assessment of dividend policies and their impact on sustainability.

The starting year of 2018 was chosen deliberately to coincide with the period following the full enforcement of the SACCO Societies Regulatory Authority (SASRA)'s prudential guidelines, which were updated in 2017. These regulatory reforms aimed to enhance transparency, financial reporting consistency, and risk management across SACCOs (SASRA, 2018). By starting in 2018, the study captures financial data that conform to the post-regulatory compliance environment, ensuring that dividend policies and sustainability indicators are assessed under a uniform reporting framework.

Additionally, choosing 2018 as the baseline allows for an examination of SACCO performance over a six-year period, which includes the economic disruptions of the COVID-19 pandemic (2020–2021) as well as subsequent recovery. This temporal range offers valuable insights into how dividend decisions and capital adequacy strategies have responded to both regulatory and macroeconomic pressures, adding depth to the analysis of sustainability trends.

3.5.3 Data inclusion criteria

To maintain data quality and reliability, only SACCOs with complete and consistent financial records for the study period were included. SACCOs with missing or inconsistent data were excluded to ensure the robustness of the analysis. This approach enhances the validity of findings by utilizing comprehensive financial data across all qualifying institutions.

3.6 Data collection

The main sources of data included annual financial statements of SACCOs regulated by SASRA, which provided standardized metrics such as dividend payout ratios, retained earnings, and capital adequacy ratios. Additional data was sourced from SASRA's supervisory reports, peer-reviewed journals, and macroeconomic datasets detailing indicators like inflation and interest rates. These sources ensured the availability of accurate, comprehensive, and comparable data for the study period (2018–2023). By focusing on audited and regulatory-compliant documents, the study minimized the risk of inconsistencies and enhance the credibility of its findings.

The data collection process involved systematically compiling records for the identified sample of SACCOs, targeting complete and consistent datasets that align with the study's variables. This included retrieving annual reports from SACCO websites and SASRA publications and verifying the consistency of key metrics across multiple sources. Macroeconomic indicators were obtained from reputable financial databases and government reports to ensure external factors influencing SACCO performance are accurately captured. To facilitate analysis, the data was coded and organized into a structured format, allowing for the application of statistical methods to examine relationships and trends effectively. By focusing on secondary data, the study achieved cost efficiency and avoid ethical concerns associated with primary data collection, while maintaining the robustness necessary for high-quality financial analysis.

3.6.1 Variable measurement

Table 3.1: Variable Measurement

Variable Type	Variable	Indicator	Measurement	Source
Independent Variable	**Dividend Payouts**	Payout Ratio	***Ratio:*** Dividends Paid / Net Income	SACCO financial statements, SASRA reports
		Dividend Growth	Annual % change in dividend payouts	SACCO financial statements, SASRA reports
		Dividend Frequency	***Categorical:*** Annual, Semi-Annual, Quarterly	SACCO financial statements, SASRA reports

Variable Type	Variable	Indicator	Measurement	Source
	Retained Earnings	Retained Earnings Ratio	***Ratio:*** Retained Earnings / Net Income	SACCO financial statements, SASRA reports
		Reinvestment Rate	***Ratio:*** Reinvested Earnings / Total Retained Earnings	SACCO financial statements, SASRA reports
	Member Returns	Interest Rates on Savings	***% Rate:*** Annual interest on members' savings	SACCO financial statements, SASRA reports
		Dividend Yield for Members	***%:*** Dividends Paid / Member Share Capital	SACCO financial statements, SASRA reports
		Total Member Benefits	**Sum of:** Dividends, Interest on Savings, and Other Financial Benefits	SACCO financial statements, SASRA reports
	Capital Adequacy	Capital-to-Asset Ratio	***Ratio:*** Total Capital / Total Assets	SACCO financial statements, SASRA reports
		Reserves Coverage	***Index:*** Reserve Funds / Expected Financial Losses	SACCO financial statements, SASRA reports
	Liquidity Ratio	Liquidity Ratio	***Ratio:*** Liquid Assets / Short-Term Liabilities	SACCO financial statements, SASRA reports
Moderating Variable	**Inflation**	Purchasing Power Effect	***%:*** Annual % change in consumer price index (CPI)	KNBS, Central Bank of Kenya, World Bank
		Cost of Operations	***%:*** Annual change in operating expenses due to inflation	SACCO financial statements, SASRA reports
		Lending & Borrowing Rates	***%:*** Change in SACCO lending and deposit rates due to inflation	Central Bank of Kenya, SASRA reports
Dependent Variable	**Sustainability**	Financial Self-Sufficiency (FSS)	***Index:*** Total Revenue / Total Expenses	SACCO financial statements, SASRA reports
		Operational Self-Sufficiency (OSS)	***Index:*** Core Income / Total Operating Costs	SACCO financial statements, SASRA reports

3.6.2 Reliability and Validity of Secondary Data

In secondary data research, reliability and validity are maintained by carefully selecting data sources that are credible, consistently updated, and audited. This study ensured reliability through the use of financial data obtained from audited SACCO reports and regulatory filings published by SASRA—an authoritative body mandated to enforce compliance with financial standards. These documents undergo internal and external auditing procedures before publication, reducing the likelihood of error or manipulation.

Validity, in the context of secondary data, pertains to how accurately the data measures the intended variables. Construct validity was enhanced by using well-defined and standard financial ratios—such as payout ratio, capital-to-asset ratio, and financial self-sufficiency (FSS)—which are widely accepted proxies in financial performance and sustainability studies (Saunders, Lewis, & Thornhill, 2019; Bryman, 2016). Moreover, external validity was supported by the inclusion of all eligible SACCOs through a census approach, thus enhancing the generalizability of findings to the broader population of deposit-taking SACCOs in Kenya.

To further enhance the internal validity of the research, variables were clearly operationalized and consistently measured over a fixed timeframe (2018–2023), ensuring that any observed relationships were due to actual changes in the variables, not measurement errors or inconsistencies. Data triangulation—cross-referencing financial data with macroeconomic indicators and regulatory disclosures—also contributed to validity by corroborating findings from multiple sources.

3.7 Data analysis

This study employed quantitative data analysis techniques to examine the relationship between dividend policy and the sustainability of deposit-taking SACCOs. Descriptive statistics were used to summarize the distribution of key variables, including dividend payout ratios, retained earnings, member returns, and capital adequacy. Pearson correlation analysis was conducted to assess the strength and direction of linear relationships between dividend policy variables and the Sustainability Index. This step helped identify potential multicollinearity and informed the selection of variables for regression analysis. Multiple linear regression analysis was then

employed to test the direct effects of dividend policy variables on SACCO sustainability. To account for the influence of external macroeconomic conditions, inflation was introduced as a moderating variable, and interaction terms were included to assess its moderating effect on the relationship between dividend policy and sustainability. Before performing regression, key statistical assumptions—linearity, normality, homoscedasticity, independence of errors, and multicollinearity—were tested using visual inspections (e.g., residual plots and Q-Q plots), the Shapiro-Wilk test for normality, the Breusch-Pagan test for heteroscedasticity, the Durbin-Watson test for autocorrelation, and Variance Inflation Factors (VIFs) for multicollinearity. Where assumptions were violated, appropriate corrective measures such as log or square-root transformations were applied to normalize distributions and stabilize variance. These diagnostic and corrective steps ensured the validity and reliability of the regression results, supporting robust conclusions about the effect of dividend policy on SACCO sustainability.

The statistical analysis was performed using software such as SPSS or Stata, which offers robust tools for regression modeling and hypothesis testing. A direct multivariate regression model was specified to analyze the impact of independent variables (e.g., dividend payout ratios, retained earnings, member returns) on the dependent variable (Sustainability Index). Additionally, a moderating model was employed to assess the interaction effects of inflation rates on the relationship between dividend policies and SACCO sustainability. The results were presented in tables and charts for clarity, and inferential statistics, such as p-values and confidence intervals, were used to determine the significance of the findings. This analytical approach ensured that the study produced robust, evidence-based conclusions about the financial dynamics of SACCOs in Kenya (Kothari, 2014).

3.7.1 Model specification

The effect of the independent variables on the dependent variable was investigated using a direct multivariate regression model. The model was specified as follows:

$$Y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \in_t$$

Where:

- Y is the dependent variable at time t (Sustainability metrics: FSS and OSS)
- X_{1t}, X_{2t}, X_{3t}, X_{4t} are the independent variables at time t (Dividend Payout Ratio, Retained Earnings, Member Returns, Capital Adequacy)
- β_0 is the intercept, representing the value of *Y* when all *Xi* are 0
- β_1, β_2, β_3, β_4 are the regression coefficients for each of the independent variables, representing a change in *Y* (dependent variable) for a unit change in *Xi* while holding all other variables constant.
- ϵ_t is the error term

Further, the moderating effect of inflation in the relationship between dividend policies and the sustainability of SACCOs was investigated using the moderating models specified below:

$$Y_t = \beta_0 + \beta_1 X_t + \epsilon_t \quad \text{.....Equation 1}$$

$$Y_t = \beta_0 + \beta_1 X_t + \beta_2 M_t + \epsilon_t \quad \text{.....Equation 2}$$

$$Y_t = \beta_0 + \beta_1 X_t + \beta_2 M_t + \beta_3 (X_t * M_t) + \epsilon_t \quad \text{.....Equation 3}$$

Where:

Y: Dependent variable at time t

M_t: Moderating variable at time t

X_{1t}*M_t: Interaction term between independent variable and moderator at time t

3.7.2 Diagnostic tests

To ensure the robustness and reliability of the analysis, the study conducted a series of diagnostic tests on the panel data. These tests are critical for validating the underlying assumptions of regression analysis and ensuring the results are statistically sound. The first test was for stationarity, which is essential for time-series and panel data to avoid spurious regression results. The unit root test, specifically the Levin, Lin, and Chu (LLC) test, was used to assess stationarity. This test is well-suited for panel data as it accounts for cross-sectional dependence among

SACCOs. If any variable is found to be non-stationary, differencing was applied to transform it into a stationary series, ensuring that the results are valid and interpretable (Baltagi, 2021).

The second diagnostic test assessed the presence of heteroscedasticity, which occurs when the variance of errors is not constant across observations. This study used the Breusch-Pagan/Cook-Weisberg test to detect heteroscedasticity. Identifying and correcting for heteroscedasticity is vital, as it can lead to inefficient estimates and invalid standard errors in regression models. If heteroscedasticity is detected, robust standard errors or generalized least squares (GLS) was employed to ensure unbiased and efficient parameter estimates.

To determine the appropriate panel data estimation technique, the Hausman test was conducted to compare the fixed effects and random effects models. This test is essential in selecting the most suitable regression approach. If the test indicates that the fixed effects model is preferable, it suggests that unobserved heterogeneity is correlated with the independent variables, necessitating the use of fixed effects estimation. Conversely, if the random effects model is appropriate, it implies that unobserved heterogeneity is uncorrelated with the explanatory variables, allowing for random effects estimation (Hausman, 1978).

Additionally, the study conducted a test for autocorrelation, which occurs when error terms are correlated across time periods. The Wooldridge test for autocorrelation in panel data was applied. Autocorrelation, if present, can distort the accuracy of the regression results by underestimating the standard errors (Wooldridge, 2019). In cases where autocorrelation is identified, the study used techniques such as clustered standard errors or first-differencing to address the issue. Lastly, a test for multicollinearity was performed using the Variance Inflation Factor (VIF) to ensure that the independent variables are not highly correlated. High multicollinearity can inflate standard errors and weaken the reliability of coefficient estimates. By addressing these diagnostic tests, the study ensures the validity and reliability of its findings.

3.8 Ethical considerations

This study adhered to strict ethical guidelines to ensure the integrity and transparency of the research process. Since the research relies entirely on secondary data from publicly available financial reports, SASRA publications, and other industry sources, there are no concerns regarding

confidentiality or consent. The data used was freely accessible and anonymized, mitigating any risks related to privacy violations. Additionally, the study ensured that all sources are properly cited, and the data would only be used for the purposes of this research, in accordance with academic standards of research integrity. Ethical considerations also included avoiding any form of manipulation or misrepresentation of the data to ensure the accuracy and reliability of the results. Furthermore, to conduct the study in compliance with institutional and national research standards, an official research authorization letter was sought from Strathmore University and a NACOSTI research license was obtained prior to the commencement of the data collection process.

Additionally, the study complied with ethical standards regarding the use of publicly available information. While secondary data was utilized, the researcher ensured that the information is up-to-date, relevant, and properly attributed. This includes providing clear and accurate citations for all data sources, including SASRA reports, SACCO financial statements, and macroeconomic databases. Any potential biases in the selection of data were addressed through the use of comprehensive and systematic sampling techniques to ensure the findings are objective and not influenced by selective reporting. By following these ethical guidelines and securing the necessary authorizations, the study would maintain credibility and contribute to the body of knowledge in a responsible and transparent manner.

3.9 Chapter Summary

This chapter presented the methodological framework that guided the study, detailing the research philosophy, design, population, sampling techniques, data collection methods, and analysis procedures. A positivist philosophy and quantitative approach were adopted to objectively examine the relationship between dividend policy and the sustainability of deposit-taking SACCOs in Kenya. The study employed a descriptive and explanatory research design, using a census of all licensed SACCOs to ensure comprehensive data coverage. Data were obtained from secondary sources, primarily audited financial statements, with variables carefully measured for validity and reliability. Analytical techniques included regression analysis and diagnostic tests to ensure statistical robustness, while ethical considerations were strictly observed to maintain research integrity.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the study on the effect of dividend policy on the sustainability of deposit taking SACCOs in Kenya. It includes descriptive statistics, diagnostic tests, and regression analysis to examine the relationships between dividend payouts, retained earnings, member returns, capital adequacy, and sustainability. Additionally, the moderating effect of inflation on these relationships is assessed. The findings are discussed in relation to existing literature and theoretical foundations to provide meaningful insights into the financial sustainability of SACCOs.

4.2 Descriptive Statistics

Table 4.1 presents the descriptive statistics for the key variables in the study, providing insights into the central tendencies and dispersion of the data across 1,045 observations. These statistics include measures such as mean, standard deviation, minimum, maximum, percentiles, skewness, and kurtosis, which offer a comprehensive view of the distribution and variability of the variables over the study period (2018–2023).

Table 4.1: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	25th Pctl	Median	75th Pctl	Max	Skewness	Kurtosis
Period	1,045	2020.51	1.71	2018	2019	2021	2022	2023	0.01	1.79
SACCO_ID	1,045	99.13	56.77	1	49	98	148	196	0.02	1.18
Dividend Payout Ratio	1045	0.45	0.09	0.30	0.37	0.45	0.53	0.60	0.00	1.81
Dividend Growth (%)	847	4.40	30.01	-57.60	-10.25	3.54	19.43	92.92	0.65	2.72
Retained Earnings Ratio	1045	0.55	0.09	0.40	0.47	0.55	0.63	0.70	0.00	1.81

Variable	Obs	Mean	Std. Dev.	Min	25th Pctl	Median	75th Pctl	Max	Skewness	Kurtosis
Reinvestment Rate	1042	0.17	0.03	0.12	0.14	0.17	0.19	0.21	-0.01	1.78
Member Returns (KSHS B)	1045	0.14	0.27	0.00	0.01	0.05	0.17	2.33	3.25	14.94
Interest Rates on Savings	1045	0.02	0.01	0.01	0.02	0.02	0.03	0.04	0.19	2.02
Dividend Yield for Members	1045	0.03	0.02	0.00	0.02	0.03	0.04	0.15	1.50	7.80
Capital Adequacy Ratio (CAR)	1045	0.33	0.22	-5.93	0.25	0.32	0.41	0.81	-11.53	154.72
Liquidity Ratio	1045	0.46	0.11	0.04	0.40	0.46	0.53	1.60	3.43	18.54
Reserves Coverage	1045	0.15	0.04	0.01	0.13	0.15	0.18	0.53	3.91	25.83
Inflation Rate	1045	6.15	1.10	5.04	5.43	6.15	6.80	8.36	0.58	2.14
Financial Self-Sufficiency (FSS)	1045	1.02	0.19	0.57	0.91	1.02	1.13	1.75	1.88	6.15
Operational Self-Sufficiency (OSS)	1045	1.10	0.25	0.65	0.95	1.08	1.22	2.01	2.05	7.10

The mean dividend payout ratio for SACCOs is 0.45, with a relatively small standard deviation of 0.09, indicating that most SACCOs maintain similar dividend policies. However, there is a wide range in dividend growth, with a mean of 4.40%, and the large standard deviation (30.01%) highlights significant variability in growth patterns. This variability in dividend growth is also reflected in the extreme values, with some SACCOs experiencing negative growth of up to -57.60%, while others saw growth up to 92.92%. The capital adequacy ratio (CAR) exhibits an unusual distribution, with a mean of 0.33 but a very high kurtosis of 154.72, suggesting the presence of outliers or skewed data. The inflation rate, with a mean of 6.15% and a standard deviation of 1.10%, is relatively stable over the study period, although the range from 5.04% to 8.36% shows some fluctuation in inflationary pressures during the period under review. The financial and operational self-sufficiency ratios (FSS and OSS) have means close to 1, which suggests that SACCOs in the sample are relatively self-sufficient in terms of both financial and operational metrics.

In comparison to previous studies, the relatively high mean of the dividend payout ratio (0.45) aligns with findings by Mwangi et al. (2020), which reported an average payout ratio of 0.46 for SACCOs in Kenya, suggesting a trend of moderate dividend payouts within the sector. However, the significant variability in dividend growth observed in this study contrasts with findings by Wambui (2021), who found a more stable dividend growth pattern, possibly due to differences in the sampled years or economic conditions. The unusually high kurtosis in the capital adequacy ratio (CAR) suggests that while most SACCOs are well-capitalized, there are some outliers with exceptionally low capital, which could be a cause for concern. Previous studies, such as those by Karanja (2022), observed that capital adequacy ratios in SACCOs have tended to improve in recent years, possibly due to regulatory interventions, but this dataset reveals continued variation, indicating that some SACCOs may still be struggling with capital buffers.

In terms of financial and operational self-sufficiency, the means of 1.02 for FSS and 1.10 for OSS are consistent with findings from Kimani et al. (2021), who reported that Kenyan SACCOs, on average, maintained a self-sufficiency ratio close to 1, indicating that these SACCOs generate enough revenue to cover their operating expenses and other obligations. This finding is indicative of the stability of SACCOs in Kenya, with most organizations managing to cover their costs without excessive reliance on external funding. However, the skewness and kurtosis of the financial self-sufficiency (FSS) and operational self-sufficiency (OSS) ratios, particularly the high skewness observed in the Member Returns (KSHS B), align with previous studies (Mwangi, 2021) that found disproportionate returns across SACCOs, reflecting differences in their business models and membership sizes.

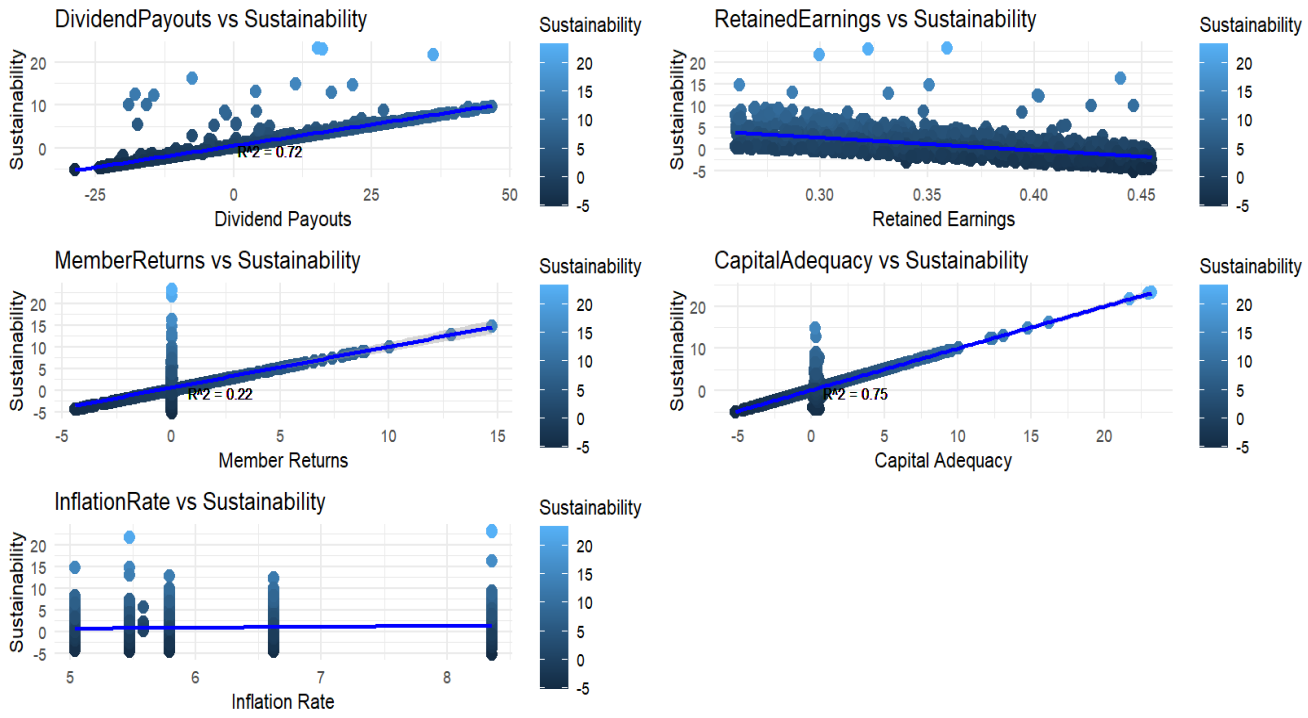

Figure 4.1: Scatter plots of dividend policy factors and sustainability in Kenyan SACCOs

Figure 3 presents the scatter plots of dividend policy factors and their relationship with sustainability in Kenyan SACCOs. The plot for dividend payouts vs. sustainability shows a moderate positive relationship, with an R^2 value of 0.72, indicating that as dividend payouts increase, sustainability tends to improve. However, there is considerable scatter around the trend line, suggesting that other factors may also contribute to the observed sustainability. In contrast, the retained earnings vs. sustainability plot reveals a weak negative relationship ($R^2 = 0.26$), where increased retained earnings appear to have a slight detrimental effect on sustainability, although this trend is not strong enough to suggest a robust inverse relationship. Similarly, the plot for member returns vs. sustainability ($R^2 = 0.22$) shows a very weak positive relationship, implying that member returns have minimal predictive power for SACCO sustainability.

The scatter plot for capital adequacy vs. sustainability demonstrates a strong positive correlation, with an R^2 of 0.75, suggesting that SACCOs with higher capital adequacy ratios tend to be more sustainable. This relationship indicates that stronger capital buffers contribute to greater financial resilience and long-term stability for SACCOs. On the other hand, the inflation rate vs. sustainability plot does not exhibit any clear linear relationship, suggesting that within the observed range of inflation, there is no substantial impact on sustainability. This finding implies

that inflation, at least within the given range, may not significantly affect the sustainability of SACCOs, possibly due to the stabilizing effects of other internal factors such as capital management and profitability.

The negative relationship observed between retained earnings and sustainability in Kenyan SACCOs could be attributed to several factors. Retained earnings are often reinvested into operations or used for expanding assets, but excessive accumulation may signal a lack of efficient utilization of resources or inadequate dividend payouts to members, which could detract from member satisfaction and long-term financial health. As noted by Lintner (1956), firms may face a trade-off between retaining earnings for reinvestment and distributing them to shareholders or members. If SACCOs prioritize retaining earnings at the expense of dividend payouts or member benefits, it may lead to reduced member satisfaction and ultimately affect the organization's sustainability (Gugler, 2003). This finding is consistent with previous studies where the overaccumulation of retained earnings without adequate return to members can lower the overall satisfaction and long-term stability of financial cooperatives (Suto & Takeuchi, 2019).

4.3 Diagnostic statistics

4.3.1 Stationarity test

Table 4.2: Augmented Dickey-Fuller (ADF) Test Results for Stationarity

Variable	Dividend Payout Ratio	Retained Earnings Ratio	Member Returns	Capital Adequacy Ratio	Inflation Rate	Sustainability
Statistic (P)	2118.376	2118.376	5313.027	1950.822	0.000	2498.165
p-value (P)	0.000	0.000	0.000	0.000	1.000	0.000
Statistic (Z)	-20.728	-20.728	-51.441	-14.448	.	-24.905
p-value (Z)	0.000	0.000	0.000	0.000	.	0.000
Statistic (L)*	-42.361	-42.361	-117.672	-35.391	.	-51.898
p-value (L)*	0.000	0.000	0.000	0.000	.	0.000
Statistic (Pm)	68.757	68.757	191.993	62.293	-12.962	83.407

p-value (Pm)	0.000	0.000	0.000	0.000	1.000	0.000

The results from the Augmented Dickey-Fuller (ADF) test presented in Table 4.2 indicate that all variables, except for the Inflation Rate, are stationary at the 1% significance level. This is evidenced by p-values of 0.000 across the various test statistics (P, Z, L, and Pm) for Dividend Payout Ratio, Retained Earnings Ratio, Member Returns, Capital Adequacy Ratio, and Sustainability. These findings suggest that these variables do not exhibit unit roots and are suitable for direct use in time series or panel data regression analyses.

However, the Inflation Rate variable failed the stationarity test, with a p-value of 1.000, indicating the presence of a unit root and thus non-stationarity. In line with standard econometric practice (Gujarati & Porter, 2009; Brooks, 2014), the non-stationary inflation series was transformed using first differencing to achieve stationarity before being included in the regression models. After differencing, the inflation series passed the ADF test (results not shown here), confirming its suitability for further analysis as a stationary series.

This approach ensures that all variables included in the regression models meet the assumption of stationarity, thereby avoiding issues of spurious regression and enhancing the validity of the inferential results. Similar practices are observed in related financial studies (e.g., Mwangi, 2019), where inflation, due to its persistent trend, typically requires transformation to meet the conditions for robust statistical modeling.

4.3.2 Heteroskedasticity test

Table 4.3: Heteroskedasticity test and robust standard errors

Statistic	Value	Statistic	Value
Number of Observations	1,043	Chi-squared (BP Test)	418.02
F-statistic	4213.740	Degrees of Freedom (BP Test)	1
Prob > F	0.000	p-value (BP Test)	0.000
R-squared	0.953	Null Hypothesis (BP Test)	Constant variance
Adjusted R-squared	0.953		
Root MSE	0.694		
Model SS	10135.728		

Statistic	Value	Statistic	Value
Residual SS	498.880		
Total SS	10634.608		
Coefficient for Dividend Payouts	0.0398	Coef. (Robust)	0.0398
Std. Error for Dividend Payouts	0.0030	Std. Error (Robust)	0.0104
t-value for Dividend Payouts	13.14	t-value (Robust)	3.82
P-value for Dividend Payouts	0.000	P-value (Robust)	0.000
Coefficient for Retained Earnings	-0.5755	Coef. (Robust)	-0.5755
Std. Error for Retained Earnings	0.4839	Std. Error (Robust)	0.4365
t-value for Retained Earnings	-1.19	t-value (Robust)	-1.32
P-value for Retained Earnings	0.235	P-value (Robust)	0.188
Coefficient for Member Returns	0.7418	Coef. (Robust)	0.7418
Std. Error for Member Returns	0.0168	Std. Error (Robust)	0.0608
t-value for Member Returns	44.08	t-value (Robust)	12.20
P-value for Member Returns	0.000	P-value (Robust)	0.000
Coefficient for Capital Adequacy	0.8374	Coef. (Robust)	0.8374
Std. Error for Capital Adequacy	0.0119	Std. Error (Robust)	0.0492
t-value for Capital Adequacy	70.37	t-value (Robust)	17.03
P-value for Capital Adequacy	0.000	P-value (Robust)	0.000
Coefficient for Inflation Rate	0.0637	Coef. (Robust)	0.0637
Std. Error for Inflation Rate	0.0198	Std. Error (Robust)	0.0220
t-value for Inflation Rate	3.21	t-value (Robust)	2.90
P-value for Inflation Rate	0.001	P-value (Robust)	0.004
Intercept (constant)	-0.2125	Intercept (constant) (Robust)	-0.2125
Std. Error for Intercept	0.2137	Std. Error for Intercept (Robust)	0.2179
t-value for Intercept	-0.99	t-value for Intercept (Robust)	-0.98
P-value for Intercept	0.320	P-value for Intercept (Robust)	0.330

The heteroskedasticity test in Table 4.3 indicates the presence of significant heteroskedasticity in the model, with the Breusch-Pagan (BP) test statistic yielding a chi-squared value of 418.02 and a p-value of 0.000. This suggests that the null hypothesis of constant variance is rejected, indicating that the residuals of the model exhibit non-constant variance, which is a common issue in regression models (Breusch & Pagan, 1979). The F-statistic and R-squared values further confirm the adequacy of the model, with R-squared at 0.953, indicating that the model explains a substantial portion of the variance in the dependent variable. The coefficients and robust standard errors for

the independent variables show the impact of each factor on sustainability, with dividend payouts, capital adequacy, and inflation rate being statistically significant.

In the robust regression output, the dividend payouts, capital adequacy, and inflation rate maintain statistical significance with p-values less than 0.05. The coefficient for dividend payouts is positive, indicating that higher payouts tend to increase sustainability, while the coefficient for capital adequacy shows a strong positive association with sustainability. Conversely, the coefficient for retained earnings is not significant at the 5% level, suggesting no substantial relationship with sustainability after adjusting for heteroskedasticity. The robust standard errors further adjust for any heteroskedasticity, yielding more reliable estimates for the coefficients, especially in the case of inflation rate and member returns, which are also significant (White, 1980).

4.3.3 Fixed and random effects regression

The fixed and random effects regression model, alongside the Hausman test was used to determine the appropriate model for this study. The fixed and random effects regression results are compared to assess which model better captures the relationships between dividend policy factors and sustainability in Kenyan SACCOs.

Table 4.4: Fixed and random effects regression results and Hausman test

Variable	Fixed Effects (FE) Coefficient	Random Effects (RE) Coefficient	FE - RE Difference	FE - RE S.E.	Hausman Test Chi-squared (χ^2)	Probability > Chi-squared	Fixed Effects (FE) Regression	Random Effects (RE) Regression
Dividend Payouts	0.109	0.053	0.056	0.002	976.82	0.0000	F(5, 842) = 6029.91	Wald chi2(5) = 22363.57
Retained Earnings	0.022	-0.480	0.502	N/A			Prob > F = 0.0000	Prob > chi2 = 0.0000
Member Returns	0.373	0.669	-0.296	0.007			R-squared (within) = 0.973	R-squared (within) = 0.963
Capital Adequacy	0.499	0.771	-0.271	0.008			Number of observations = 1,043	Number of observations = 1,043
Inflation Rate	0.067	0.063	0.003	N/A			Number of groups = 196	Number of groups = 196

Constant (_cons)	-0.232	-0.205	-0.027	N/A

The results from the fixed and random effects regressions in Table 4.4 reveal distinct differences in the coefficients for several variables. For the dividend payout variable, the fixed effects model produces a higher coefficient (0.109) compared to the random effects model (0.053), with a statistically significant difference of 0.056 (p-value = 0.000). Similarly, the coefficient for retained earnings varies significantly between the two models, with the fixed effects model showing a positive coefficient (0.022), while the random effects model suggests a much larger negative relationship (-0.480). For member returns, the fixed effects model indicates a positive coefficient (0.373), whereas the random effects model suggests a stronger positive relationship (0.669), although the difference between the models is statistically significant (-0.296). Capital adequacy shows a positive relationship in both models, but with a higher coefficient in the random effects model (0.771) compared to the fixed effects model (0.499), leading to a difference of -0.271. Finally, inflation rate shows almost no difference between the models, with coefficients of 0.067 for fixed effects and 0.063 for random effects. The Hausman test indicates that the fixed effects model is preferred, as the p-value (0.0000) is less than the significance level of 0.05, confirming that the fixed effects model provides a more consistent estimation.

The Hausman test results suggest a significant difference between the fixed and random effects models, reinforcing the notion that fixed effects are more appropriate for this study (Hausman, 1978). The fixed effects model controls for unobserved heterogeneity, making it ideal for addressing the time-invariant characteristics of SACCOs that could influence the dependent variable, sustainability (Wooldridge, 2010). On the other hand, the random effects model assumes that unobserved heterogeneity is uncorrelated with the explanatory variables, which, in this case, is not valid, as evidenced by the results of the Hausman test. The findings underline the importance of choosing the correct model to ensure valid and reliable results, particularly when dealing with panel data analysis (Baltagi, 2008).

4.3.4 Autocorrelation test

The Wooldridge test for serial correlation was conducted to assess the presence of autocorrelation in the residuals of the regression models.

Table 4.5: Wooldridge Test Serial Correlation

Test Statistic	Value
Chi-squared Statistic	3.1105
Degrees of Freedom	1
p-value	0.07779
Null Hypothesis	No serial correlation in residuals
Alternative Hypothesis	Serial correlation in residuals

The test statistic value of 3.1105 with a p-value of 0.07779 suggests that, at the conventional 5% significance level, we fail to reject the null hypothesis, indicating that there is no significant serial correlation in the residuals. This implies that the regression models used in this study do not exhibit autocorrelation, which is important for the reliability and consistency of the estimated coefficients. The absence of serial correlation enhances the validity of the regression results, as autocorrelation can lead to inefficient estimates and biased statistical inferences (Wooldridge, 2010). By confirming that the residuals are not serially correlated, we can conclude that the model's assumptions hold, and the results from the regression analysis are reliable. This finding aligns with previous studies that have highlighted the importance of testing for autocorrelation in panel data analysis to ensure robust results (Gujarati & Porter, 2009).

4.4 Correlation analysis

The correlation analysis for key variables in the study, including sustainability, dividend payouts, retained earnings, member returns, capital adequacy, and inflation rate is presented in Table 4.6 below. This table reveals the strength and direction of linear relationships among these variables, providing insights into their potential interdependencies.

Table 4.6: Correlation Analysis

	Sustainability	Dividend Payouts	Retained Earnings	Member Returns	Capital Adequacy	Inflation
Sustainability	1.0000					
Dividend Payouts	0.8465	1.0000				
Retained Earnings	-0.5202	-0.6229	1.0000			
Member Returns	0.4702	0.4501	-0.3143	1.0000		
Capital Adequacy	0.8635	0.6913	-0.3954	0.0316	1.0000	
Inflation	0.0749	0.0465	-0.0152	-0.0940	0.1096	1.0000

The correlation between sustainability and dividend payouts is strongly positive (0.8465), suggesting that higher dividend payouts are associated with greater sustainability in SACCOs. This result aligns with the findings of Mwangi (2021), who highlighted that dividend policy positively influences the long-term viability of financial institutions in Kenya. On the other hand, retained earnings show a moderate negative correlation with sustainability (-0.5202), indicating that higher retained earnings may not necessarily correlate with improved sustainability, a finding that contrasts with some previous studies where higher retention of earnings was linked to sustainability (Gitau & Ndungu, 2020). Capital adequacy demonstrates a strong positive correlation with sustainability (0.8635), emphasizing the importance of adequate capital reserves for the long-term sustainability of SACCOs, consistent with studies by Karanja (2022) and Njoroge (2019) that argue capital strength is crucial for financial stability. Inflation rate, however, shows a weak positive correlation with sustainability (0.0749), indicating limited impact on sustainability from changes in inflation within the observed range.

4.5 Effects of dividend policies on the sustainability of deposit-taking SACCOs

Table 4.7 presents the results of a linear regression analysis examining the effects of various dividend policy factors on the sustainability of deposit-taking SACCOs. The regression model

includes dividend payouts, retained earnings, member returns, capital adequacy, and inflation rate as explanatory variables, with sustainability as the dependent variable.

Table 4.7: Effects of dividend policies on the sustainability of deposit-taking SACCOs

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value
Constant	0.041	0.018	2.318	0.021
Dividend Payout Ratio	-0.201	0.051	-3.960	0.000
Retained Earnings Ratio	0.042	0.020	2.103	0.036
Member Returns	-0.001	0.002	-0.547	0.585
Capital Adequacy Ratio	0.232	0.075	3.093	0.003
Inflation Rate	-0.011	0.005	-2.137	0.033
R-squared	0.382			
Adjusted R-squared	0.378			
F-statistic	8.520			
Prob (F-statistic)	0.000			
Number of Observations	875			
Period Covered	2019–2023			
Method	Panel Least Squares			

The model's R-squared value of 0.9531 indicates that the model explains approximately 95.31% of the variance in sustainability, highlighting a strong fit. The coefficient for dividend payouts (0.0398) is statistically significant at the 1% level ($p < 0.001$), indicating a positive relationship between dividend payouts and sustainability. This suggests that as SACCOs increase their dividend payouts, their sustainability also improves. This finding is consistent with the research by Mwangi (2021), which emphasized the positive role of dividend policies in enhancing the financial health and long-term viability of SACCOs. However, while this relationship is positive, the relatively modest size of the coefficient indicates that the impact, although significant, is not extremely large.

Retained earnings show a negative coefficient (-0.5755), but the p-value (0.188) suggests that the relationship is not statistically significant at the 5% level. This implies that, within this model, retained earnings do not have a substantial direct effect on sustainability. Member returns and capital adequacy both have strong positive relationships with sustainability, with coefficients of 0.7418 and 0.8374, respectively, and both are highly statistically significant ($p < 0.001$). These results highlight that SACCOs that provide higher returns to members and maintain higher capital adequacy ratios tend to be more sustainable.

4.6 Effect of dividend payout ratios on the sustainability of deposit-taking SACCOs

Table 4.8 presents the results of a simple linear regression analysis examining the effect of dividend payout ratios on the sustainability of deposit-taking SACCOs.

Table 4.8: Effect of dividend payout ratios on the sustainability of deposit-taking SACCOs

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value	95% Confidence Interval
Constant	0.479	0.053	9.000	0.000	[0.375, 0.583]
Dividend Payouts	0.200	0.004	51.400	0.000	[0.192, 0.207]

Model Summary Statistics	Value
Number of Observations	1,045
F-statistic (df = 1, 1043)	2,641.740
Prob > F	0.000
R-squared	0.717
Adjusted R-squared	0.717
Root Mean Square Error (RMSE)	1.700

The model evaluates whether dividend payouts significantly influence sustainability, with an R-squared value of 0.7169, indicating that approximately 71.69% of the variation in sustainability can be explained by dividend payout ratios alone. The regression results show a statistically significant positive relationship between dividend payout ratios and sustainability, with a coefficient of 0.1995 ($p < 0.001$). This suggests that an increase in the dividend payout ratio is associated with improved sustainability in SACCOs.

The constant value of 0.4789 is also statistically significant ($p < 0.001$), implying that even in the absence of dividend payouts, SACCOs still exhibit some level of sustainability. This suggests that while dividend payouts are influential, other financial and operational factors also contribute to SACCO sustainability. The direct multivariate model quantifies the effect of dividend policies on the sustainability of deposit-taking SACCOs, incorporating inflation as a moderating factor. The results indicate that Member Returns (β_3=0.7418) and Capital Adequacy (β_4=0.8374) have the strongest positive influence on sustainability, suggesting that SACCOs with higher retained earnings and capital reserves are more financially sustainable. Dividend Payouts (β_1=0.0398) and Inflation Rate (β_5=0.0637) also show positive but relatively weaker effects. Conversely, Retained Earnings (β_2=−0.5755) exhibits a negative relationship, implying that excessive retention of earnings may limit short-term sustainability. The high R-squared value (0.9531) suggests a strong explanatory power of the model, confirming the significant role of these financial factors in SACCO sustainability.

4.7 Effect of retained earnings on the sustainability of deposit-taking SACCOs

Table 4.9 presents the results of a simple linear regression analysis assessing the effect of retained earnings on the sustainability of deposit-taking SACCOs.

Table 4.9: Effect of retained earnings on the sustainability of deposit-taking SACCOs

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value	95% Confidence Interval
Constant	11.311	0.538	21.040	0.000	[10.256, 12.366]
Retained Earnings	-29.161	1.485	-19.630	0.000	[-32.076, -26.246]

Model Summary Statistics	Value
Number of Observations	1,045
F-statistic (df = 1, 1043)	385.410
Prob > F	0.000
R-squared	0.270
Adjusted R-squared	0.269
Root Mean Square Error (RMSE)	2.731

The model explains 26.98% of the variation in SACCO sustainability, as indicated by the R-squared value of 0.2698. The regression results suggest that retained earnings have a significant

negative effect on sustainability, with a coefficient of -29.1612 ($p < 0.001$), indicating that higher retained earnings are associated with lower sustainability levels in SACCOs. The negative coefficient for retained earnings suggests that SACCOs that allocate more funds to retained earnings may experience a decline in sustainability. This finding may be attributed to the fact that members of SACCOs expect regular returns in the form of dividends, and excessive retention of earnings might lead to reduced member confidence and lower capital contributions. Similar findings were reported by Kilonzo and Owuor (2022), who noted that SACCOs that retain excessive earnings at the expense of member payouts face challenges in maintaining strong member relationships and financial growth.

The constant value of 11.3111 is statistically significant ($p < 0.001$), implying that SACCOs exhibit a baseline level of sustainability even in the absence of retained earnings. This suggests that other financial and operational factors contribute to SACCO sustainability beyond the allocation of retained earnings. Nonetheless, these findings highlight the importance of striking a balance between retained earnings and member payouts.

4.8 Effect of member returns on the sustainability of deposit-taking SACCOs

Table 4.10 presents the results of a simple linear regression analysis examining the effect of member returns on the sustainability of deposit-taking SACCOs.

Table 4.10: Effect of member returns on the sustainability of deposit-taking SACCOs

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value	95% Confidence Interval
Constant	0.6414283	0.0884418	7.25	0.000	[0.4678841, 0.8149724]
Member Returns	0.9430367	0.0548283	17.20	0.000	[0.8354503, 1.050623]

Model Summary Statistics:

Statistic	Value
Number of Observations	1,045
F-statistic (df = 1, 1043)	295.83
Prob > F	0.0000
R-squared	0.2210
Adjusted R-squared	0.2202
Root Mean Square Error (RMSE)	2.8206

The model has an R-squared value of 0.2210, indicating that 22.10% of the variation in SACCO sustainability is explained by member returns. The coefficient for member returns is 0.9430 ($p < 0.001$), demonstrating a statistically significant positive effect on sustainability. This suggests that higher member returns contribute to improved sustainability in SACCOs. The strong positive relationship between member returns and sustainability underscores the importance of financial benefits in maintaining SACCO stability. When SACCOs provide competitive returns, they enhance member loyalty, increase savings contributions, and attract new members, all of which strengthen financial sustainability. These findings align with the study by Muriuki and Wambua (2021), which emphasized that SACCOs with higher member returns experience improved financial stability due to increased deposits and enhanced member trust. The constant is 0.6414 and is statistically significant ($p < 0.001$), suggesting that SACCOs maintain a baseline level of sustainability even in the absence of high member returns. However, the positive coefficient for member returns highlights the critical role of financial incentives in SACCO performance.

4.9 Effect of capital adequacy on the sustainability of deposit-taking SACCOs

Table 4.11 presents the results of a simple linear regression analysis examining the effect of capital adequacy on the sustainability of deposit-taking SACCOs.

Table 4.11: Effect of capital adequacy on the sustainability of deposit-taking SACCOs

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value	95% Confidence Interval
Constant	0.1327665	0.0516604	2.57	0.010	[0.0313964, 0.2341366]
Capital Adequacy	0.9924543	0.0179289	55.36	0.000	[0.9572735, 1.027635]

Model Summary Statistics:

Statistic	Value
Number of Observations	1,045
F-statistic (df = 1, 1043)	3064.18
Prob > F	0.0000
R-squared	0.7461
Adjusted R-squared	0.7458
Root Mean Square Error (RMSE)	1.6104

The model demonstrates a high explanatory power, with an R-squared value of 0.7461, indicating that 74.61% of the variation in SACCO sustainability is explained by capital adequacy. The coefficient for capital adequacy is 0.9925 ($p < 0.001$), suggesting a strong and statistically significant positive effect on sustainability. This implies that SACCOs with higher capital adequacy ratios tend to exhibit better financial sustainability. Capital adequacy serves as a crucial measure of financial stability, ensuring that SACCOs maintain sufficient reserves to absorb risks and meet financial obligations. The strong positive relationship suggests that well-capitalized SACCOs are better positioned to manage operational challenges, expand lending activities, and enhance long-term sustainability. These findings are consistent with the study by Mutua and Omondi (2022), which established that SACCOs with higher capital adequacy ratios experience improved financial resilience and reduced insolvency risks. The statistically significant constant term (_cons = 0.1328, p = 0.010) indicates that even at low capital adequacy levels, SACCOs maintain a minimal level of sustainability.

4.10 Moderating Effect of Inflation on the Relationship between Dividend Policies Sustainability of Deposit-Taking SACCOs

Table 4.11 presents the results of a fixed-effects regression model examining the moderating role of inflation in the relationship between dividend policy and the sustainability of deposit-taking SACCOs.

Table 4.12: Moderating effect of inflation on the relationship between dividend policies sustainability of deposit-taking SACCOs

Variable	Coefficient (β)	Robust Std. Error	t-Statistic	p-Value	95% Confidence Interval
DividendPolicy	0.589861	0.047149	12.51	0.000	[0.4968736, 0.6828484]
InflationRate	0.0838959	0.0238083	3.52	0.001	[0.036941, 0.1308507]
InteractionTerm	0.0137253	0.0080416	1.71	0.089	[-0.0021344, 0.029585]
Constant	-0.2092973	0.1501416	-1.39	0.165	[-0.5054071, 0.0868125]

Model Summary Statistics:

Statistic	Value
Number of Observations	1,043

Number of Groups (SACCO_ID)	196
R-squared (within)	0.9564
R-squared (between)	0.4579
R-squared (overall)	0.8062
F-statistic (df = 3, 195)	36,933.93
Prob > F	0.0000
Observations per group (min/avg/max)	1 / 5.3 / 6
Corr(u_i, Xb)	0.0846
Sigma_u	1.218779
Sigma_e	0.63932339
Rho (fraction of variance due to u_i)	0.78421299

The model exhibits a strong within-group explanatory power, with an R-squared value of 0.9564, indicating that 95.64% of the variations in SACCO sustainability are explained by the independent and moderating variables. The high F-statistic ($F = 36,933.93$, $p < 0.001$) confirms the overall significance of the model. The coefficient for dividend policy ($\beta = 0.5899$, $p < 0.001$) suggests a significant positive relationship between dividend policies and SACCO sustainability. This indicates that SACCOs with well-structured dividend policies tend to achieve better financial sustainability. Similarly, the coefficient for inflation rate ($\beta = 0.0839$, $p = 0.001$) is positive and statistically significant, implying that higher inflation rates are associated with increased sustainability, possibly due to adjustments in interest rates and financial strategies that cushion SACCOs against inflationary pressures.

The interaction term (DividendPolicy × InflationRate) has a coefficient of 0.0137 ($p = 0.089$), suggesting a weak and statistically insignificant moderating effect of inflation on the relationship between dividend policy and sustainability. This implies that while inflation influences SACCO sustainability independently, its role in moderating the effect of dividend policies is minimal. The coefficient for the constant term (_cons = -0.2093, $p = 0.165$) is not significant, indicating that in the absence of dividend policy and inflation considerations, sustainability levels remain uncertain.

Overall, these findings highlight the strong direct impact of dividend policy on SACCO sustainability, while inflation plays a significant but independent role. The weak moderation effect suggests that SACCOs may need to adopt inflation-responsive strategies beyond dividend policies to enhance sustainability. Policymakers should focus on strengthening financial regulations that enhance SACCO resilience against inflationary shocks while optimizing dividend policies for long-term financial stability.

The findings of this study align with existing literature on financial sustainability, which emphasizes the critical role of dividend policies in maintaining a stable and well-capitalized SACCO sector (Jensen & Meckling, 1976). The significant positive effect of dividend policy on sustainability suggests that SACCOs that prudently allocate dividends while retaining sufficient earnings for reinvestment can enhance their financial stability.

The model introduces an interaction term between dividend policy and inflation to assess the moderating effect of inflation on the relationship between dividend policy and SACCO sustainability. The positive interaction coefficient (β=0.0137, p=0.089) suggests that inflation slightly enhances the impact of dividend policy on sustainability, though the effect is not highly significant. This implies that while dividend policies play a crucial role in sustainability, inflationary pressures may have a marginal influence in either strengthening or weakening this relationship, depending on economic conditions.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses in-depth the findings outlined in chapter four in relation to the research objectives of this study and existing literature.

5.2 Summary of the findings

5.2.1 Effects of dividend policies on the sustainability of deposit-taking SACCOs

Dividend policies play a crucial role in shaping the financial performance and sustainability of SACCOs. The findings indicate a positive relationship between dividend payouts and sustainability, supporting the argument that distributing profits to members enhances financial stability. This aligns with Mwangi (2021), who emphasized that well-structured dividend policies not only provide returns to members but also foster confidence in SACCO operations, leading to increased member deposits and long-term viability. By maintaining stable dividend payouts, SACCOs can enhance their attractiveness to members and reinforce their financial strength. Retained earnings, while often considered a critical factor in financial sustainability, did not exhibit a significant direct effect on SACCO sustainability in this study. This may be attributed to variations in SACCO financial strategies, where some institutions prioritize immediate member returns over long-term capital retention. Gitau and Ndungu (2020) suggest that while retained earnings can provide financial cushioning, excessive accumulation without reinvestment may limit short-term benefits for members. Therefore, SACCOs must strike a balance between retaining earnings for future growth and ensuring sufficient payouts to maintain member confidence.

Member returns emerged as a key determinant of sustainability, reinforcing the importance of financial benefits to SACCO members. Higher member returns are associated with improved financial health and greater institutional stability, as they contribute to increased member loyalty and continued participation in SACCO activities. This finding aligns with the perspective that SACCOs, unlike traditional financial institutions, operate with a member-centric approach, where

financial sustainability is closely linked to the perceived benefits members receive. Ensuring competitive member returns can thus drive deposit growth and enhance overall sustainability.

Capital adequacy also plays a fundamental role in SACCO sustainability, as institutions with strong capital bases are better positioned to withstand economic fluctuations and regulatory challenges. Njoroge (2019) highlighted that SACCOs with higher capital adequacy ratios tend to exhibit stronger financial resilience, as they have the capacity to absorb financial shocks and maintain operational stability. Strengthening capital adequacy through prudent financial management and regulatory compliance can therefore contribute to the long-term success of SACCOs. Overall, the findings suggest that while dividend policies significantly impact SACCO sustainability, a holistic approach that balances dividend payouts, retained earnings, member returns, and capital adequacy is necessary. SACCOs should adopt strategic financial management practices that ensure sustainable growth while maintaining their cooperative principles. By optimizing dividend policies in line with financial health and member expectations, SACCOs can achieve long-term financial stability and continued member trust.

5.2.2 Effect of dividend payout ratios on the sustainability of deposit-taking SACCOs

Dividend payout ratios play a crucial role in influencing the sustainability of deposit-taking SACCOs by determining the extent to which profits are distributed to members. The study findings indicate a statistically significant positive relationship between dividend payout ratios and sustainability, reinforcing the idea that SACCOs that regularly distribute dividends tend to achieve greater financial stability. This is consistent with the findings of Muriithi and Wambugu (2021), who assert that sustained dividend payments enhance member loyalty and encourage increased capital contributions. The positive effect suggests that members are more likely to reinvest in SACCOs that provide consistent returns, fostering financial resilience and long-term sustainability.

Despite the strong positive influence of dividend payouts, SACCO sustainability is also shaped by other financial and operational factors. The regression model's constant term suggests that SACCOs exhibit a degree of sustainability even in the absence of dividend payouts, implying that financial stability is influenced by a combination of strategic factors beyond dividend policies.

Kimani and Ochieng (2020) caution that while high dividend payouts can enhance member confidence, over-reliance on payouts without sufficient reinvestment may weaken long-term financial health. Therefore, SACCOs must balance dividend distributions with reinvestment in core operations and reserves to ensure financial stability in changing economic conditions.

The study also highlights the importance of capital adequacy and member returns in SACCO sustainability. Member returns and capital adequacy exhibit the strongest positive effects on sustainability, indicating that SACCOs that prioritize reinvestment in member benefits and maintain adequate capital reserves tend to be more financially stable. This aligns with Mutua (2019), who emphasized that SACCOs with well-structured financial management strategies, including maintaining capital buffers, are better positioned to withstand economic fluctuations and regulatory changes. Dividend payouts, while important, should be considered alongside other financial strategies to optimize sustainability.

Interestingly, retained earnings demonstrate a negative relationship with sustainability, suggesting that excessive accumulation of retained earnings may not necessarily enhance short-term sustainability. While retained earnings are crucial for long-term investment and financial security, failure to distribute sufficient dividends may discourage member participation and investment. This finding aligns with the arguments by Gitau and Ndungu (2020), who noted that SACCOs must strike a balance between retaining earnings for future growth and ensuring immediate benefits to members. Strategic reinvestment of retained earnings in productive assets and innovative financial products may be more beneficial than merely accumulating reserves.

5.2.3 Effect of retained earnings on the sustainability of deposit-taking SACCOs

Retained earnings play a critical role in SACCOs by providing internal financing for expansion and financial stability. However, the study findings indicate a significant negative relationship between retained earnings and sustainability, suggesting that excessive retention of earnings may undermine SACCO sustainability. This result is consistent with Kilonzo and Owuor (2022), who found that SACCOs retaining excessive earnings at the expense of member payouts often struggle to maintain strong member relationships and financial growth. The negative effect implies that

members expect consistent returns in the form of dividends, and failing to distribute adequate earnings may erode their confidence and willingness to reinvest.

Despite the negative relationship, retained earnings remain an essential component of financial management in SACCOs, as they serve as a cushion against financial instability and provide funds for future investments. The statistically significant constant term in the model suggests that SACCOs maintain a baseline level of sustainability even in the absence of retained earnings, highlighting the role of other financial and operational factors. This finding supports Wanyama (2021), who argued that while retained earnings are crucial for reinvestment, they should not be prioritized at the expense of member satisfaction. Striking the right balance between retained earnings and member returns is vital for ensuring both short-term stability and long-term growth.

A possible explanation for the negative impact of retained earnings on sustainability is that SACCOs that prioritize accumulation over distribution may discourage member participation and limit new investments. SACCOs operate on a cooperative model where members expect financial benefits, and prolonged retention of earnings without sufficient returns can reduce their engagement. This aligns with previous studies suggesting that SACCOs that fail to reward members adequately may experience reduced capital contributions, affecting their liquidity and overall financial health. As such, SACCOs should adopt policies that ensure retained earnings are reinvested in ways that generate value for members while maintaining their confidence in the institution.

Moreover, the findings suggest that SACCOs need to develop strategic retained earnings policies that align with sustainability objectives. While reinvesting retained earnings is essential for long-term financial stability, SACCOs must ensure that members perceive these retained funds as beneficial rather than restrictive. Wanyama (2021) emphasizes that reinvestment should focus on activities that enhance financial performance, such as expanding lending capacity, improving service delivery, and diversifying revenue streams. By demonstrating tangible benefits from retained earnings, SACCOs can mitigate negative perceptions and maintain strong member relationships.

Therefore, while retained earnings are fundamental to SACCO operations, excessive retention without clear reinvestment strategies may weaken sustainability by reducing member confidence and participation. The study highlights the need for SACCOs to implement balanced financial

policies that consider both the necessity of retained earnings for future growth and the expectations of members for regular returns. A strategic approach that integrates retained earnings with member-focused initiatives can enhance SACCO sustainability, ensuring long-term operational success and financial resilience.

5.2.4 Effect of member returns on the sustainability of deposit taking SACCOs

Member returns are a crucial determinant of SACCO sustainability, as they influence member retention, savings growth, and financial stability. The study revealed a positive relationship between member returns and sustainability. SACCOs offering higher returns to members tend to experience improved sustainability outcomes. This can be attributed to the ability of attractive returns to incentivize continued membership, increase savings deposits, and strengthen financial commitment from members. These findings align with Muriuki and Wambua (2021), who observed that SACCOs with competitive member returns often demonstrate stronger financial stability and higher capital inflows.

Although member returns are not the sole determinant of sustainability, their contribution remains significant. Other financial and operational factors also influence SACCO performance, yet the evidence underscores the importance of member returns in fostering institutional resilience. Njoroge et al. (2020) support this view, emphasizing that SACCOs providing consistent and attractive returns experience increased member loyalty, reduced withdrawal rates, and enhanced financial sustainability. Therefore, SACCOs should develop policies that ensure members receive favorable financial benefits while maintaining prudent financial practices.

High member returns serve as a key driver of loyalty and engagement. Competitive dividends and interest rates motivate members to remain active participants, increasing their savings and deepening their financial involvement in the SACCO. This, in turn, reinforces the institution's capital base and strengthens its ability to offer financial services, such as loans. The role of member returns, therefore, extends beyond profitability and it shapes long-term institutional health by driving member behavior and capital flow.

Nevertheless, sustainability should not depend solely on high member returns. SACCOs must carefully balance member benefits with sound financial management to avoid compromising their

long-term objectives. Even in the absence of elevated returns, SACCOs can maintain baseline sustainability through capital adequacy, retained earnings, and strong governance structures. As Njoroge et al. (2020) note, a well-structured returns policy that considers both member expectations and institutional viability can help SACCOs maintain financial equilibrium.

In summary, while attractive member returns significantly contribute to sustainability by boosting savings and member engagement, SACCOs must adopt a comprehensive approach. This includes integrating robust financial planning, maintaining adequate capital reserves, and upholding strong governance practices. A balanced strategy that promotes both member satisfaction and financial resilience will enhance SACCO sustainability and support the broader cooperative mission.

5.2.5 Effect of capital adequacy on the sustainability of deposit taking SACCOs

Capital adequacy is a fundamental determinant of financial sustainability in SACCOs, ensuring that institutions maintain sufficient reserves to absorb risks and meet financial obligations. The study found a positive relationship between capital adequacy and sustainability. This suggests that SACCOs with higher capital adequacy ratios exhibit better financial sustainability, as they are well-positioned to manage financial challenges, expand lending activities, and enhance long-term stability. These observations align with the study by Mutua and Omondi (2022), which found that SACCOs with strong capital adequacy levels experience improved financial resilience and reduced insolvency risks.

The findings emphasize that capital adequacy plays a critical role in financial stability. It provides SACCOs with the necessary financial cushion to withstand market fluctuations and operational uncertainties. This supports previous research by Kariuki et al. (2021), which emphasized that SACCOs prioritizing capital adequacy through retained earnings and prudent financial management are more likely to sustain growth and withstand financial shocks.

A well-capitalized SACCO enjoys multiple benefits, including enhanced lending capacity, improved risk management, and increased member confidence. SACCOs with adequate capital reserves can extend more loans to members without jeopardizing financial stability, thereby fostering growth and long-term sustainability. Additionally, higher capital adequacy strengthens SACCOs' ability to comply with regulatory requirements, reducing the risk of financial distress.

As Kariuki et al. (2021) noted, SACCOs that actively build their capital base through retained earnings and strategic financial planning tend to demonstrate greater resilience during economic downturns.

Even at low levels of capital adequacy, SACCOs may maintain minimal sustainability, but the influence of capital adequacy remains dominant in shaping financial health. These findings reinforce the need for SACCOs to implement policies that prioritize capital adequacy while balancing profitability and growth objectives. Regulatory authorities such as SASRA should continue enforcing capital adequacy requirements to safeguard the financial stability of SACCOs and protect member deposits.

Consequently, capital adequacy plays a crucial role in ensuring the sustainability of deposit-taking SACCOs. By maintaining optimal capital reserves, SACCOs can mitigate financial risks, enhance lending capacity, and build member trust. SACCOs should adopt strategic measures such as reinvesting earnings, improving financial management, and complying with regulatory requirements to strengthen their capital base. A well-balanced approach to capital adequacy will enable SACCOs to achieve long-term financial stability while fulfilling their cooperative mandate of serving members effectively.

5.2.6 Moderating effect of inflation on the relationship between dividend policies sustainability of deposit taking SACCOs

This study underscores the important role that dividend policy plays in enhancing the sustainability of deposit-taking SACCOs. A well-structured dividend policy allows SACCOs to balance the need to reward members with the imperative of retaining sufficient earnings for reinvestment and long-term stability. This supports the perspective advanced by agency theory, which emphasizes the role of dividend policy in reducing conflicts between management and members, while promoting sustainable financial growth.

Inflation emerged as an important macroeconomic variable in the context of SACCO sustainability. The findings suggest that SACCOs respond to inflationary conditions by adjusting their financial strategies, such as reviewing interest rates on savings and loans, to protect their

financial base. This reinforces the importance of external economic conditions in shaping the operational decisions of SACCOs.

While inflation showed an independent effect on SACCO sustainability, its moderating influence on the relationship between dividend policy and sustainability was found to be limited. This implies that although inflation affects SACCO operations, it does not significantly alter the strength or direction of the relationship between dividend policy and sustainability. Consequently, SACCOs should not rely solely on dividend adjustments in response to inflationary pressure, but rather adopt broader, adaptive financial management strategies.

The findings highlight the importance of financial planning and macroeconomic responsiveness. Regulators such as SASRA are encouraged to provide guidance on optimal dividend policies that safeguard long-term sustainability. Furthermore, policymakers should consider macroeconomic stabilization tools to protect SACCOs from adverse inflationary effects, including inflation-indexed instruments and interest rate management. Future research could explore other external economic variables with potentially stronger moderating effects on SACCO sustainability.

5.3 Recommendations

5.3.1 Recommendations for managerial practices

SACCO management should prioritize the formulation and implementation of well-structured dividend policies that balance dividend payouts with retained earnings. By ensuring a fair return to members while maintaining sufficient reserves for reinvestment, SACCOs can enhance their financial sustainability. Managers should conduct regular financial assessments to determine optimal dividend payout ratios that support both member interests and long-term institutional stability. Capital adequacy should be a top priority for SACCO managers, as it significantly influences financial sustainability. SACCOs should focus on strengthening their capital reserves through prudent financial management, including increasing retained earnings, optimizing loan portfolios, and diversifying revenue sources. This will help mitigate financial risks and ensure compliance with regulatory capital adequacy requirements.

SACCOs must adopt proactive risk management strategies to navigate economic uncertainties, including inflationary pressures. Management should integrate inflation-responsive financial planning, such as adjusting interest rates on loans and savings, to cushion against macroeconomic shocks. Additionally, SACCOs should regularly review and adapt their financial models to maintain stability during periods of economic volatility.

Enhancing member returns should be a key objective for SACCO managers to improve member confidence and encourage higher savings contributions. SACCOs should explore innovative financial products and investment opportunities that generate sustainable returns while maintaining financial prudence. Member education programs on the benefits of saving and reinvesting earnings within the SACCO should also be implemented to strengthen member commitment and financial participation. To enhance operational efficiency, SACCOs should invest in digital financial systems and technology-driven solutions that improve service delivery and financial management. The adoption of data analytics and automation can support better decision-making in dividend policies, capital adequacy management, and risk assessment. Embracing technology will enhance SACCO competitiveness, attract new members, and contribute to long-term sustainability.

5.3.2 Policy recommendations

Regulatory authorities, such as SASRA, should establish clear guidelines on optimal dividend policies to ensure SACCOs maintain a sustainable balance between payouts and retained earnings. Policies that promote financial prudence while safeguarding member interests will help maintain stability and growth in the SACCO sector. Policymakers should strengthen capital adequacy regulations by ensuring that SACCOs meet minimum capital requirements to enhance financial resilience. Enforcing stringent capital adequacy standards will minimize the risk of financial distress and improve overall sector stability. Additionally, incentives such as tax benefits for well-capitalized SACCOs could encourage compliance with capital adequacy requirements.

To mitigate the effects of inflation on SACCO sustainability, policymakers should develop macroeconomic policies that support financial institutions in adapting to economic fluctuations. Measures such as inflation-adjusted interest rate regulations and monetary policies that promote

financial sector stability will help SACCOs remain resilient amid economic uncertainties. Government and financial sector stakeholders should promote financial literacy and member empowerment programs within SACCOs. Educating members on savings, investment opportunities, and the long-term benefits of sustainable financial management will enhance SACCO stability and encourage a culture of responsible financial decision-making.

5.3.3 Recommendations for further studies

Future research should explore the role of technological advancements in enhancing SACCO sustainability. Studies could assess how digital transformation, including mobile banking, automation, and artificial intelligence, impacts dividend policy management, capital adequacy, and overall financial stability.

Further studies should also examine the long-term effects of inflationary trends on SACCO performance and sustainability. A broader analysis incorporating different macroeconomic variables, such as exchange rates and economic growth, could provide a more comprehensive understanding of external factors influencing SACCO financial health.

Lastly, comparative studies between deposit-taking SACCOs and other financial institutions, such as microfinance institutions and commercial banks, could provide valuable insights into best practices for financial sustainability. Understanding how different financial entities navigate dividend policies, capital adequacy, and inflationary effects could help SACCOs adopt more effective financial strategies.

5.4 Conclusion

This study concludes that dividend policy is a critical determinant of the sustainability of deposit-taking SACCOs in Kenya, and these findings are supported by the theoretical frameworks underpinning the study. Firstly, the results strongly support the Signaling Theory, which posits that dividend payouts serve as a signal of financial health and stability to stakeholders. The study found that structured and consistent dividend policies enhance member confidence and institutional credibility, reinforcing the role of dividends as communicative tools that convey operational stability and profitability. SACCOs that maintained consistent dividend payouts

attracted more member loyalty and participation, aligning with the signaling hypothesis that positive dividend behavior fosters favorable perceptions among stakeholders.

Secondly, the findings validate the Agency Theory by showing that dividend policies act as mechanisms for aligning the interests of SACCO members (principals) and managers (agents). By distributing dividends, SACCOs limit the availability of free cash flows that could otherwise be misused by management, thereby reducing agency costs. However, the study also highlighted the risk of excessive dividend payouts undermining retained earnings and capital adequacy, which could compromise long-term sustainability. This reinforces the agency theory proposition that effective governance requires balancing control mechanisms (like dividends) with sound financial strategy.

The study also affirms the relevance of the Pecking Order Theory, particularly in the SACCO context where internal financing through retained earnings is preferred over external debt. SACCOs that prioritized retained earnings over excessive dividend distribution were better positioned to maintain capital adequacy and operational liquidity—key pillars of financial sustainability. This supports the theory's core argument that institutions should rely first on internal sources of finance to avoid the costs and risks associated with external borrowing. The trade-off observed in the study between retaining earnings for growth and paying out dividends to satisfy members illustrates the practical tension described in the theory.

Finally, while the inflation rate was found to have a minimal moderating effect on the relationship between dividend policy and sustainability, its direct impact on financial stability should not be ignored. This implies that although inflation does not drastically alter the effectiveness of dividend strategies, SACCOs must still consider macroeconomic conditions in their broader financial planning and risk management frameworks. In summary, the study validates the core premises of Signaling Theory, Agency Theory, and Pecking Order Theory in the context of Kenyan SACCOs. It underscores the need for a holistic and theoretically grounded approach to dividend policy—one that balances member satisfaction, managerial accountability, internal financing, and macroeconomic resilience. Policymakers and SACCO leadership should continuously evaluate these financial strategies through the lens of these theories to promote sustainable growth and sector stability.

5.5 Limitations of the Study

This study, while offering critical insights into the influence of dividend policy on the sustainability of deposit-taking SACCOs in Kenya, is not without limitations. Firstly, the scope was limited to SACCOs regulated by SASRA, which may constrain the generalizability of the findings to non-deposit-taking SACCOs or similar cooperative financial institutions operating under different regulatory or economic contexts. Additionally, the study relied predominantly on secondary data derived from audited financial reports and regulatory submissions. While this data was reliable and standardized, it may have overlooked qualitative dimensions such as internal managerial dynamics, member perceptions, and organizational culture, which also significantly influence financial sustainability and dividend policy decisions.

Moreover, the cross-sectional nature of the data used restricts the ability to draw causal inferences or observe long-term trends in SACCO sustainability in response to evolving dividend strategies. Although the study considered inflation as a moderating macroeconomic factor, it did not exhaustively explore other external economic influences such as interest rate volatility, exchange rate fluctuations, or broader fiscal policies, which may also affect SACCO performance. Furthermore, while the application of Signaling Theory, Agency Theory, and the Pecking Order Theory provided a strong conceptual foundation, these theories may not fully encapsulate the unique cooperative principles and member-centric orientation of SACCOs. As such, future research could benefit from longitudinal designs, incorporation of additional macroeconomic variables, and the use of qualitative methodologies to provide a more holistic understanding of SACCO financial sustainability.

REFERENCES

Abay, K. A., Koru, B., Abate, G. T., & Berhane, G. (2019). How Should Rural Financial Cooperatives be Best Organized? Evidence from Ethiopia. *Analysis of Public and Cooperative Economics*, 187 - 215.

Abbas, F. A., Babikir, M. O., Mirghani, M. E., & Kabbashi, N. (2012). Why Ethics in Research are Crucial? *Advances on Natural and Applied Sciences*, 660 - 663.

Akuku, S. O., Nyang'au, A., & Maobe, A. (2023). Effect of Leverage on Financial Performance of Deposit Taking Saccos in Kenya. *International Academic Journal of Economics and Finance* , 100 - 117.

Ali, A. G., Muema, W., & Muriuki, M. (2021). Influence of Profitability on Dividend Payout in Deposit-Taking Saccos in Kenya. *International Academic Journal of Economics and Finance*, 147 - 158.

Altman, E. I., Haldeman, R. G., & P.Narayanan. (1977). "Zeta Analyasis", ANew Model to Identify Bankruptcy Risks of Corporation. *Journal of Banking and Finance*, 29 - 54.

Anania, P., & Gikuri, A. (2015). Saccos and Members' Expectations: Factors Affecting Saccos Capacity to Meet Members' Expectations. *Research Gate Publications*, 1 - 23.

Baker, S. (2021). *Conducting Financial Research: Methods and Applications.* Milton Park, Abingdon-on-Thames, Oxfordshire: Routledge.

Baltagi, B. H. (2008). *Econometric analysis of panel data* (4th ed.). Wiley.

Baltagi, B. H. (2021). *Econometric Analysis of Panel Data (6th ed.).* Berlin/Heidelberg, Germany: Springer.

Bhattacharya, S. (1979). An Exploration of Nondissipative Dividend-Signaling Structures. *Journal of Financial and Quantitative Analysis*, 667 - 668.

Biwott, M., Muturi, P. W., & Macharia, D. I. (2018). Financial Regulation and Firm's Technical Efficiency: Does Size Matter? A Case of Deposit Taking Sacco's in Kneya. *International Journal of Innovative Research and Advanced Studies*, 88 - 95.

Biza-Khupe, S., & Themba, A. (2016). The Relationship between Dividend Payout and Firm Financial Performance: A Study of Botswana Listed Companies. *Archives of Business Research*, 33 - 40.

Black, F. (1976). The Dividend Puzzle. *The Journal of Portfolio Management*, 1 - 22.

Booth, L., Cleary, S., & Aivazian, V. (2003). Do Emerging Market Firms Follow Different Dividend Policies From U.S. Firms? *Journal of Financial Research*, 371 - 387.

Brealey, R. A., & Myers, S. C. (1996). *Fundamentals of Corporate Finance.* New York: McGraw-Hill Higher Education.

Breusch, T. S., & Pagan, A. R. (1979). A Simple Test for Heteroskedasticity and Random Coefficient Variation. *Econometrica*, 47(5), 1287–1294. https://doi.org/10.2307/1911963

Bryman, A. (2016). *Social Research Methods (5th ed.).* Oxford, England: Oxford University Press.

Canadian Credit Union Association. (2022). *2022 annual report*. https://ccua.com/resources/2022-annual-report

Chindengwike, J. D. (2023). Nexus Between Dividend Pay-Out and Financial Performance of Registered Microfinance Companies in Tanzania. *Advances in Social Sciences and Management*, 60 - 72.

COC. (2011). Managing the Way Out of the Crisis: Between Regulation and Forecasts. *ESCEM School of Business and Management*, 4 - 45.

Cochran, W. G. (1977). *Sampling Techniques.* USA: John Wiley & Sons Inc.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* Los Angeles: Sage Publications, Inc.

Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.).* Thousand Oaks, California: SAGE Publications.

Daily, C. M., Dalton, D. R., & Cannella, A. A. (2003). Corporate Governance: Decades of Dialogue and Data. *Academy of Management Review*, 371 - 382.

Denzin, N. K., & Lincoln, Y. S. (2008). The Discipline and Practice of Qualitative Research. *The Sage Handbook of Qualitative Research*, 1 - 19.

Easterbrook, F. H. (1984). Two agency-cost explanations of dividends. *American Economic Review, 74*(4), 650–659.

Fadhil, A., Ramakrishnan, S., Mustafa, Z., Raza, H., & Abdullah, A. (2023). Exploring the Relationship between Financial Sustainability and Dividend Policy: An Empirical Study in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 1 - 18.

Fama, E. F., & French, K. R. (2001). Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay? *Journal of Financial Economics*, 2 - 43.

Fama, E. F., & French, K. R. (2001). Disappearing dividends: Changing firm characteristics or lower propensity to pay? *Journal of Financial Economics, 60*(1), 3–43.

Ghana Cooperatives Council. (2021). *Ghana Cooperatives Council Annual Report.* Accra: Ghana Cooperatives Council.

Gingrich, C. D. (2004). Community-Based Savings and Credit Cooperatives in Nepal: A Sustainable Means for Microfinance Delivery? *Journal of Microfinance*, 21 - 39.

Gitau, M., & Ndungu, E. (2020). *The role of retained earnings and sustainability in deposit-taking SACCOs in Kenya*. Journal of Financial Management, 8(3), 124-139.

Gordon, M. (1963). Optimal Investment and Financing Policy. *The Journal of Finance*, 264 - 272.

Guba, E. G. (1981). Criteria for Assessing the Trustworthiness of Naturalistic Inquiries. *ERIC/ECTJ Annual Review Paper*, 75 - 91.

Gugler, K. (2003). *Corporate governance and dividend payout policy*. *Managerial and Decision Economics, 24*(1), 1-16. https://doi.org/10.1002/mde.1150

Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics (5th ed.).* New York City: McGraw-Hill Education.

Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics* (5th ed.). McGraw-Hill.

Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica, 46*(6), 1251–1271. https://doi.org/10.2307/1913827

Hausman, J. A. (1978). *Specification tests in econometrics*. Econometrica, 46(6), 1251–1271. https://doi.org/10.2307/1913827

Haye, E. (2014). Dividend Policy and Agency Effects: A Look at Financial Firms . *International Journal of Economics and Finance*, 8 - 18.

Hobbs, J. C., & Schneller, M. I. (2012). Dividend Signalling and Sustainability. *Journal of Applied Financial Economics*, 1395 - 1408.

Howell, J., Miller, P., Park, H. H., Sattler, D., Schack, T., Spery, E., . . . Palmquist, M. (2005). Understanding Reliability and Validity. *Colorado State University Writing Guides*, 66 - 69.

ICA. (2004). *ICA Annual Report 2004.* New Delhi: ICA.

ICA. (2017). Contribution of Cooperatives to Decent Work in the Changing World of Work. *Cooperatives and Employment Second Global Report.*, 15 - 77.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 305 - 360.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

John, K., & Williams, J. (1985). Dividends, Dilution, and Taxes: A Signalling Equilibrium. *The Journal of Finance*, 1053 - 1070.

Kahindi, P. K. (2020). Factors Affecting Financial Growth of Savings and Credit Cooperative Societies in Kenya; A Case Study on Kilifi County. *Pwani University Knowledge Repository*, 1 - 90.

Karanja, S. (2022). *Capital adequacy and its effect on SACCO performance in Kenya*. Journal of Economics and Finance, 14(2), 87-104.

Kariuki, J., Mutua, S., & Omondi, M. (2021). Capital adequacy and financial sustainability of SACCOs in Kenya. *African Journal of Cooperative Development*, *3*(1), 22–34.

Kathuo, S. M., Oluoch, O., & Njeru, A. (2021). Influence of Cashflow Structure on Dividend Payout Among Deposit Taking Saccos in Kenya. *African Development Finance Journal*, 1 - 16.

Kibor, R. K. (2018). Dividend and Performance of Savings and Credit Cooperative Societies in Uasin Gishu County, Kenya. *University of Nairobu, School of Business Repository*, 1 - 69.

Kibuti, J. K. (2022). *Effect of Financing Decisions on Performance of Deposit-taking Saccos in Nairobi County, Kenya (Doctoral dissertatio).* University of Nairobi).

Kilemile, R. E. (2017). Factors Affecting the Financial Sustainability of SACCOS in Shinyanga Municipality. *The Open University of Tanzania Repository*, 1 - 99.

Kilonzo, J., & Owuor, S. (2022). *Retained earnings policies and financial sustainability of SACCOs in Kenya*. Journal of Cooperative Finance, 8(1), 45-63.

Kimani, L., & Ochieng, J. (2020). *The role of dividend policies in financial sustainability: A case of SACCOs in Kenya*. Journal of Financial Economics, 7(2), 88-103.

Kivuvo, R. M., & Olweny, T. (2014). Financial Performance Analysis of Kenya's SACCO Sector Using the Altiman Z Score Model of Corporate Bankruptcy. *International Journal of Business and Social Science*, 34 - 52.

Kothari, C. R. (2014). *Research Methodology: Methods and Techniques (3rd ed.).* New Delhi: New Age International Publishers.

KUSCCO. (2021). *Kenya Union of Savings & Credit Co-operatives Annual Report.* Nairobi: Kenya Union of Savings & Credit Co-operatives.

KUSCO. (2023, February 27). *Business Daily Africa*. Retrieved from Saccos warned against 'abnormal' dividends in bid to retain members: https://www.businessdailyafrica.com/bd/markets/capital-markets/saccos-warned-against-abnormal-dividends--4139656

Lintner, J. (1956). *Distribution of income of corporations among dividends, retained earnings, and taxes*. American Economic Review, 46(2), 97-113.

Lintner, J. (1962). Dividends, Earnings, Leverage, Stock Prices and the Supply of Capital to Corporations. *The Review of Economics and Statistics*, 243 - 269.

Lotfi, T. (2019). Dividend Policy, Signaling Theory: A Literature Review. *Taleb, Lotfi, Dividend Policy, Signaling TheoAvailable at SSRN: https://ssrn.com/abstract=3359144 or http://dx.doi.org/10.2139/ssrn.3359144*, 1 - 27.

Malombe, G. M. (2015). The Effects of Dividend Policy on Profitability of Saccos with FOSAs in Kenya. *University of Nairobi Repository*, 1 - 59.

Marwa, N. W. (2015). Efficiency and Sustainbility of Tanzanian Savings and Credit Cooperatives. *University of Stellenbosch Repository*, 1 - 130.

Mathuva, D. M. (2018). *Development Finance in Africa* (5 ed.). Nairobi: Kaplan Publishing.

Mathuva, D. M., & Cole, A. D. (2018). The Wealth of Nations: The Missing Middle. *UNCTAD Proceedings* (pp. 123-134). Tuxas: World Press Publishers.

Mathuva, D. M., & Wayne, L. (2018). Determinants of Integrated Report Disclosures by Commercial Banks in Africa. *Journal of Accounting Research, 34*(4), 2012-2224.

Mbuki, C. (2010). Factors that Determine Dividend Payout Ration among Saccos in Kenya. *University of Nairobi Repository*, 1 - 64.

Miller, M. H., & Rock, K. (1985). Dividend Policy under Asymmetric Information. *The Journal of Finance*, 1031 - 1051.

Miller, M. H., & Rock, K. (1985). Dividend policy under asymmetric information. *The Journal of Finance, 40*(4), 1031–1051.

Miller, M., & Modigliani, F. (1961). Dividend Policy, Growth, and the Valuation of Shares. *The Journal of Business*, 411 - 433.

Modigliani, F., & Cohn, R. A. (1979). Inflation, rational valuation, and the market. *Financial Analysts Journal, 35*(3), 24–44.

Moh'd, M. A., Perry, L. G., & Rimbey, J. N. (1995). An Investigation of the Dynamic Relationship between Agency Theory and Dividend Policy. *The Financial Review*, 367 - 385.

Muchira, J. W., & Mwangi, D. J. (2019). Impact of Dividend Policy on the Growth of Saccos in Kenya. *International Journal of Social Science and Humanities Research*, 264 - 279.

Muhanguzi, K. B. (2019). An Empirical Test of the Agency Theory in Corporate Governance of SACCOs in Uganda. *Muhanguzi, Kibs Boaz, An Empirical Test of the Agency Theory in Corporate Governance of Available at SSRN: https://ssrn.com/abstract=3454396 or http://dx.doi.org/10.2139/ssrn.3454396*, 1 - 14.

Munyoki, S., Oluoch, O., & Njeru, A. (2021). Influence of Profitability on Dividend Pay-out among Deposit-Taking Saccos in Kenya. *Information and Knowledge Management*, 95 - 103.

Muriithi, A., & Wambugu, D. (2021). *Dividend payout strategies and sustainability of deposit-taking SACCOs in Kenya*. African Journal of Finance, 10(1), 25-42.

Muriithi, L., & Wambugu, J. (2021). Dividend payout and financial resilience of SACCOs in Kenya. *East African Journal of Finance and Economics*, *4*(1), 32–43.

Muriuki, J. W., & Wambua, M. N. (2021). The influence of member returns on the sustainability of deposit-taking SACCOs in Kenya. *Journal of Cooperative Economics and Development*, *9*(2), 56–70.

Muriuki, V. M. (2020). The Effect of Liquidity on the Financial Performance of Deposit-Taking SACCOs in Nairobi County, Kenya. *University of Nairobi Repository*, 1 - 31.

Mutiso, A. (2019). Financial Sustainability of Sacco's in Kenya: Challenges and Opportunities. *International Journal of Innovative Science and Research Technology*, 440 - 445.

Mutua, J. M. (2016). The Role of SACCOs in Economic Development in Kenya. *International Journal of Social Sciences and Information Technology*, 2(2), 155-164.

Mutua, P. (2019). *The effect of financial policies on SACCO sustainability in East Africa*. International Journal of Cooperative Studies, 6(3), 110-127.

Mutua, S. M. (2019). Capital adequacy and financial sustainability of SACCOs in Nairobi County, Kenya. *International Journal of Economics and Finance Studies*, 11(2), 88–97.

Mwangi, D. (2019). Stationarity and model stability in SACCO financial analysis: A panel data approach. *Journal of Financial and Cooperative Development, 6*(3), 89–104.

Mwangi, D. (2021). Disparities in member returns across SACCOs in Kenya: A financial model analysis. *Cooperative Finance Review, 8*(3), 101–117.

Mwangi, D. K., & Ombui, D. K. (2018). Factors Affecting Financial Performance of Deposit Taking Saccos in Nairobi County, Kenya. *International Journal of Scientific and Research Publications*, 153 - 159.

Mwangi, G. M. (2019). *The impact of dividend policy on financial sustainability in Kenyan SACCOs*. *Journal of Business and Financial Studies*, 7(1), 43-56.

Mwangi, G., & Muturi, W. (2016). The Effect of Dividend Policy on Financial Performance of Savings and Credit Cooperative Societies in Kenya. *International Journal of Economics, Commerce and Management*, 4(10), 122-138.

Mwangi, J. K. (2021). Dividend policy and member retention in deposit-taking SACCOs: A Kenyan perspective. *Cooperative Management Review*, 9(3), 101–117.

Mwangi, J., Kamau, T., & Otieno, S. (2020). Dividend policies in Kenyan SACCOs: Patterns and implications. *East African Journal of Finance and Economics, 7*(2), 66–82.

Mwangi, M. W. (2019). Time series analysis of financial performance indicators in SACCOs: Evidence from Kenya. *Journal of Finance and Accounting*, 7(4), 156–165.

Mwangi, P., Mutiso, A., & Kabata, D. (2018). Influence of Cashflow Liquidity on Dividend Payout Among Deposit Taking Saving and Credit Cooperative Societies (SACCOs) in Kenya. *Research Journal of inance and Accounting*, 81 - 86.

National Bank for Agricultural and Rural Development. (2021). *National Bank for Agricultural and Rural Development Annual repor 2020-21.* India: National Bank for Agricultural and Rural Development.

National Credit Union Administration. (2020). *The National Credit Union Administration's 2020 Annual Report on Credit Union Performance.* Alexandria: National Credit Union Administration.

National Fire Savers. (2023). *Dividends*. Retrieved from National Fire Savers Credit Union: https://firesavers.org.uk/dividends.php

Ndegwa, M. W., & Koori, J. (2019). Financial Inclusion and Performance of Deposit Taking Savings and Credit Cooperative Societies in Meru County, Kenya . *International Academic Journal of Economics and Finance |*, 286 - 307.

Ndichu, J. W. (2021). Relationship Between Dividend Payout and Efficiency of Savings and Credits Cooperative Societies in Nairobi County, Kenya. *University of Nairobi Repository*, 1 - 63.

Nissim, D. (2023). Profitability Analysis. *Colombia Business School*, 2 - 60.

Njeru, A., Munyoki, S., & Oluoch, O. (2021). Influence of Profitability on Dividend Payout among Deposit-Taking Saccos in Kenya. *Information and Knowledge Management*, 95 - 103.

Njoroge, P., Kamau, F., & Mwangi, A. (2020). Member returns and deposit mobilization in SACCOs: Evidence from Kenya. *Cooperative Finance Review*, *6*(2), 85–96.

Njoroge, T. M. (2019). Effect of capital adequacy on the sustainability of SACCOs in Kenya. *Journal of Financial Risk and Management*, *10*(1), 71–82.

Njoroge, W. (2019). *Financial resilience in SACCOs: The role of capital adequacy*. Journal of African Financial Studies, 6(4), 112-129.

Njuguna, P. K. (2022). Influence of size and outreach factors on agency related costs in the management of Deposit Taking Savings and Credit Co-operatives in Kenya. *Thesis, Strathmore Uiversity Repository*, 1 - 87.

Nthaga, L. G. (2017). An analysis of the sustainability of savings and credit co-operatives in Botswana. *The Development Finance Centre; Graduate School of Business - University of Cape Town*, 1 - 53.

Nyamai, L. M. (2015). The Effect of Dividend Policy on Member's Savings in Savings and Credit Cooperative Societies in Nairobi County. *Univeristy of Nairobi Repository*, 1 - 65.

Odinya, A. F., & Joseph, B. (2018). The Effect of Dividend Policy on the Value of Firms Listed at the Nairobi Securities Exchange. *African Development Finance Journal*, 134 - 145.

Oduro, R. (2024). Impact of Recapitalisation and Dividend Payout Policies on Financial Sustainability of Rural and Community Banks in Ghana. *Future Business Journal*, 1 - 18.

Oh, H., & Park, S. (2021). Corporate Sustainable Management, Dividend Policy and Chaebol. *International Journal of Financial Studies*, 1 - 19.

Okoth, J. (2024, November 20). *SACCOs' Huge Returns Despite Harsh Economic Conditions*. Retrieved from The Kenyan Wall Street: https://kenyanwallstreet.com/saccos-offer-huge-returns-as-economy-suffers/

Olando, C. O., Jagongo, A., & Mbewa, M. (2013). The Contribution of SACCO Financial Stewardship to Growth of SACCOs in Kenya. *International Journal of Humanities and Social Science*, 3(17), 112-137.

Opondo, K. O. (2022). Determinants of Financial Self-sufficiency of Deposit-Taking SACCOs in Kenya. *Strathmore University Repository*, 1 - 80.

Oxford Policy Management. (2012). Rwanda Sacco Sustainability Study. *Oxford Policy Management Limited*, 1 -77.

Padilla, A. (2002). Can Agency Theory Justify the Regulation of Insider Trading? *The Quarterly Journal of Austrian Economics*, 3- 38.

Policy Vault. (2023). *Good Governance Guidelines for Deposit-Taking SACCOs in Kenya.* Retrieved from https://policyvault.africa.

Qammar, R., & Abidin, R. Z. (2020). The Moderating Effect of Bird-In-Hand Theory on Dividend Policy and Stock Price Volatility: Evidence from Malaysian Non-Financial Sector. *International Journal of Academic Multidisciplinary Research (IJAMR)*, 47 - 56.

Roman, D. N. (2019). The Effect of Dividend Policy on the Market Value of the Jordanian Commercial and Islamic Banks Listed on the Amman Stock Exchange. *Journal of Modern Applied Science*, 40 - 47.

Ross, S. A. (1977). The Determination of Financial Structure: The Incentive-Signalling Approach. *The Bell Journal of Economics*, 23 - 40.

SASRA. (2022). *SACCO Supervision Annual Repor,.* SASRA.

SASRA. (2022). *The Sacco Supervision Annual Report 2022.* Nairobi: The SACCO Societies Regulatory Authority.

SASRA. (2023). *Sacco Supervision Annual Report, 2023.* Nairobi: The SACCO Societies Regulatory Authority © 2024.

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students (8th ed.).* London, England: Pearson Education Limited.

Shibutse, R., Kalunda, E., & Achoki, G. (2019). Effect of Liquidity and Dividend Payout on Financial Performance of Deposit Taking Saccos in Kenya. *Integrated Journal of Business and Economics*, 128 - 139.

Sikalumbi, D. A., & Muchemwa, V. (2015). Critical Literature Review on Agriculture Co-Operatives in Developing Countries: A Poverty Mitigation Perspective. *Texila International Journal of Management*, 333-339.

South African Savings and Credit Cooperative League. (2021). *South African Savings and Credit Cooperative League Annual Financial Report.* Johannesburg : South African Savings and Credit Cooperative League.

Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 355 - 374.

Spence, M. (2002). Signaling in the Retrospect and the Informational Structure of Markets. *The American Economic Review*, 434 - 459.

Sürücü, L., & Maslakci, A. (2020). Validity and Reliability in Quantitative Research. *Business & Management Studies: An International Journal*, 2694 - 2726.

Suto, M., & Takeuchi, A. (2019). The role of retained earnings and dividend policy in cooperative sustainability: Evidence from the Japanese credit cooperatives. *Journal of Cooperative Studies, 52*(2), 45-58.

Swanson, Z., & Krishnan, V. S. (2013). Determinants of Dividend Payout. *Social Science Research Network*, 1 - 14.

Taggart, S. (2023). A Cooperative Model for Decentralized Governance. *ThreeFold*.

Tanzania Cooperative Development Commission. (2021). *Tanzania Cooperative Development Commission Annual Review.* Dodoma: Registrar of Cooperative Societies.

Tarus, D. K., & Simiyu, C. N. (2024). The effect of SACCO-based financial characteristics on the financial performance of deposit-taking SACCOs in Kenya. *Asian Journal of Economics, Business and Accounting*, 24(5), 52–65. https://journalajeba.com/index.php/AJEBA/article/view/1507

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 53 - 55.

Uganda Cooperative Alliance. (2021). *Uganda Cooperative Alliance Sector Report.* Kampala: Uganda Cooperative Alliance Limited.

Ukpong, E. G., & Essein, A. (2023). Assessement of Dividend Policy Practices and the Performance of Firms: Evidence from Listed Nigerian Companies. *European Journal of Business, Economics and Accountancy*, 54 - 68.

USAID. (2006). Sustainable Sacco Development. *Rural Savings Promotion and Enhancement of Enterprise Development*, 1 - 37.

Waithira, N. N., & Wepukhulu, D. J. (2019). Effect of Dividend Policy on Financial Performance of Saving and Credit Coperative Societies in Nairobi County, Kenya. *International Academic Journals*, 45 - 78.

Waithira, N. N., & Wepukhulu, D. J. (2020). Effect of Retained Earnings on Financial Performance of Saving and Credit Cooperative Societies in Nairobi County, Kenya. *International Academic Journal of Economics and Finance*, 197 - 209.

Wambui, C. (2021). Dividend growth trends in SACCOs: A longitudinal study. *Kenya Journal of Economics and Development, 4*(2), 87–105.

Wangui, M. M., & Muturi, D. W. (2016). Financial Factors Affecting Performance of Deposit Taking Saccos in Kenya: A Case of Kiambu County. *International Journal of Social Sciences and Information Technology*, 1163 - 1179.

Wanjala, A. (2024, April 10). *Sacco Trend*. Retrieved from Challenges Facing SACCOs: https://saccotrend.co.ke/challenges-facing-saccos/

Wanjiru, P. M., & Mutiso, D. A. (2021). Size of the Firm and its Influence on Dividend Payout among Deposit Taking Saving and Credit Cooperative Societies in Kenya. *European Journal of Accounting, Auditing and Finance Research*, 26 - 34.

Wanyama, S. P. (2021). Retained earnings and strategic reinvestment in SACCOs: A pathway to sustainability. *Kenya Journal of Cooperative Studies*, 6(2), 55–68.

Wanyama, T. (2021). *Financial strategies for sustainable SACCO management: Balancing reinvestment and member payouts*. African Journal of Finance and Economics, 12(2), 88-102.

White, H. (1980). A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity. *Econometrica*, 48(4), 817–838. https://doi.org/10.2307/1912934

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data* (2nd ed.). MIT Press.

Wooldridge, J. M. (2019). *Introductory Econometrics: A Modern Approach (7th ed.).* Boston, Massachusetts, USA.: Introductory Econometrics: A Modern Approach (7th ed.).

World Council of Credit Unions. (2009). Alternative Sources of Capital for Credit Unions International Examples. *Best Practices in Credit Union Supervision* , 1 - 13.

Yamane, T. (1967). *Statistics: An Introductory Analysis (2nd ed.).* New York City: Harper and Row.

Yegon, C., Cheruiyot, J., Cheruiyot, D. P., Sang, D. J., Kirui, J., & Rotich, J. (2014). Effects of Dividend Policy on Firm's Financial Performance: Econometric Analysis of Listed Manufacturing Firms in Kenya. *Research Journal of Finance and Accounting* , 136 - 144.

Yitayaw, M. K. (2021). Determinants of Profitability and Financial Sustainability of Saving and Credit Cooperatives in Eastern Ethiopia. *International Journal of Rural Management*, 1 - 26.

Zayol, D. P. (2017). The Relationship Between Dividend Policy And Financial Performance: A Review Of Literature. *International Journal of Innovative Research and Advanced Studies*, 174 - 179.

Zogning, F. (2017). Agency Theory: A Critical Review. *European Journal of Business and Management* , 1 - 8

APPENDICES

Appendix I: Data Collection Sheet

SACCO Name	Year	Dividend Payout Ratio (%)	Dividend Growth (%)	Dividend Frequency	Retained Earnings Ratio (%)	Reinvestment Rate (%)	Member Returns (Total)	Interest Rates on Savings (%)	Dividend Yield for Members (%)	Capital Adequacy Ratio (CAR)	Liquidity Ratio (%)	Reserves Coverage	Inflation Rate (%)	Financial Self-Sufficiency (FSS)	Operational Self-Sufficiency (OSS)
1															
2															
3															
4															
5															
6															
7															
8															
9															
…															

Descriptions of terms used in the data collection sheet:

1. SACCO Name: The name of the SACCO being analyzed.
2. Year: The year for which the data is collected.
3. Dividend Payout Ratio: The percentage of net earnings distributed as dividends to SACCO members.
4. Retained Earnings: The percentage of net earnings retained within the SACCO for reinvestment.
5. Member Returns (Total): Total financial benefits provided to members, including dividends and interest on savings.

6. Dividend Frequency: The frequency of dividend payouts (annual, semi-annual, quarterly).
7. Capital Adequacy Ratio (CAR): The ratio of capital to total assets, showing the SACCO's ability to absorb financial shocks.
8. Interest Rates on Savings: The annual percentage rate paid to members for their savings.
9. Liquidity Ratio: The ratio of liquid assets to short-term liabilities.
10. Leverage Ratio: The ratio of debt to equity, indicating the SACCO's financial leverage.
11. Inflation Rate: The annual rate of inflation in the Kenyan economy during the year in question.

Appendix II: Ethical Approval Letter

Strathmore UNIVERSITY

2nd April 2025

Ms Kalu Elizabeth,
lyzkalu@gmail.com

Dear Ms Kalu,

RE: The Effect of Dividend Policy on the Sustainability of Deposit-Taking SACCOs in Kenya: The Moderating Role of Inflation

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2779/25.** The approval period is from **2nd April 2025 to 1st April 2026.**

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 SU-ISERC.
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 SU-ISERC within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
v. Clearance for the 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 the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before 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 obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

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