EFFECT OF CAPITAL STRUCTURE ON THE LIQUIDITY OF DEPOSITS TAKING SACCOS IN KENYA

BY

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MASTER OF SCIENCE IN COMMERCE (FINANCE AND ACCOUNTING)

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A RESEARCH DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN COMMERCE (FINANCE AND ACCOUNTING) TO THE SCHOOL OF BUSINESS AT KCA UNIVERSITY

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DECLARATION

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ABSTRACT

The effects and the existence of an optimal capital structure has remained a matter of academic debate since the capital structure irrelevance proposition by Modigliani and Miller in 1958. According to the SASRA's SACCOs annual supervision report of 2022, deposits taking SACCOs in Kenya hold over 700 billion Kenya shillings in assets. This study sought to determine the effect of capital structure on the liquidity of deposit taking SACCOs in Kenya. The study used a descriptive research design to collect panel data from the published financial statements of deposit taking SACCOs in Kenya in relation to capital structure, in particular the long-term debt, equity and members non-withdrawable deposits. The study found out 59% of variations of liquidity levels of deposits taking SACCOs in Kenya can be explained by the long-term debt, share capital and the members' non-withdrawable deposits in their capital structure. The study established that capital structure component of DT SACCOs in Kenya, namely; long-term debt, share capital and non-withdrawable deposits have an influence on the SACCO liquidity position. The study established that long-term debt has a positive and a significant effect on the liquidity risk of deposits taking SACCOs in Kenya. An increase in long-term debt will positively affect the SACCO liquidity level with 3.175 units. The study found out both the share capital and the non-withdrawable deposits also have a positive and significant effect on the liquidity levels of deposits taking SACCOs in Kenya, share capital (β= 1.122, p value <0.05), non-withdrawable deposits with (β= 3.011, p value <0.05). The study recommends to policy makers to develop a strict liquidity prudential guidelines mechanism to safeguard and limit the liquidity risk exposure of DT SACCOs and the need of the SACCOs' management to continuously evaluate the cost of source of funds against the interest revenue generated from loans to members as lending is the core business of DT SACCOs in Kenya so as to manage their liquidity risk exposure. Consequentially with the noted study limitations, a future study on the capital structure on liquidity of non-deposit takin SACCOs should be carried as well as a survey of all the licensed deposits taking SACCOs in Kenya using a well-structured questionnaire to capture the primary data from the SACCOs' management in regard to effect of capital structure on liquidity management.

Keywords: *Capital structure, long-term debt, share capital, non-withdrawable deposits, liquidity, capital adequacy, SACCO Societies' regulatory authority, Savings and credit cooperatives*

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ACRONYMS AND ABBREVIATIONS

ADM	Annual Delegates Meeting
AGM	Annual General Meeting
ANOVA	Analysis of Variance
BOSA	Back Office Service Activity
DT	Deposit Taking
FOSA	Front Office Activities
KUSCO	Kenya Union of Savings and Credit Cooperatives Limited
LR	Liquidity Risk
LTD	Long-term Debt
NSE	Nairobi Securities Exchange
OLS	Ordinary Least Squares
SACCO	Savings and Credit Cooperatives
SASRA	SACCO Societies Regulatory Authority
SC	Share Capital
VIF	Variance Inflation Factor

TERMS AND DEFINATIONS

Capital Structure	Refers to a mix of debt and equity that a company uses to finance its assets (Abor, 2005).
Deposit Taking Sacco	Refers to a SACCO licensed by the SACCO society regulatory authority to engage in both non-withdrawable and withdrawable deposits taking business from the public in Kenya (Kagunda, 2018).
Liquidity	Refers to the ease at which an organization can convert it assets into cash to meet its financial obligations as they fall due without incurring extra costs (Wachira, 2018)
Liquidity Risk	Refers to the risk that an organization shall not meet its financial obligations as they fall due without incurring extra costs (Moosa and Li, 2012).
Long-Term Debt	Includes all the financial obligations whose maturity are longer than one year (Klapper and Tzioumis, 2008).
Non-withdrawable Deposits	Refers to a SACCO Member BOSA savings that are only refundable to a member on notice upon membership cessation and are used as member's loan security (Njau, 2018).
SACCO	Refers to a savings and credit cooperative operated by and for the members in which they mobilize their funds into a pool from which they are individually advanced loans (Mwita, 2019)
Share Capital	Refers to non-repayable funds invested in a firm by investors

in exchange of the firm's shares (Abai, 2003).

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Deposit-taking Savings and Credit Cooperative Societies (DT-SACCOs) are financial intermediaries that collect savings and deposits from their members, who in most cases, come back to seek loans from the same societies (Kadagi, Ahmed & Wafula, 2015). DT-SACCOs takes a significant portion of the savings and credit fraternity in Kenya, covering both deposit taking and non-deposit taking societies (Njeru, 2016). The primary objective being to bring individuals of similar ideology together with a view to creating a pool of funds from which they may borrow at terms softer than what is offered in the market. Although members are allowed to withdraw funds if they wish to terminate their membership, a continuing member uses the non-withdrawable portion of their deposits as collateral for any loans taken (SASRA, 2016). Millions of people have accessed financial services from DT-SACCOs in Kenya and other developing countries, with over 600 million Africans depending on them directly or indirectly (Muturi & Ochingo, 2018).

Rated first in Africa, Kenya has over 22,000 registered co-operative societies with a membership of over 14 million and employs over 1.5 million, either directly or indirectly (KNA, 2019). In the recent past, however, the DT-SACCO sector in Kenya has faced a number of challenges like mismanagement, non-performing loans, financial difficulties, low of liquidity levels and poor governance structures. Fraudulent dealings, especially where Information and Communications Technology (ICT) systems are not properly secured were suspected. This resulted in some level of instability in the sector. Although legal interventions by the government encourages good governance practices, incidences of poor governance including poor adherence

to budgetary discipline, incapacity in financial management, unethical practices and general mismanagement of resources have been reported. Bad governance and corruption have negatively affected operations and revenues of DT-SACCOs (GOK, 2019).

To protect the DT-SACCO sector and the economy from any level of instability with all the negative repercussions, such a trend must be halted and reversed (Fullerton, Kennedy & Widener, 2014). Fearing members' savings might be at risk, the State Department of Co-operatives partnered with the Ethics and Anti-Corruption Commission (EACC) to carry out lifestyle audit of DT-SACCO managers and where necessary prosecute any officials found to have been involved in fraudulent activities (Wycliffe, 2019). EACC Chairperson had observed that there was evidence of massive corruption and unethical conduct within the sector leading to loss of members' savings (Kamau, 2019). Furthermore, Mwangi (2014) observed that weak controls and mismanagement of DT-SACCO resources are the main reasons why funds are lost resulting in poor financial performance.

In the African context where co-operatives were first considered in 1955, the main objective was to improve the living standards of their members (Muthoni, 2016). Unfortunately, reckless financial management practices have contributed to DT-SACCO failures especially in South Africa (Kwame, 2016). The DT-SACCO sector, especially in Sub-Saharan Africa, has not escaped the volatility that hit the financial markets in 2007 (ILO, 2009). To protect themselves from potential losses, some DT-SACCOs had to scale down disbursement of loans as a result of inadequate liquidity. This affected their growth. To obtain the wealth maximization goal of a firm, there must be efficient working capital management which enhances the balance between liquidity and profitability. While evaluating financial performance of Small & Medium

Enterprises (SMEs) in South Africa, Asah, Fatoki & Rungani (2015) observed that capital budgeting is critical to any firm. They stated that financial well-being of a firm is closely tied to its capital budgeting decisions as they determine how huge amounts of finance may be expended on fixed assets.

Tesfa & Chawla (2018) found that financial managers make annual working capital reviews in their firms. Comparing firms in Ethiopia with those in USA, Australia, Canada and Pakistan, they concluded that any difference in working capital management practices could be attributed to size and cultural differences among other factors. Financing decisions are made to determine the level of debt and equity to be used to finance organizational operations and or investments. Information asymmetry and agency conflicts between managers and other stakeholders are the main market frictions that influence financing decisions (Jensen & Meckling, 1976). The debt-equity choice is a critical financing decision influenced by price terms and incentives to the management and in most cases their interests are not aligned due to information asymmetry.

According to Moosa and Li (2012) a firm is said to be liquid if its cash and cash equivalents can easily be used to cover its obligations as they fall due. Taking into consideration an organization in a certain period, liquidity can be defined as the available cash and cash equivalents at the organization disposable to cover the obligations, especially the short-term financial obligations. Liquidity risk is the risk that a firm fail to meets its financial obligation as they fall due to the inadequacy of cash and easily convertible assets (Kagunda, 2018). Illiquidity of an organization negatively affects the growth and the profitability of such an organization, in that the organization struggles funding its revenue earning operations.

Deposit taking SACCOs business model is that of credit and savings, thus they pool financial resources from members and issue the same funds to them as loans. With the core business of SACCOs being lending of money, they have to maintain an optimum liquidity level for running their daily administrative operations as well as meet the loan demands by members (Otwoko and Maina, 2021). According to the SASRA's SACCO supervision annual reports from the year 2010 to 2020, no single deposit taking SACCO in Kenya has failed to annually propose to pay dividends on share capital and interest on non-withdrawable deposits to its members. Therefore, it is important that, the liquidity position of the deposit taking SACCOs be managed from the point of meeting the demand for loan (which is the core business of SACCOs), meeting financial obligations when they fall due and interest and dividends payouts to the SACCO membership.

Mismanagement of funds, non-remittances or delayed remittance of members funds by their employers to SACCOs, fraud, and bad loans rank among the top challenges that negatively affect deposit-taking SACCOs liquidity in Kenya (SASRA, 2018). According to Ochanda (2018), deposit taking SACCOs must maintain a high deposit ratio to be liquid enough to meet the loan demands otherwise they would not have sufficient money to lend to members and boost members confidence. Kagunda (2018) argues that there a significant number of SACCOs in Kenya with huge loans to members' applications backlog which is as a result of poor liquidity management by the SACCOs. Liquidity risk is hinged on the inability of the meets its cash obligations as they fall due.

1.1.1 Capital Structure

A firm can choose from various alternative source of funds to finance its operations and assets, both internal and external, which includes equity, debt and retained earnings and savings (Abor, 2005). The capital structure of a firm is a combination of internal and external source of funds, that a firm uses to finance its operations and assets. The trade-off theory states that the choice of a firm capital structure involves a trade-off between the benefits that accrue from use of debt and the cost of bankruptcy due to leverage level of a firm (Myers, 2001). Abor (2005) argues that capital has a cost, therefore the mix of the capital structure that a firm adopts shall depend on trade-off between the benefits and the cost of a particular source of funds as well as availability. The choice of a firm capital structure will vary from one organization to another depending on the firm size and the financial performance

Much of the existing literature on firm's financial structure revolves around the concept espoused by Myers and Majluf (1984) in their pecking-order theory arguing that firms try to utilize internal financing sources (that is, retained earnings and savings) first, followed by debt and then would issue equity as a last resort. Ahmadimousaabad, Bajuri, Jahanzeb, Karami and Rehman (2013) argue that highly profitable firms would most likely use internal financing sources to lower the level of debt. However, there have been inconclusive findings from past studies on as to whether financing decisions depend on the level of information asymmetry between the management and investors (Naranjo, Saavedra, & Verdi, 2020). Having an optimal capital structure for an organization is a goal that all organizations pursue to achieve albeit with almost no clear-cut definition of what an optimal financial structure encompasses.

Financial structure decisions are based on the mix of debt and equity that the firm in question adopts. The choice of debt or equity is dependent on cost of each financing choice, the time, and the optimal or target capital composition that a firm intends to have and the availability of such funding in the market. Firms with sub-optimal capitalization; inadequate funds or excessive funds could erode profitability and firm value, consistent with arguments by Modigliani and Miller (1958) on firms' capital structures. Modigliani and Miller (1958) argues that the discussion of possible optimal capital structure due to market perfect nature and predictability is irrelevant.

According to Aspal and Nazneen (2014) the effects, determinants and the existence of optimal capital structure of a firm, remains a matter of debate in various fields; corporate finance and governance, and has been a subject of various academic research projects all over the world. Studying the effects of Capital structure of Jordan industrial companies, Shubita and Alsawalhah (2012) argue that establishing the ideal capital structure of a firm in various economic scenarios is a difficult managerial task as it involves an analysis of several factors among them the various risks and costs of the capital structure components as well as the fact that the firm operates in unpredictable environment in regard to laws and regulations, political, economic and technological changes. The choice of the optimal capital structure of firm encompasses consideration of both the benefits and costs of each capital structure component.

The significance of financing decisions to organizations cannot be underestimated, they need to be re-evaluated frequently to be aligned with the firm's overall operational strategy (Malette, 2006). Appropriate financing decisions ensure that firms drive growth and achieve their objectives, both short term and long term, with the organization striving to fund her operations without liquidity challenges. Olaifa (2018) posits that inappropriate financial planning, limited

access to funding, and poor financial projections are some of the core aspects that lead to business failure, especially in the financial services sector. These assertions imply that it is pertinent for studies to investigate the role of a firm financial structure on the liquidity position of organizations such as the deposit taking SACCOs to ensure efficient functioning of the financial services sector by mitigating possible organization's liquidity risks.

1.1.2 Liquidity

A firm is said to be liquid when it can easily meet its financial obligations as they fall due without incurring any extra costs as well as run its operations smoothly without facing liquidity distress (Gatere, 2019). A firm liquidity position as discussed by Kamau (2009) can refer to the cash and cash equivalents held by the firm at a particular time and which can be used to settle all the organization's financial obligations that fall due at that particular period. The ease at which an organization can convert its assets into cash for purpose of settling the due financial obligations points to a healthy liquidity position of the said firm and the vice versa. A firm liquidity position is gauged by the ability of the firm to fund the increase in its assets while meeting its short-term obligations without incurring unnecessary costs or losses (CBK, 2016).

According to Gatere (2019), it is important for every organization, more so a financial institution such as a deposit taking SACCO, to engage in prudent liquidity management as it helps in controlling two critical liquidity risks; the risk of low liquidity levels and very high liquidity levels. As such, liquidity risk is the potential that an organization would not acquire the cash needed to meet its short and intermediate-term obligations. Otwoko and Maina (2021) argue that deposit taking SACCOs would be perceived as having a liquidity risk when they fail to fund their operations and the credit needs of their members when they are expected to do so. Wachira

(2018) notes that liquidity may be measured using the current ratio or acid-test ration against industry benchmarks of 2.1 and 1.5 respectively.

Deposits taking SACCOs holding too much cash, which is over liquidity, may mean the funds available are underutilized or misused by the management by investing in projects with negative net present values or excessive prerequisite consumption (Mwandia, 2014). On the other hand, under liquidity or illiquidity results from having insufficient funds to sustain operations and issue loans to members and meet other financial obligations as they fall due. Given the homogeneity of the characteristics of the members in deposit taking SACCOs, Zhu (2001) recommends that financial institutions must always strive to hold an optimum level of liquidity.

As provided for in the SASRA liquidity prudential guidelines, deposit taking SACCOs in Kenya needs to maintain a liquidity level of at least 15%, being the ratio of the SACCO cash and cash equivalents to its total call deposits (withdrawable deposits) and any other 90 days maturing liabilities, as well as core capital ratio of 8%. To further control deposits taking SACCOs spending SASRA also require them to maintain a specific investment ratio and prevent over liquidity by the SACCOs. Nguyen and Nguyen (2015) argue that any firm should be liquid enough to meet its short-term debts. For the financial institution, a healthy financial position saves the organization from reputation embarrassment which can seriously erode its depositors' confidence.

1.1.3 Capital Structure and Liquidity

There are extensive past studies on both the capital structure and liquidity. As argued by Lipson and Mortal (2009), while studying the relationship between liquidity and capital structure of

firms in the United States of America, firms that are struggling in terms of liquidity are likely to end up seeking for debt to finance its assets and operations. This position is supported by Frieder and Martell (2006) who argue that liquidity and leverage are intertwined, as liquidity position of a firm improves, the more likely the firm shall decrease its debt levels.

A company's liquidity position influences its overall performance, as prudent liquidity management ensures the organization has at its disposal to fund its operations and investments, thus it informs the need to understand the capital structure decisions so that organizations can determine an optimal mix of debt and equity. A study by Wambui and Muturi (2014) notes that 60% of the United Kingdom firms follow a financing hierarch in light of the Pecking order theory with key determinants for use of debt financing being information asymmetry, interest tax shield, and agency costs.

Al-Tally (2014) while studying the implications of leverage on listed Saudi Aribia companies argue that liquidity position of a company can be influenced by both cash inflows and outflows, and in term can determine the organization ability to borrow and thus liquidity position of an organization play a role in the choice of the organization capital structure mix. It is possible for an institution to have rich assets but poor in cash and this presents a challenge to the enterprise as it may lose out on profitable investment opportunities. For the firms to finance new projects, they would be forced to borrow or issue shares and the costs of these two financing options may be restrictive due to the existing asset structure. Illiquidity means the firm may have challenges repaying debt and thus raising capital may be costly to an extent of eroding the profits.

Decisions on the capital composition of financial institutions are a priority to the top management as they not only help meet short-term obligations and sustain operations but also facilitate long-term investment choices. Makori (2017) states that short-term financing decisions influence a company's liquidity and performance and posits that proper financing decisions ought to be aligned to the overall organizational goals to prevent the company from plunging into illiquidity or over liquidity. In his study, Makuri (2017) argues that if not carefully selected, the choice of an organization source of funds can either in the short-run or the long-run strangle an organization due to liquidity risks that may arise.

According to Kagunda (2018), as it is provided in the SASRA prudential guidelines on capital adequacy and liquidity guideless, deposits taking SACCOs in Kenya must maintain a certain percentage of liquidity levels in relation to its members' deposits and be well positioned to absorb huge liquidity shocks occasioned by abrupt deposits withdrawals by members. According to NJau (2018), as non-withdrawal member's deposits increase in a SACCO, the more the SACCO becomes exposed to liquidity risks as it results to a higher demand of loans and means more interest on deposits payout each year and thus calls for diligent liquidity management.

1.1.4 Deposits taking SACCOs in Kenya

The first cooperative society to be formed in Kenya was Lumbwa Dairy Cooperative Society, formed in 1908 and since then there has been growth in diverse forms of societies (Mwita, 2019). After Lumbwa dairy cooperative society, the other early cooperatives in Kenya were, Kenya planters' co-operative union (KPCU) formed in 1923, Kenya cooperative creameries (KCC) formed in 1925. According to Mwita (2019) the government, first interest in the cooperative

societies' movement was in 1931, when the cooperatives ordinance was enacted. The membership of the early cooperatives was drawn from the white settlers up to 1946 when Africans were allowed to join the cooperative movement after the British colonial government in Kenya saw it necessary for the Africans to start being involved in economic development of the country.

The initial cooperatives in Kenya were marketing oriented, and as Kagunda (2018) opines the government was very central in day to day running of cooperatives through the department of cooperatives until 1997 when the Cooperatives societies act was enacted transferring the day to day running of these SACCOs to the dully elected directors of the SACCOs. In 2008, the SACCO Societies act was enacted, which separated the regulation and supervision of deposit-taking SACCOs and non-deposit taking SACCOs, with the non-deposit taking SACCOs still remaining under the regulation and supervision of the department of cooperative. The SACCO Societies act of 2008, give birth to the SACCO Societies regulatory authority (SASRA), the body tasked to license, supervise and regulate deposits-taking SACCOs in Kenya (Kagunda, 2018).

Deposit-taking SACCOs are licensed to engage in quasi-banking activities through front office services activities (FOSA) where members operate ordinary savings accounts just as it is the case with commercial banks (SASRA, 2020). According to the SASRA's SACCO supervision report of 2010, there were 215 licensed deposits taking SACCOs in Kenya, with a combined total asset base of 171.3 billion Kenya shillings, and total members loans of KSH 123.4 billion. As 31st December 2020, the licensed deposits taking SACCOs in Kenya had shrunk to 175, however both the total assets and members' loans having grown in excess of 350% in the last 10 years to KSH 671.7 billion and KSH 474.8 billion respectively.

The deposit-taking SACCOs contribute immensely to economic growth and development of the country; primarily through complementing the conventional banking sector. SACCOs provide financial intermediation, create employment for more than 250,000 people in Kenya (KUSCO, 2015). Deposit taking SACCOs in Kenya account for more than 75% of the total deposits and total assets of the Sacco sector. Technological advancements such as mobile access to funds and provision of debit cards to members through the cooperative bank of Kenya enables members in these SACCOs to access financial services in real time (Njau, 2018). Comparatively, Kenya has the highest assets to gross domestic product (GDP) ratio in Africa, at 5.7% followed by Rwanda (3.0%), and Ethiopia (0.7%). The accessibility of SACCOs in Kenya to the adult population stands at 28.4%, as at 2019; being the highest in Africa.

1.2 Statement of the Problem

According to the SASRA's SACCO supervision report of 2022, the number of licensed deposits taking SACCOs in Kenya shrunk by 23% between 2010 to 2022, from 215 in the year 2010 to 176 as at 2022, among other factors, liquidity challenges hugely contributing to the revocation of the operating licenses of various SACCOs. In the year 2014, Jijenge Sacco Society limited was placed under statutory management for a period of six months due to acute liquidity challenges and three other SACCOs had their licenses not renewed for the year 2014 as result of their inability to meet their obligations to depositors and third parties (SASRA Annual report, 2014).

According to Njau (2018), despite the financial growth of SACCOs in Kenya, that is the growth in asset base and members' deposits, a majority of deposits taking SACCOs have been experiencing liquidity challenges from time to time as a result of poor investment and financing decisions. Over the years, many SACCOs in Kenya have been experiencing members' loan

applications backlog, as a result of illiquidity and this results in lack customers' confidence towards the SACCO, and has the ability to negatively affect the entire SACCOs sector (Gatere, 2019). The choice of source of funds in the SACCO sector together with mismanagement of funds has hugely contributed to liquidity challenges.

The debate on the ideal capital structure of a firm and its influence has been on-going debate since the Modigliani and Miller (1954) capital irrelevance theory. To establish a clear impact and understanding of capital structure on liquidity, various researchers all over the world have carried out different studies touching on capital structure and liquidity. Liu, Xu, Yang and Zhang (2017) argued that liquidity is vital to firms for reasons beyond its simple value, the liquidity level could act as a determinant on whether the organization can finance new projects or not. Prior studies have not come into a consensus as to the impact of capital structure on liquidity, while Liu et al., (2017) found a negative link between debt and liquidity, Anderson (2002) on the other hand found a positive link between high leverage levels and holding more liquid assets.

Locally, there have been studies focusing on the capital structure and the liquidity of firms, Gatere (2019) conducted a study on effect of capital structure on the liquidity of firms listed at the NSE focusing on retained earnings, share capital and debt in which the study concluded that the retained earnings and share capital have a positive relationship with liquidity unlike the long-term debt. This was supported by Ayot (2014) and Gathogo (2013). Shibutse, Kalunda and Achoki (2019) investigated the effect of liquidity and dividend payout on financial performance of deposit-taking SACCOs in Kenya. Mutisya (2010) sampled 25 deposit-taking SACCOs in Nairobi County and noted that to maintain optimal liquidity, the SACCOs have to rally members to make deposits and minimize reliance on debt.

How capital structure decision can affect an organization, from liquidity position, growth and value, is yet to be agreed on globally. According to Sibilkv (2007), if wrong financing mix is adopted by a firm, it may face some liquidity challenges thus the need to carefully evaluate the sources of funds available to a firm before settling on a particular one. Whereas there are many prior studies in respect to relationship between capital structure and liquidity of listed companies, there are very few done in respect to the capital structure and liquidity of deposit taking SACCOs in Kenya, thus existence of weak empirical evidence on the matter. It is for these reasons that this study was be conducted.

1.3 Research Objectives

1.3.1 General Objective

The general objective of this study was to determine the effect of capital structure on the liquidity of deposits taking SACCOs in Kenya.

1.3.2 Specific Objectives

i. To determine the effect of long-term debt on the liquidity of deposits taking SACCOs in Kenya.
ii. To determine the effect of share capital on the liquidity of deposits taking SACCOs in Kenya.
iii. To determine the effect of non-withdrawable deposits on the liquidity of deposits taking SACCOs in Kenya.

1.4 Research Question

i. What is the effect of long-term debt on the liquidity of deposits taking SACCOs in Kenya?
ii. What is the effect of share capital on the liquidity of deposits taking SACCOs in Kenya?
iii. What is the effect of non-withdrawable deposits on the liquidity of deposits taking SACCOs in Kenya?

1.5 Significance of the Study

The study results and findings will be valuable to various groups of people such as the DT-SACCO managers, researchers and scholars, government policy makers and most importantly SACCO members.

The study highlight both theoretical and empirical concepts that the management of deposit taking SACCOs can adopt to streamline their financing decisions and lower their liquidity risk. The study's findings will be vital to the top executives in SACCO management as it draws content from a wide scope, thus, capable of recommending financing strategies that will enhance optimal and sustainable business operations and financial services provision to the members in deposit-taking SACCOs in Kenya. With the findings of the study, the management of deposits taking will be adequately informed when guiding and advising the board of directors in policies relating to financing.

The study findings shall be helpful to DT-SACCO members in that, during either their annual general meeting (AGM) or annual delegates meeting (ADM), the members are informed of the various financing options available to the SACCO. Therefore, the findings of this study

shall be helpful to membership of the SACCOs whenever their approval is sought during their annual meetings to in relation to management proposals related to SACCOs financing. Thus, as a result of this study, the DT-SACCO membership in the country are well informed on the impact that each source of funds on the SACCO liquidity position.

The findings of this study will be vital to the government, especially the Sacco Societies Regulatory Authority (SASRA) as it will suggest plausible recommendations on liquidity management practices. The concepts in this study could inform policy formulation especially with regards to the requirements for financing choices available to SACCOs in light of their investment needs, funding needs for loans, and the overall operating financial services environment.

To scholars, this research contributes to the financial management body of knowledge through critiquing existing studies and contributing to existing body of knowledge in capital structure and liquidity. The research will act as a basis upon which further studies can be conducted, especially in the areas of capital structure, financing decisions, liquidity risk and the deposit-taking SACCOs in Kenya.

1.6 Study Justification

The 2008 financial crisis which manifested through the credit crunch in the real estate sector of the United States of America had a ripple effect on the liquidity of the financial market. With the rapid growth of the SACCO movement in Kenya and considering the majority investors in the deposits taking SACCOs in Kenya are the middle- and low-income earners in Kenya, who form the majority of the Kenya population, it is important to study the effect of every source of funds available to the SACCOs on their liquidity. This is so because, the core business of SACCOs is

lending money, where people pool their resources together and the same funds is used lent out to the same individuals for their own economic development, however with poor liquidity management, SACCOs are most likely to face challenges in advancing credit to their members and thus having to experience loans backlog.

With the Kenyans' wealth held in deposit taking SACCOs in the country increasing each year, and to protect these resources held in SACCOs, it becomes extremely important to study the source of funds decisions by the SACCOs and comes up with recommendations on liquidity management by the SACCOs. The study provides insights into each of the source of funds available to a deposit taking in the country and the findings can be useful if adopted in safeguarding the Kenyans' wealth held in deposit taking SACCOs

1.7 Scope of the Study

The study mainly focused on three sources of funds that a deposit taking SACCO can use financing its assets; share capital financing, long-term debt financing and the members' non-withdrawable deposits, commonly known as BOSA deposits, establishing their relationship with the liquidity position of the deposit taking SACCOs in Kenya, based on the theoretical assertions of the Modigliani and Miller theory (1958), the trade-off theory, and the agency theory. The study further focused on licensed deposit taking SACCOs in Kenya while the study period was confided to 2018 to 2022. Data was collected from audited financial statements filed with SASRA over the study period.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the theoretical and empirical literature related to the study variables with the objective of the study being to determine the effect of the capital structure on liquidity of deposits-taking SACCOs in Kenya. The chapter reviews and critiques prior work of other researchers relevant to the study to establish the knowledge gap. The chapter contains the theoretical literature, the empirical literature, the knowledge gap and the conceptual framework as well as the operationalization of the variables.

2.2 Theoretical Review

In the theoretical review, it contains theories that are applicable and relevant to the study and those that provide a basis of understanding the study variables. In particular, the Trade-off theory, Modigliani and Miller capital irrelevance theory, and the agency theory were reviewed since they support the study variables.

2.2.1 Trade-off Theory

The trade-off theory advanced by Myers (1984) talks of the trade-off between the tax benefits of debt and the cost of bankruptcy. With the debt interest being an allowable expense in respect to taxation, this comes into play when picking a source of funds. The theory states that a firm optimal capital structure can be achieved by having a mix of debt and equity that equates the benefits of debt and the leveraged risks and costs (Myers, 2001). According to Sheikh and Wang (2011), a firm will continue using debt in its capital structure but at the same time keep an eye on the disadvantages that may arise as a result of bankruptcy in relation to debt. A manager of a

firm therefore evaluates the various costs of various capital structure components and the benefits therein when choosing the optimal capital structure.

As argued by Myers (2001), use of debt in the capital structure increases the financial risk of the firm which in turn erodes the advantage that debt financing has over equity. In the debt - financing, the interest paid to the debtholders is tax deductible, which reduces the tax liability of a firm, and at the same time debt owners inject cash into the firm and thus helps improve the firm liquidity position, and this is an advantage of using debt in the capital structure. Xiaoyan (2008), argues that firm specific characteristics such as the type of assets, income levels etc. will result in the cost of debt varying from one firm to another as well as the benefits that arise from use of debt in the capital structure.

Luigi and Sorin (2009), indicates that trade-off theory is a child of Modigliani and Miller irrelevance theory of 100% debt financing. Debt financing creates a benefit to the company in that it shields the earnings of a firm from corporate tax because the interest paid to debtholders is allowed as a tax deduction and the cash injection improves the firm liquidity level. However, having a 100% debt financing would gradually increase the financial distress of a firm. The trade-off theory indicates that the most important job of the management of a firm is to strike a balance between the cost of debt financing and the benefits of debt financing.

In choosing the optimal capital structure, a firm management strike a balance in respect to the debt and equity ratios, in such a way that the final adopted capital structure is a trade-off between the benefits of debt and the costs associated with bankruptcy and financial distress from the use of debt (Myers, 2001).Therefore, the management should choose to balance between the

costs and benefits of both the debt and equity financing and evaluate various leverage options in choosing the optimal capital structure (Alkhatib, 2012).

As provided for in the Kenya income tax article 19, the interest paid to members of a SACCO non-withdrawable deposits is also an expense that is allowable. According to Njeru (2016), the SASRA regulations 2010 provides that a SACCO shall at the end of each financial year pay-out interest to members on their non-withdrawable deposits, similarly the interest on debt is a mandatory obligation unlike the dividends payment on share capital. The trade-off theory according to Njeru (2016) in respect to deposit taking SACCOs comes into play, in that it is predictable when debt principal repayment is due and by how much, however for the non-withdrawable deposits several members can give membership cessation at the same time, and as per the internal policies of the SACCO if met, they shall be refunded to the members. Therefore, as advocated by Myers (1984), the SACCO can look at the other benefits of each source of funds rather than tax benefits in respect to its disadvantages.

As used in this study, the trade-off theory explains the rationale on the choice of either debt or equity in a firm capital structure, which is based on the trade-off between the benefits, among them improvement of the firm liquidity through cash injection and costs of each source of finance. The relevance of this theory to the study was based on its assertion that a firm has to make a choice between debt and equity as its main source of financing, minding the benefits and costs of each source of finance.

2.2.2 Agency Theory

The agency theory as advocated by Jensen and Meckling (1976) is based on the hypothesis that interests of an agent and the principal are not necessary perfectly aligned, conflict of interest

brings forth agency costs. An agency relationship exists where one party, the principal, entrusts another party, an agent, with authority and responsibility to act on behalf of the principal and cater for the interests of the principal. The agency cost theory argues that a firm optimal capital structure can be achieved through reducing the agency conflict costs of the owners of the firm, the management and the debtholders in regard to reducing the agency conflict costs. This is to say the three have to compromise in order to achieve an optimal capital structure (Grigore and Stefan-Duicu, 2013).

The shareholders can opt to the use of debt so as to minimize the amount of future free cash flow at the disposal of the management, in that debt attracts mandatory payable interest and principal and thus control the liquidity levels of the firm. The main reason of a shareholder investing in a firm is to maximize on his wealth and thus in regard to the capital structure, a shareholder would be biased towards an option that ensures shareholder's wealth maximization objective of the firm. On the other hand, according to Luigi and Sorin (2009), managers in the long-run may not prefer high debt financing in that as debt increases it obliges the management to factor in the mandatory future debt repayments in the liquidity management. However, managers may prefer debt in the short-run is respect to the cash injection associated with the debt, regardless of the interest costs which may concern the owners.

However, the owners' preference of debt can also be based on the argument that debt financing ensures non-dilution of the shareholders stake in the firm, the tax shield offered by debt and the cash injection to finance the firm operations (Grigore and Stefan-Duicu, 2003). According to Luigi and Sorin (2009), debt financing attracts agency costs in regard to control costs, justification costs and the increased risk of investment demanded by the debtholders and the bankruptcy costs. Therefore, a firm will be debt financed up to a point the increase in value

as a result of debt financing equals the marginal costs of the debt (Grigore and Stefan-Duicu,2003).

However, with the unique nature of deposit taking SACCOs in Kenya, as much in other corporate, shareholders may prefer debt financing as opposed to equity to reduce the agency costs, the SACCO members as owners of the SACCO would prefer BOSA deposits to be the main source of finance in the SACCO as this would mean a higher interest paid to them at the end of the year, and would not be concerned with the immediate liquidity healthiness of the SACCO that the debt may bring. Debt reduces the sharable members' interest and as such, the members of the SACCO at all times would encourage the management to least pick debt as a source of finance (Kagunda, 2018). The SACCO managers may prefer debt in that it is predictable in terms of when the payment is due and by how much, however several members can certainly decide to cease being the members of the SACCO on which their deposits are refunded upon meeting the internal SACCO policy requirements. This in turn can expose the organization to serious liquidity problem, which in turn shall be blamed on the SACCO management.

Agency theory as used in this study is used to show the opportunism that can be exploited by the various managers in the choice of either debt or equity in the capital structure as well as the different perspective on what finances the SACCO operations and assets from the management and the members. The relevance of the theory arises from the relationships between the agents who are management, and the SACCO Members who are the principals, with the principal advocating for the source of finance mix that results into maximum benefits to the members and which may be in conflict with those of the management. The management can curb

the agency conflict by adopting liquidity risk management practices - this includes making optimal financing decisions for investments and smooth running of the enterprise

2.2.3 Modigliani and Miller Capital Structure Irrelevance Theory

The capital structure irrelevance theory as advocated by Modigliani and Miller (1958) states that under perfect market conditions, a firms' debt to equity ratio in its capital structure is irrelevant and does not affect the value of the firm. Under the assumption of perfect market conditions, both the firm and the investors can borrow and lend at the same rate and thus the value of a leveraged firm and the value of unleveraged firm is not affected by the capital structure, making the managerial decision making on the optimal capital structure of a firm irrelevant (Mwangi, 2016).

Investors and the firm are assumed to have equal access to the financial market under the perfect market condition, thus a firm in its decision on debt-to-equity ratio divides its cash flows among the various investors (Luigi and Sorin, 2009). And by dividing the firms expected cash flows, according to Brigham and Ehrhardt (2010) among the various investors has no effect on the firm value. The firm choice of source of funds so as to manage its liquidity is therefore irrelevant in the view of the cost and availability of the source of funds.

The Modigliani and Miller (1958) irrelevance theorem was advanced on the basis of two propositions. The first proposition was the arbitrage proposition; according to this proposition an investor would engage in arbitrage investment decision making. If an investor has shares in an overvalued firm, they would sell the over-valued stock and buy the shares of the undervalued firm that is identical in all aspects rather than the way both firms are financed. This would

continue until the two firms commands the same valuation, none is over or under valued (Mwangi, 2016).

The second proposition was in regard to the dividend policy the firm may adopt, which argues that the dividend policy of a firm does not affect the share price thus to a greater extension does not affect the firm value, thus irrelevant. Modigliani and miller (1963) advanced the capital structure irrelevance theory, by arguing that the firm value is not affected by the firm investment decisions and policies. Modigliani and Miller (1958) assume that the weighted average cost of capital in a perfect market will remain the same regardless of the changes in the capital structure of the firm. This is to say; the capital structure of a firm is irrelevant in the respect of the firm value.

The cost of capital in a leveraged firm is equal to the cost of equity of unleveraged firm, because the use of cheaper debt will be offset by the increase in the risk of using more debt (Mwangi, 2016). The theory assumes that a deposit taking SACCO in Kenya assess to both internal and external source of finances is seamless and there exist a perfect financial market with free flow of information. The choice of either the long-term debt, non-withdrawable deposits, share capital or any other source of finance being inconsequential, and thus the SACCO can opt for any source of funds to manage its liquidity.

However, empirical studies criticize the Modigliani and Miller irrelevance theory in that is based on the assumption of perfect market conditions, and simply it is very difficult to have a situation of perfect market condition. The Kenya financial market is not perfect and there is no free flow of information in the country. The theory is relevant to the study in the in that it talks of how capital structure mix, the proportion of debt and equity may have no bearing on liquidity of

SACCOs in the Kenya. When long-term debt is preferred to internal sources of finance, or members' deposits, the decision has no bearing on the liquidity of the deposits taking SACCOs in Kenya and that liquidity is affected by other factors.

2.3 Empirical Review

Past studies have been conducted locally and internationally regarding the choice of the optimal capital structure of a firm and what influences the capital structure decision making. This section reviews the past empirical literature that related to the study.

2.3.1 Long-term Debt and Liquidity

Onyango (2016) conducted a study titled the effects of external financing on the growth of SACCO's in Nairobi County. The author adopted a descriptive research design where both primary and secondary data was collected from licensed SACCOs in Nairobi and had actively been operational between 2010 and 2014. The study noted that SACCOs access external finances and invest in profitable business opportunities; when funds are effectively invested, external long-term debt could be a catalyst for growth and improved performance. The study points out that deposit-taking SACCOs in Kenya are seeking external loans from commercial banks to improve their liquidity ratios and levels so to finance their core business which is issuance of credit to their members.

The trade-off theory according to Myers (2003) states that the optimal debt level in a firm capital structure is heavily influenced by the tax shield benefit together liquidity needs of a firm at a particular period of time. In their study titled Taxes and Financing decisions, Lewellen and Lewellen (2005) while studying US firms argued that there is a positive correlation between a firm tax shield benefits and the firm liquidity given that an increase in leverage results in the

after-tax cash outflows decreasing, this in turns helps improve the liquidity position of the firm. This is also supported by the virtue of debt at the very initial point implies cash injection to the firm, therefore it helps enhance the liquidity position of the organization.

Anderson (2002) in his study titled the capital structure and liquidity of Belgian and United Kingdom (UK) companies argues that the firms with more liquid assets are more likely to lean towards high level of debt financing. Using panel data sets of Belgian and UK firms, the study found out that firms with more liquid assets prefer long-term financing as opposed to short-term financing. With more liquid assets, which implies a liquid firm, and long- term debt financing, the firm can cope in times of low earnings in that the debt obligations are well spread out over a certain period. Firm's preference of long-term debt while still having highly liquid assets is based on a precautionary motive (Anderson, 2002).

While studying firms listed at the Bursa Malaysia Securities Berhad market, Suhaila, Kila, Mahmood and Mansor (2008) established a negative relationship between debt level and its liquidity position. The findings were however a complete contract with Sibilkov (2009) who argues that there is a positive relationship between liquidity and the capital structure of firms in the US, especially the secured long-term debts. Gill, Nahum and Neil (2011) support this argument by Sibilkov (2009) by agreeing that there is a positive relationship between long-term debt financing and liquidity of service industries in the US by the virtue that the debt principal and interest repayments are spread over a long period.

Saleh and Abbu Affia investigated the effect of credit risk, liquidity risk and bank capital on bank profitability using evidence from Amman Stock Exchange. Data was collected from 13 commercial banks over a period ranging from 2010 to 2018. The study used the ratio of liquid

assets to total assets as the proxy for liquidity risk based on the study by Abbas et al. (2019) and Kim and Sohn (2017). The authors noted that the need for external funding diminishes when the institution has a higher equity to assets ratio. In the same breath, banks in liquidity challenges would most likely turn to external funding to compensate and meet funding obligations. Liquidity risk, if not well managed, could lead to reduced profits thus necessitating the need to choose suitable funding sources for the organizations in question

Studying the determinants of liquidity on banks in developing and less developed countries, Al-Harbi (2017) established that the firm liquidity is negatively affected by the firm leverage levels. In his study titled Determinants of banks liquidity; evidence from IOC countries, Al-Habri (2017) used ordinary-least square fixed effect model on unbalanced data set of all the 686 conventional banks in Islamic countries between 1989-2008 and indicates that a firm liquidity position is negatively related with the long-term debt. Agbada and Osuji (2013) while studying the efficiency of liquidity management in Nigeria banking sector established that liquidity risks and debt related financial distress risks are positively related. The risk that a firm shall fail to meet its debt obligations when they fall due is a possibility to any organization if it is underperforming. Fola (2015) established that Ethiopia banks leverage levels is positively related to the liquidity risks facing the banks.

Gatere (2019) in the study titled the effect of capital structure on liquidity of commercial firms listed at the Nairobi Securities Exchange. The study considered both the long-term debt and the share capital effect on the liquidity position of companies using both the quick ratio and the current ratio as the liquidity position measurement. The study found that both the shareholders' equity and debt together with the firm size have immense influence on the liquidity of firms listed at the NSE. Githaka (2017) investigated the factors influencing the liquidity of

SACCOs in the study titled factors influencing the Liquidity of SACCOs in Kirinyaga county. A cross-sectional survey research design was used where a sample of 18 licensed SACCOs in the county were analyzed and results showed that liquidity management, net cash flows, credit lending and investment in non-core business and liquidity of SACCOs to be positively correlated.

2.3.2 Share Capital and Liquidity

As per the SASRA SACCO supervision report of 2022, the shareholders' funds stood at 15.59% of the total assets by the close of the year 2022. The cost of equity financing in respect to the cost of debt plays a key role in the optimal capital structure of a firm decision making. Goh, Lee, Lim and Sherlin (2016) established in their study that the cost of equity capital in terms of the expected cash outflows is lower as compared to debt financing. This is to say that share capital exposes the firm to low liquidity risk as compared to debt.

Passmore, Wayne, and Judith (2020) investigated the links among investor demands for safety, bank share capital, and liquidity management among U.S banks. The authors developed a model of a bank's optimal financing decision, where the bank negotiates with both safety-driven short-term bondholders and risk-taking long-term bondholders. The researchers used a descriptive research design to determine that investor demands for safety to create a negative link between the banks' capital decisions and short-term funding. The study also showed negative association between share capital and common measures of bank liquidity. The results show that safety concerns of bank debt investors may underlie capital-liquidity financing decisions and that a bank's share of collateralized short-term debt could be a more robust measure of bank liquidity.

Njoroge (2013) in the study titled determinants of efficiency of savings and credit cooperative societies in Nairobi County examines the efficiency members' deposits saving in SACCOs. Correlation research design was adopted and secondary data collected among 56 SACCOS in Nairobi County from 2010 to 2012. The study found that efficiency of SACCOs was dependent on size, credit risk, management quality and capital. Since the study had collected panel data there was need for consideration of data over long period to eradicate challenges associated with small panels.

Kochubey & Kowalczyk (2014) investigated the share capital, liquidity risk in U.S commercial banks between 2001 and 2009. The authors noted that banks simultaneously coordinate short adjustments in capital, risk, and liquidity. Given that the study was conducted before, during, and after the financial crisis, findings indicated that during the pre-crisis, short-term adjustments in bank capital inversely influenced short-term changes in bank risk and vice versa. In the financial crisis period, lower risk implied higher capital though having higher capital induces more risk-taking. The overall finding is that banks increase liquidity ratios when their capital ratios reduce and lower their capital when liquidity increases. This outcome is consistent with the recommendation that financial institutions need to incorporate the liquidity ratios and recommended capital requirements in their operations.

Acosta-Smith, Arnould, Minolas and Vo (2019) while studying the bank of England in the study titled capital and liquidity interaction in the banking, established that an increase in banks share capital results in less liquidity position transformation as compared to other sources of funds. Share capital subscription in most cases results in less cash injection to the firm in comparison to other source of funds. The finding of the study however pointed to a positive relationship between capital and the liquidity position of a firm. This is due to the fact that that

capital injection to a firm result to cash injection and unlike long-term debts, the firms are not obligated to make and future payments to capital holders.

Onyango (2018) in the study titled effect of capital adequacy on the performance of deposit taking SACCOs in Meru County, studied SACCOs in Meru county for the period 2010 to 2017 and adopted panel regression analysis, the results showed that the ratio of core capital to total deposits had a negative but statistically significant effect on the performance of deposit-taking SACCOs. SASRA recommends that SACCOs need to maintain core capital of not less than ten million shillings or at least not less than 10% of its total assets or not less than 8% of its total deposits. These requirements ensure that the deposit taking SACCOs remain stable, keep the liquidity risk low, and run their operations efficiently (SASRA, 2013). The findings in this study indicate that while maintaining higher core capital as recommended, it could limit the institutions capacity to advance loans to members, an aspect that could have increased overall firm performance.

In the study titled 'A study of the influence of corporate tax rates on the capital structure of quoted companies at the NSE', Mutsotso (2007) argued that unlike debt, share capital investment is not refundable to the investors, but they are rather paid periodic dividends depending on the performance of the firm. The study adopted descriptive research design and studied all the NSE listed companies between 1990 to 2003. The study found out that, the payments in form of dividends made to share capital investors are not mandatory and the invested cash cannot be refunded to the investors, and in turn helps improve a firm liquidity position. Therefore, there is a positive relation between share capital and the liquidity position of a firm (Mutsotso, 2007).

The cost of equity however, plays a role in determining the debt-equity ratios in firm's capital structure as well as the availability of share capital in the financial market (Mutwiri, 2015). For investors to invest in a firm share capital, the firm has to be of reputable financial standing, and thus an organization cannot use share capital to fix liquidity challenges quickly as compared to debt. The organization can use the Share capital as a source of funds and manage its liquid in that it is not a must for an organization to pay dividends on share capital and the share capital is not refundable.

2.3.3 Non-Withdrawable deposits and Liquidity

Leonello, Mendiciano, Penetti & Porcellacchia (2022) in their study titled, Savings efficiency and nature of bank runs in European union, argues that non-withdrawable deposits enhance an institution liquidity position due to the fact it's a cash injection. They studied the level of deposits as a source of bank fragility and argues customers' deposits results to low fragility of banks as a result of liquidity. Dewi, Febrian, Effendi & Anwar (2020) while studying financial institutions in Indonesian observed that commercial banks are moving towards customers' deposits as opposed to debt as a source of funds. The non-withdrawable deposits held at financial institutions lasts longer as opposed to call deposits and thus in their study, they argue that commercial banks deploy non-withdrawable deposits as a tool that enhances the liquidity position.

In Ghana, Baido, Bagina & Tobazza (2019) argue that non-withdrawable deposits form a crucial source of funds to financial institutions due to the predictability of the funds withdrawal by the customers. In their study titled effects of customer deposits on performance of banks in Ghana, they established that non-withdrawable deposits improve a financial institution liquidity

position and in turn such an institution continue offering loans to its customers. Manyeruke (2018) argue that in Zimbabwe, mobilization of deposits from members by commercial banks is on a high as the commercial banks view customers' deposits as a cheap source of funds. Thus financial institutions opt for cheaper sources of funds, in these case customers' deposits, in enhancing their liquidity position.

Musasiah (2012) investigated the effect of members' deposits on lending of SACCOs in Nairobi County between 2007 and 2011. The objective of the study was to ascertain whether the deposits level impacted on SACCOs lending. The author notes that deposit-taking SACCOs collect deposits from members, which enables them to gain a cheaper and more stable source of capital. The SACCOs uses this tool to enhance their liquidity position. The SACCOs in return also pays interest on these deposits at the end of every year, with majority of deposits-taking SACCOs in Kenya paying interests on non-withdrawable deposits at rate that is higher than the market rate (SASRA, 2020). A study by Upper (2006) developed a contagion model which focused on interbank loans and noted that banks become insolvent due to defaults by their counterparts. The author notes that contagion may take the form of deposit withdrawals due to fears that banks will not be able to meet their liabilities.

Njeru (2016) investigated the effect of liquidity management on financial performance of deposit taking SACCOs in Kenya and sampled out 30 licensed SACCOs. Descriptive survey was used and the results showed that SACCOs apply a multiplier of either three or four on a member's deposits to establish the limit of loan the member can be advanced, an increase in non-withdrawable deposits implies an increase in the limit. The author notes that non-withdrawable deposits can be used as collateral and are not refundable unless one ceases being a member of the said SACCO. The need to have the non-withdrawable deposits, also called BOSA deposits, is an

imperative financing decision that is consistent with the assertions of the pecking order theory – this is part of the equity and internal financing that SACCOs utilize before seeking external financing.

While investigating the link between capital structure and the financial performance of deposit taking SACCOs in Kenya, Mwatu (2018) argued that the members' non-withdrawable deposits held by the SACCO constitute part of the debt in that these deposits are eventually are refunded to member's when they cease being a member. The distinguishing factor between external debt and non-withdrawable deposits is that unlike debt which has interest terms, the BOSA deposits have no interest terms (Mwatu, 2018). The author used a causal research design and collected data from 40 licensed SACCOs that were operational between 2012 and 2016. The author found a negative link between debt and financial performance. Liquidity was noted to have a negative but weak relationship BOSA deposits. The study recommended reduction in the amount of debt in the capital structure as they reduce profitability.

Kagunda (2018) in the study titled liquidity management practices on the financial performance of SACCOs in Nairobi recommends that deposits taking SACCOs should strive to maintain the higher liquidity ratios than that is required by SASRA. The study employed descriptive and inferential statistics to analyze the quantitate data of the 41 SACCOs under study and found out that a firm leverage levels affects its liquidity ratios. This is so because, as much the members BOSA deposits are not on call, the same can be refunded when a member ceases to be the member of the SACCOs. To sabotage a SACCO, if several members decide to give notice to cease being the SACCO members, their non-withdrawable deposits refunds can expose the SACCO to liquidity distress.

The deposit taking SACCOs rely on member deposits, savings, and external borrowings to meet the demand for loans. Non-withdrawable deposits are used as a multiplier in determining a member loan, thus this leads to an increase in required loan by members. However, SASRA restricts deposit-taking SACCOs from advancing loans to a single member that exceeds the 10 % of the core capital and thus this may help mitigate the liquidity risk that arise from the increased loan ability to members due to increase in non-withdrawable deposits. The aim is to maintain a certain liquidity level that would enable the SACCOs to grant loans to members as and when they need the funds. Also, as per SASRA regulations, no single individual should have deposits (call deposits and non-withdrawable deposits) that exceeds 25% of the SACCO institutional capital, this insulates the SACCOs from liquidity risk in the event that member ceases to me a member of the SACCO and requires their deposits to be refunded (Njeru, 2016).

2.4 Summary of Literature

The study relies on multiple theories whose assertions are intended to solidify the findings on the relationships between independent and dependent variables. For instance, the static trade-off theory posits that utilization of debt in financing a firm's investments or operations is preferred due to the tax liability shield which enhances the firm's liquidity position. However, authors such as Kim (1974) and Myers (1984) hold a contrary view; that heavy reliance on debt could reduce a firm's profitability due to limited growth prospects and may negatively impact liquidity. The trade-off theory suggests firms selects between equity and debt by off-setting the debts' tax benefits with its associated benefits costs (Ahmadimousaabad et al., 2013).

Agency theory has immense contribution in this study as it explains the relationship that the management has with the members of the deposit-taking SACCOs. Decisions on how to

finance operations and profitable investments are done by the management but the interests of the members have to be preserved; to ensure members get loans when they need them, in which the SACCOs need to be operating at an optimal liquidity level. However, in some cases, the decisions may not align well with the interests of the members as Jensen and Meckling (1976) note. While Onyango (2016) established that SACCOs in Kenya seek external loans to finance their most lucrative business activity which is lending loans to members, it ends up exposing the SACCOs into future liquidity crisis.

In his study, Anderson (2002) argues there is a relationship between a firm's debt level and its liquidity, with the firm getting immediate cash injection from debt owners. Sibilkov (2009) as well as Gill, Nahum and Neil (2011) also found a positive and significant relationship between debt and liquidity. However, Kila et al., (2008) argues that the relation between debt and liquidity is a negative one. This position is supported by Lewellen and Lewellen (2005) who argues that debt increases a firm liquidity risks due to the financial obligated terms that are attached to a loan. In Africa, Fola (2015) also established a negative relationship between debt and liquidity of Ethiopian banks.

Kochubey & Kowalczyk (2014) established an insignificant relationship between share capital and liquidity simply because of the percentage of the share capital in an organization's capital structure and that unlike debt, share capital is not refundable and the dividends payment is not a mandatory obligation on part of the organization especially in case of ordinary stocks. This was supported by Acosta-Smith et al., (2019) as well as Mugenyah (2015) who studied the relationship between shareholders' funds and liquidity of NSE listed firms.

Views on the core capital or non-withdrawable deposits are also mixed with Musasiah (2012) noting that a SACCO's deposit level determines the extent of loans that can be issued to members and that they are a cheaper source of capital. Muthoni (2013) found external loans as well as members' non-withdrawable BOSA deposits affects the liquidity of the deposits taking SACCOs negatively. However, Njeru (2016) argues that the high loan uptake by members predisposes the deposit-taking SACCOs to lasting liquidity crises. With debt repayment time and amount known, it is difficult to predict when a member may decide to cease being a member of the SACCO, upon which their non-withdrawable deposits must be refunded, as it is also unpredictable to determine how many members can give notice of membership cessation, these challenges mean that the institutions have to manage their liquidity well by having an optimal level of debt and equity of which the non-withdrawable deposits are important.

2.5 Knowledge Gap

From the review of the relevant empirical literature, it is evident that past studies provide weak empirical evidence in respect to the relationship between Deposits taking SACCOs capital structure and liquidity. The literature reviewed in this study provides immense information on the performance of deposit-taking SACCOs and this is influenced by diverse factors, including liquidity. Studies on the capital structure are also documented albeit with inconsistent and contradicting findings on whether there is an optimal level of debt and capital to use or not. Some authors such as Anderson (2002) state that external debt has a positive impact on liquidity of an organization, a position opposed by Lewellen and Lewellen (2005) who argues leverage exposes an organization to liquidity challenges. It follows that the decisions undertaken by the management are underpinned by the objectives at hand. The firms' objectives may entail but not

limited to meeting loaning needs, to invest in high growth projects, and meet the regulatory requirements while sustaining business operations.

Additionally, the reviewed studies fail to provide strong empirical evidence between non-withdrawable deposits and the SACCOs share capital in relation to their liquidity. The focus of previous studies has mostly been on capital structure and its composition leaving out aspects of core capital and non-withdrawable deposits which have a considerable influence on the financing decisions undertaken by organizations. Therefore, this study seeks to fill this gap by investigating the relationship between the capital structure and liquidity, mainly concentrating on long-term debt, share capital and non-withdrawable deposits.

2.6 Conceptual Framework

Conceptual framework involves the assumptions, beliefs and explanations that support the study, the researcher conceptualizes the relationship that exists between the dependent and the independent variables. The conceptual framework explains the main factors or variables and their relationships. In the study the liquidity is considered as the dependent variable, while the long-term debt, share capital and the non-withdrawable deposits components of the capital structure are the independent variables. The conceptual framework therefore represents a set of ideas that explain the relationship between the dependent variable and the independent variables to provide a connection between the study objectives, literature and the methodology.

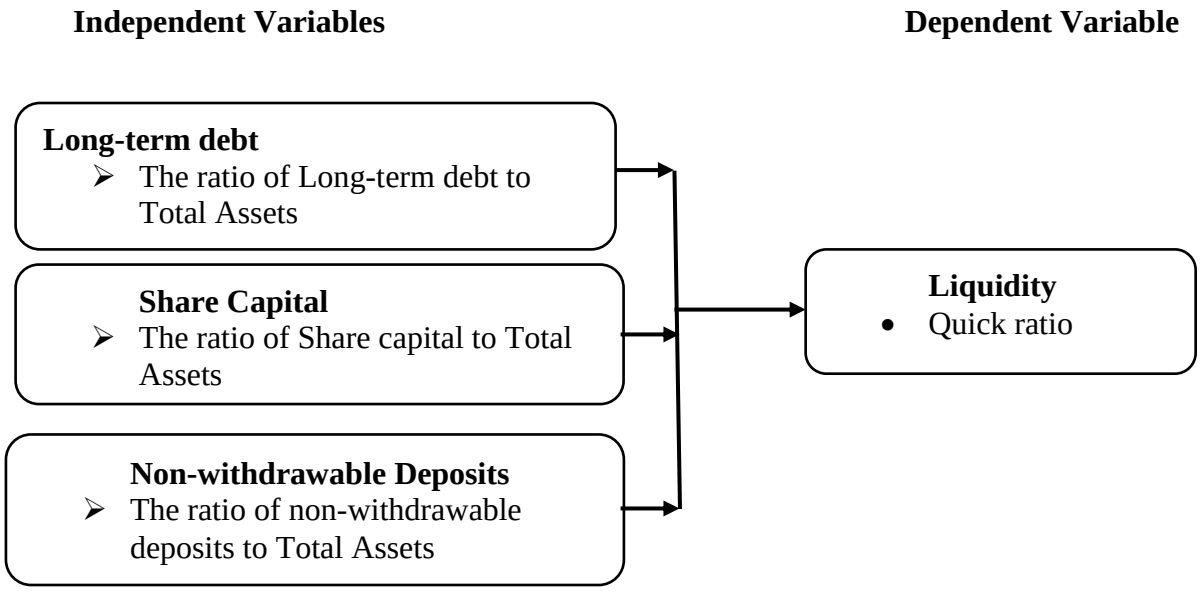

FIGURE 2.1
Conceptual Framework

2.7 Operationalization of Variables

TABLE 2.1
Operationalization of Variables

Variable	Indicators	Measurement
Independent		
Long-term Debt	Long-term Debt	Long-term Debt/total assets
Share Capital	Share Capital	Share Capital/Total assets
Non-withdrawable Deposits	Non-withdrawable Deposits	Non-withdrawable Deposits/Total assets
Dependent		
Liquidity	Quick Ratio	(Cash and cash equivalents +Marketable securities + Accounts Receivable)/Current liabilities

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology and research design. The chapter, discusses the research design, the targeted population, sample design, data collection methods and the data processing and analysis techniques.

3.2 Research Design

Research design establishes the foundation of the entire research work as it explains what the researcher will do in carrying out the study. Descriptive research design was adopted for the study. According to Mugenda and Mugenda (2003) research design refers to the strategy adopted by the research to obtain data and information that will help in answering the research question to achieve the study objectives. It is the strategy adopted to establish the relationship between the different variables of the study with the study questions and objectives.

To carry out tests that establish conclusively and the significance of the association between the study variables, descriptive research is appropriately applicable (Creswell, 2009). Descriptive research is useful in this case as it enables conclusive establishment of the association that exist between the study variables and the design is a very useful when carrying out quantitative analysis, as it is the case of the study. The descriptive research design advocates for measurement of variables and thus will be helpful in establishing the relationship between the study variables, it provides a description of the affairs as they are (Mugenda and Mugenda, 2003).

3.3 Targeted Population

The study targeted population was the deposits-taking SACCOs in Kenya that had been licensed by SASRA and operating between 2018 to 2022. As at 31st December 2022, SASRA had licensed 176 SACCOs, categorized in 3 tiers, (appendix II). The deposits-taking SACCOs in Kenya are public in nature with open membership to all Kenyans and are legally required after the end of their financial year to submit audited financial reports to SASRA. According to SASRA SACCO supervision report 2017, 188 SACCOs had been licensed to operate deposits taking business in Kenya, with 12 operating under restricted license. Prior years had varying number of licensed SACCOS, however from 2018 to 2021, 175 SACCOs were licensed and submitted the audited accounts to SASRA annually while in the year 2022, 1 out of 176 licensed SACCOs failed to submit audited accounts. Therefore, studying SACCOs between 2018-2022 ensured there would no data gaps as it is only in this period equal number of SACCOs submitting their audited accounts to SASRA. The population of a study must have common characteristics conforming to given characteristics (Kothari, 2004).

3.4 Sample size and Sampling Technique

The study only focused on deposits taking SACCOs operating between the year 2018 to 2022 so as to avoid data gaps since not all the 176 licensed as deposits taking SACCOs by December 2022 had been operating since 2011. For this study, only those SACCOs that had valid SASRA license in all the years between 2018 to 2022 were eligible for the study in which a simple random sample of 40 deposit taking SACCOs was taken. A population sample is necessary where the targeted population size is big and unmanageable, or researcher is faced with time and budget constraints (Mugenda & Mugenda, 2012). According to Kothari (2014), a representative

sample size should be equivalent to 10-30% of the target population. The study sample size of 40 represents 22.9 % of the study target population which would be an adequately be representation of the total study population (175 licensed deposit taking SACCOs).

3.5 Data Collection

The study used secondary data sourced from the deposit taking SACCOs audited financial reports, which was obtained from the SACCOs' websites and offices, SASRA website and website and from the SASRA SACCO annual supervision reports. Secondary data and more so in this study, the use of audited financial statements enhanced the credibility of the data as secondary data eliminates the aspect of biasness (Hui and Phillips, 2014).

3.6 Data Collection Instrument

Data was collected from secondary sources using a data collection sheet (appendix I). The data collection sheet is divided into various sections, which each section meant to capture data that will be used to measure a specific variable for the years 2018 to 2022. The sections in data collection sheet captures indicators used to measure liquidity, long-term debt, share capital and non-withdrawable deposits respectively.

3.7 Data Processing and Analysis

Secondary data that was mined from the audited financial reports of the deposits taking SACCOs in Kenya for the period 2018 to 2022 was used in this study. After the secondary data clean-up, the panel data was then analyzed with the help of the computer statistical computer package, STATA 12, to come up with mathematical models that was used to establish the association between the research variables and objectives and the study hypothesis to enable answer the

study questions. To capture the time and the cross-sectional characteristics of the secondary data collected so as to establish the relationship between the independent and dependent variables in the study, the panel data analysis model was adopted for the study, with the significance of the model tested using the analysis of variance (ANOVA) which was statistically significant in the 0.05 level.

The descriptive statistics; minimum, maximum, mean and the standard deviation were used to quantitatively describe the study variables. Diagnostic tests were performed to choose the appropriate model for analysis; the pooled OLS, random effect and the fixed effect model. Also, diagnostic tests; correlation analysis and multi collinearity analysis were carried out to establish the appropriateness of the study variables is predicting the study analysis model.

The general empirical model was

$$Y_{it} = \alpha + X'_{it}\,\beta + \mu_{it} \quad \text{(i)}$$

Where; Y_{it} is the SACCO *i* liquidity (dependent variable) at time *t*, α the unknown intercept of each entity, X*it* being the explanatory variables (long-term debt, share capital and non-withdrawable deposits) and β are the coefficients of the explanatory variables and μ is the error term.

The expanded panel data analysis models equation that was adopted was as follows;

$$QR_{it} = \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \alpha_i + \mu_{it} \quad \text{(ii)}$$

Where;

QR*it* is the liquidity of deposit taking SACCO *i* at time *t* measured by quick ratio.

α_i = The unknown intercept of each entity

β_i = coefficients of the independent variable

X_1 = Long-term debt of SACCO *i* at time *t*

X_2 = Share Capital of SACCO *i* at time *t*

X_3 = non-withdrawal deposits of SACCO *i* at time *t*

μ_{it} = The error term

3.8 Diagnostic Tests

Various diagnostic tests were carried out on the panel data to determine the appropriateness of the analysis model; normality test, Hausman test, autocorrelation, heteroskedasticty, and multi collinearity test.

3.8.1 Normality Test

Jarque Berra normality tests examined normality of the data. The null hypothesis of the Jarque Berra test is that the data is normally distributed. If P< 0.05, accept the null hypothesis.

$H_{01:}$ The variables are normally distributed

3.8.2 Hausman Test

Hausman test was carried out to establish if to estimate fixed effects model or the random effects model. The null hypothesis is that the preferred model is the random effect. Using the Chi-square

test if the probability is greater than 0.05 reject the null hypothesis. P> 0.05, we do not reject the null hypothesis.

H_0: Preferred model is random effect

3.8.3 Autocorrelation Test

Wooldridge serial correlation tests was used to carry out the autocorrelation test that examined presence of first order serial correlation. It is an appropriate test for testing the null hypothesis (absence of autocorrelation) against the alternate hypothesis (presence of autocorrelation). If its p value is greater than 0.05, then there is no first order serial correlation.

H_{01}: There is no autocorrelation

3.8.4 Heteroskedasticity

Heteroskedasticity examines the uniformity of variance of error term across the variables under examination. In the study, Modified Wald test was applied with a null hypothesis of uniform variance against an alternative of non-uniform variance. For p value < 0.05, then regression model with robust standard errors.

H_{01}: There is no heteroskedasticity

3.8.5 Multi Collinearity

Multi collinearity is a phenomenon where there is inter-correlation among the explanatory variables, which would be a violation of the assumptions of OLS (Alin, 2010). Variance inflation factor (VIF) which measures by how much the variance have been inflated was used to test the for multi collinearity among the explanatory variables. A rule of the thumb was applied to

interpret the VIF factor, if VIF; is equal to 1 there is no correlation, if between 1 to 5 it is moderately correlated and if greater than 5 it is highly correlated.

CHAPTER FOUR: FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter presents findings of the study after analysis of secondary data that was gathered on capital structure and liquidity among the deposits -taking SACCOs in Kenya. The chapter provides information on descriptive data analysis, diagnostic analysis, panel data analysis and discussion of the findings. Descriptive statistics presents an overview of secondary data collected on four variables, namely; liquidity, long term debt, share capital and non-withdrawable deposits. The chapter presents study findings, summarized in figures and tables. The study applied measures of central tendency and dispersion. Inferential statistics adopted were correlation for examination of the strength of the effect of capital structure on liquidity and regression analysis. Prior to regression modelling diagnostic tests that include normality, autocorrelation, heteroskedasticity, multicollinearity and Hausman test were carried out.

4.2 Liquidity Trend Analysis

Pictorial presentation in Figure 4.1 indicates that there was no constant trend of liquidity throughout the period under observation. For instance, in 2018, there was an upward and downward trend, while in 2021, the trend recorded the highest variation while in 2020 the highest liquidity was noted in DT SACCO.

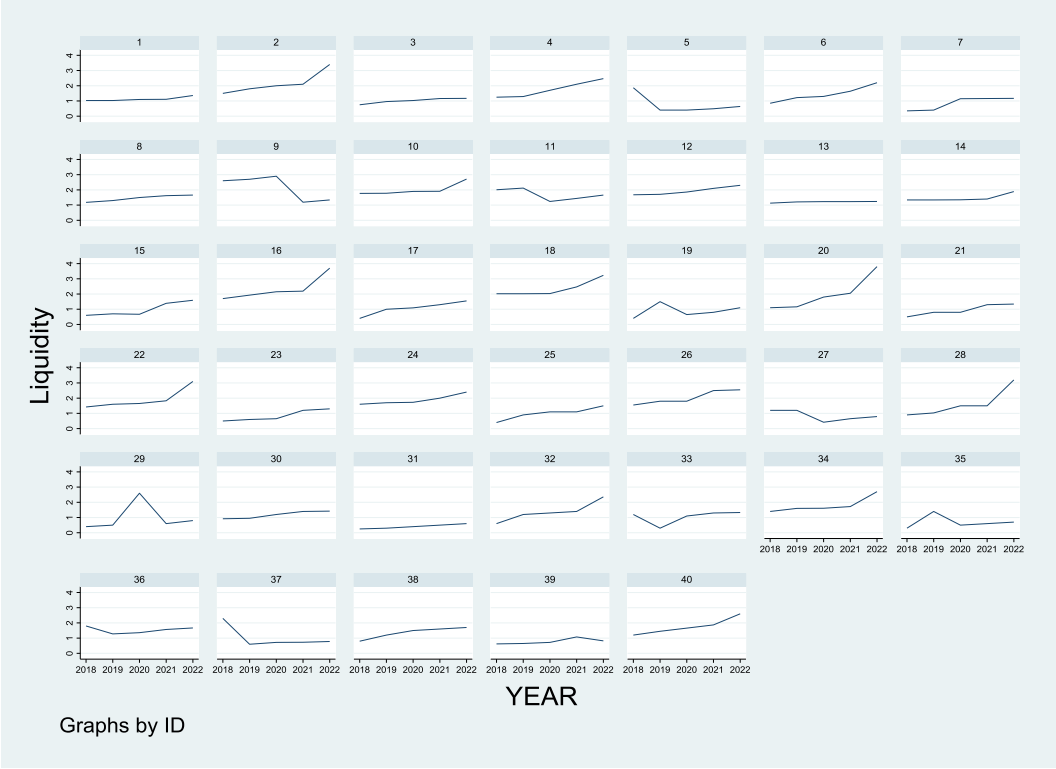

FIGURE 4.1
Line Graph

The overlay graph indicates that there was a co-movement of liquidity among DT SACCOs under observation. From the findings there were no outliers, thus none of data observation was dropped.

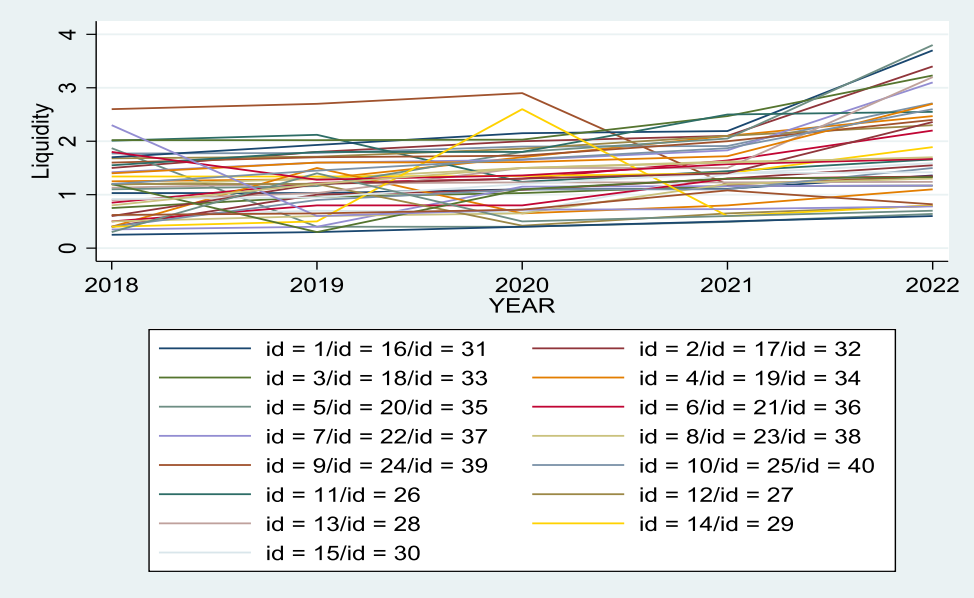

FIGURE 4.2
Overlay Graph

4.3 Descriptive Statistics

Descriptive analysis was done on the data relating to the study variables and presented in the table below. The analysis of data began with the exploration of the data and descriptive statistics relating to liquidity, long term debt, share capital, and SACCO members' non-withdrawable deposits of the deposits taking SACCOs in Kenya that were sampled over the 5-year chosen study period (2018-2022).

The descriptive statics results as shown in table 4.1, produced the mean, maximum, minimum of the liquidity, long-term debt, share capital and non-withdrawable deposits of the sampled deposits taking SACCOs in Kenya for the period 2018 to 2022. The results show that the average liquidity level was 1.3926, this indicates that most deposit taking (DT) SACCOs had current ratio below recommended thresh-hold of 2:1 and may struggle to meet their financial obligations as they fall due though there were some which had a ratio higher than recommended.

Those that exceeded the ratio of 2:1 indicates that there were holding excessive current assets in comparison to current liabilities and their working capital models may have been detrimental to their operational stability and or their profitability. Surprisingly, the minimum liquidity was 0.25, this indicates that current liabilities were ten times current assets, this calls for reevaluation of the current assets to minimize reliance on current liabilities since they may increase odds of respective DT SACCO suffering from financial distress due to inability to service short term debts as they fall due.

The average long-term debt to total assets of DT SACCOs was 0.1193, with a minimum of 0.0052 and maximum of 0.4272, this indicates that at most 42.72% of the financial needs of DT SACCOs are met through external borrowing. The mean share capital was 50.16% of totals while non withdrawable deposits constituted 36.98% of the total assets. From the findings, with a mean of 36.98% it can be deducted that most DT SACCOs, heavily rely on members' non withdrawable deposits as a source of funds as indicated in table 4.1. With all deposited taking SACCOs having continuously paid interest on non-withdrawable deposits for the last 5 years at a late higher than market rate as per SASRA SACCO supervisor report 2020, of the three independent variables, DT SACCOs liquidity risk exposure can be attributed more to the members' non-withdrawable deposits.

TABLE 4.1
Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations	
Liquidity	Overall	1.3926	0.6862	.250	3.8	N =	200
	Between		0.5126	.41	2.354	n =	40
	Within		.4618	.4366	3.2107	T =	5
Long-term debt	Overall	0.1193	.1055	.0052	.4272	N =	200
	Between		.0637	.03473	.2474	n =	40
	Within		.0845	.08654	.4003	T =	5
Share capital	Overall	0.5016	.1264	.0648	.7943	N =	200
	Between		.0884	.2083	.6364	n =	40
	Within		.0912	.0992	.8834	T =	5
Non-withdrawable deposits	Overall	0.3698	.0719	.2102	.5843	N =	200
	Between		.0449	.2766	.4424	n =	40
	Within		.0565	.2187	.5115	T =	5

4.3.2 Correlation Analysis

Correlation analysis was carried out to establish if there is any association between two variables of the study. To ascertain the linear relationship among the variables in this study, a correlation analysis was done. A correlation Value of 0 shows no association between the variables as that of ± 1 shows either a positive or strong association between the variables. Product moment correlation coefficient was applied to examine the strength of the effect of capital structure on liquidity of DT SACCOs. Results in Table 4.2, indicate that, there was a positive and significant effect of long-term debt on liquidity (rho = 0.648, p value <0.05). Share capital has significant and positive effect on liquidity (rho = 0.403, p value < 0.05). Non-withdrawable deposits have significant and positive effect on liquidity (rho = 0.562, p value <0.05).

TABLE 4.2
Correlation Analysis

	liquidity	long term debt	Share capital	Non-withdrawable deposit
liquidity	1			
Long term debt	0.648	1		
	0.000			
Share capital	0.403	0.048	1	
	0.000	-0.499		
Non-withdrawable deposit	0.562	0.176	0.192	1
	0.000	-0.013	-0.006	

4.4 Diagnostic Tests

4.4.1 Normality Test

An examination of the normality tests indicates that share capital, long term debt and non-withdrawable funds were not normally distributed since their respective Jarque Berra p values were less than 0.05 while liquidity was normally distributed with Jarque-Bera p value of 0.47 (p> 0.05)

TABLE 4.3
Normality Test

	Liquidity	Longterm Debt	Share Capital	Non-Withdrawable Deposit
Jarque-Bera	3.5788	27.6468	59.3034	63.6260
Probability	0.167	0.00	0.00	0.00

4.4.2 Multicollinearity Test

Multicollinearity tests was carried out to evaluate the degree of association among explanatory variables. Tolerance limits and variance inflation factors were adopted. The researcher used Variance inflation factor (VIF) of predictor variables to test for the existence of multi collinearity

in the regression analysis (the correlation between the predictors). The VIF assesses the extent of variance of the estimated regression coefficients relative to when these variables do not have a linear relationship. According to Alin (2010), if VIF > 10, it indicates the presence of multi collinearity The findings as indicated in Table 4.4, indicates that highest VIF was 1.07 and below 5, thus there was no multicollinearity. Consequently, no need for model specification or dropping of any variables.

TABLE 4.4
Multicollinearity

	Collinearity Statistics	
	Tolerance	**VIF**
Long-term debt	0.932	1.073
Share capital	0.958	1.043
Non withdrawable deposits	0.971	1.03

4.4.3 Serial Correlation

First order serial correlation was examined using Wooldridge serial autocorrelation test with a null hypothesis that there was no first order serial correlation. Results in Table 4.5 indicates that the p value greater than 0.05, thus we could not reject the null hypothesis. Thus, it can be concluded that there was no first order serial correlation.

TABLE 4.5
Serial Correlation

	F (1,39)	**P value**
Wooldridge test for autocorrelation	21.137	0.760

4.4.3 Heteroskedasticity

Heteroskedasticity was carried out to examine the uniformity of variance of the error terms. The null hypothesis for the test was that there was homoscedasticity. Results in Table 4.6 indicate that the p value < 0.05. Hence, there was enough evidence to support rejection of the null hypothesis. Consequently, it can be concluded that there was heteroskedasticity. Thus, robust standard errors were applied while fitting the model for examining effect of capital structure on liquidity.

TABLE 4.6
Heteroskedasticity

	Chi square	P value
Modified wald test	513.366	0.0000

4.4.4 Hausman Test

Hausman test was carried out to evaluate the choice between random and fixed effects regression model. The null hypothesis was that random effects model should be fitted against an alternative for fitting fixed effects. Results in Table 4.7, has chi square of 19.9969, with a p value of 0.0002. This indicates that null hypothesis ought to be rejected hence, fixed effects model was adopted while examining the effect of capital structure on liquidity of deposit taking SACCOs in Kenya

TABLE 4.7
Hausman Test

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
		19.9969	3	0.0002
Variable	**Fixed**	**Random**	**Var(Diff.)**	**Prob.**
Long term debt	3.174684	3.518326	0.019386	0.0136
Share capital	1.122105	1.503216	0.023345	0.0126

Non-withdrawable deposits	3.010629	3.658804	0.044032	0.002

4.5 Fixed Effects Model on Effect of Capital Structure on Liquidity of DT SACCOs in Kenya

Regression results in Table 4.8 has an R squared of 0.59, that indicates that 59% of changes in liquidity of DT SACCOs can be accounted for by long-term debt, share capital and non-withdrawable deposits while the remaining percentage is related to exogenous attributes. An F statistic of 75.369, with a p value of 0.00, depicts the model goodness of fit.

Long-term debt has positive and significant effect on liquidity ($\beta = 3.175$, p value < 0.05). This indicates that unit increase in long-term debt while holding constant share capital and non-withdrawable deposits increases liquidity of DT SACCOs by 3.175 units.

Share capital has positive and significant effect on liquidity of deposit taking SACCOs ($\beta = 1.122$, p value < 0.05). This indicates that unit increase in share capital while holding constant long-term debt and non-withdrawable deposits increases liquidity of DT SACCOs by 1.122 units.

Non withdrawable deposits have positive and significant effect on liquidity of deposit taking SACCOs ($\beta = 3.011$, p value < 0.05). This indicates that unit increase in non-withdrawable deposits while holding constant long-term debt and share-capital increases liquidity of DT SACCOs by 3.011 units.

TABLE 4.8
Fixed Effects Model on Effect of Capital Structure on Liquidity of DT SACCOs in Kenya

Liquidity	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
Long term debt	3.175	0.281	11.29	0.00	2.619	3.73	***
Share capital	1.122	0.259	4.33	0.00	0.61	1.634	***
Non withdrawable deposits	3.011	0.42	7.16	0.00	2.18	3.841	***
Constant	-0.662	0.199	-3.32	0.001	-1.056	-0.269	***
Mean dependent var	1.393	SD dependent var	0.686				
R-squared	0.59	Number of obs	200				
F-test	75.369	Prob > F	0.00				
Akaike crit. (AIC)	87.18	Bayesian crit. (BIC)	100.373				

*** p<.01, ** p<.05, * p<.1

4.6 Model Fitting

The results of the fixed effects model in table 4.8 indicated that all the study variables are significant at ($p< 0.5$) implying that both the long-term debt, share capital and non-withdrawable deposits have a significant influence of the liquidity of deposit-taking SACCOs in Kenya. The results had R- squared value of 0.59, implying that 59% of the variations of liquidity of the deposit-taking SACCOs in Kenya can be associated with the long-term debt, share capital and non-withdrawable deposits with 41% change of the liquidity position being associated to exogenous attributes. The study expanded panel data analysis models equation that was adopted was as follows;

$$QR_{it} = \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \alpha_i + \mu_{it} \quad \text{..... (ii)}$$

The model results indicated β_1 had a value of 3.175, while $\beta_2 = 1.122$ and $\beta_3 = 3.011$ and a constant of -0.662. Fitting the model of the study, we get; Liquidity of deposit taking SACCOs in

Kenya = -0.662 + 3.175 (long-term debt) + 1.122 (share capital) +3.011 (non-withdrawable deposits)

4.7 Discussion of Findings

4.7.1 Long-term Debt and Liquidity

The first objective of the study examined the effect of long-term debt on liquidity on DT SACCOs in Kenya. Results of the study depicted a positive and significant effect of long-term debt on liquidity of DT SACCOs in Kenya. This implies that the long-term debt helps improve the liquidity position of the SACCOS. The debt means cash injection into the deposit taking SACCOs, and with the debt repayment spread over a longer period, the SACCO at its disposal has cash to finance its short-term obligations. The study findings were in support of trade off theory that allude that use of external financing increases financial risk exposure. The findings concurred with Luigi and Sioni (2009) who allege that debt financing benefits corporate entities through the interest tax shield benefits. Though caution ought to be exercised while using debt financing since its increases is associated with increased odds of financial distress. Alkhatib (2012) recommended balancing while choosing the optimal mix of debt and equity to be adopted in a firm.

Positive findings agree with Onyango (2016) who reported that use of external financing enhanced SACCOs wealth creation. Anderson (2002) argued that corporate entities in United Kingdom with more liquid assets relied on long-term debts as a precautionary motive. This was linked with firms' capacity to deal with oscillating performance that may have implications on debt servicing. Kim and Sohn (2011) reported that the need for external funding in a firm should

be optimized so as to minimize likelihood of profit reduction when firms are exposed to corporate governance challenges.

Significant effect of leverage on liquidity was in support of Al-Harbi (2017) who reported that bank liquidity in developing countries was linked to leverage levels. However, Agbada and Osuji (2013) reported inverse effect of leverage on liquidity due to increased likelihood of financial distress in Nigeria banking sector. Gatere (2019) documented significant effect of leverage on liquidity of listed banks in Kenya while Githaka (2017) documented positive effect of leverage on liquidity. Muthoni (2013) cautioned on reliance of external loans due to increase in liquidity risks. To a debt, a mandatory interest and principal repayment at a specified time is attached, breach of which can be consequential, thus caution in the use of debt is required as debt has potential future negative impact on liquidity.

4.7.2 Share Capital and Liquidity

The second objective examined the effect of share capital on liquidity of DT SACCOs in Kenya. The study found positive and significant effect of share capital on liquidity of DT SACCOs in Kenya, implying that whenever the SACCO members subscribes to its share capital helps in improving the SACCO liquidity position. By the virtue that the share capital can only be transferred to another member, the cash injected by a member as share capital cannot be withdrawn. These results confirm agency theory that calls for maximization of shareholders' wealth that is not guaranteed with inverse link between share capital and liquidity. There is need for optimization of share capital in respective DT SACCOs so as to enhance achievement of stability in liquidity management.

Positive effect of share capital on liquidity was in contravention of Goh et al., (2016) who argued that there is an inverse effect of equity while linked to liquidity. This was cemented by Passmore et al., (2020) who reported inverse effect of share capital in liquidity of banks in United States of America. Similarly, Kochubey and Kowalcyk (2014) reported inverse effect of capital on liquidity of US banks. DT SACCOs and commercial banks may have heterogeneous capital requirements that may have implications on their capital structure which impact liquidity.

The findings agree with Gatere (2019) who reported that shareholders' capital positively affected liquidity of listed firms in NSE. Similarly, Mugenyah (2015) documented positive effect of shareholders' wealth on liquidity of commercial banks. Heterogeneity of these findings is associated with industry specific characteristics of listed firms and banks that may have effect on co-movement of capital structure and liquidity.

4.7.3 Non-Withdrawable Funds and Liquidity

The third objective examined the effect of non-withdrawable deposits on liquidity of DT SACCOs in Kenya. Results of the study indicates that there was a positive effect of non-withdrawable deposits on liquidity of DT SACCOs, implying that it helps improve the liquidity position of deposit taking SACCOS. The non-withdrawal deposits, which are used as loans collaterals by members denotes a member depositing cash in their BOSA account and the more a member deposits the more it helps in improving the liquidity position of the deposit taking SACCO.

The findings were in conformity of perking order theory that recommends sourcing funds from cheapest sources first and upon their exhaustion external sources may be sought. Hence,

positive effect of non-withdrawable deposits on liquidity do support reliance on internal sources of finance. According to Kagunda (2018) in recent years DT SACCOs in Kenya have been competing on unhealthy competition of which SACCO that pays highest interest on non-withdrawable deposits annually, which in the long-run makes non-withdrawable deposits the most expensive source of financing.

The study confirms Njeru (2016) who reported positive effect of deposits on liquidity management rmance of DT SACCOs in Kenya because there is no mandatory obligation to pay interest on non-withdrawable deposits neither is there a set rate of return. However, the study is in agreement with Mwatu (2018), who alluded that non-withdrawable deposits are expensive sources of finance especially when financial institution is exposed to bank panic and runs. Unlike debt whose repayment amount and time due is known, the time when a specific member non-withdrawable deposit can be refunded is unpredictable and thus exposes the SACCO to greater liquidity risk. According to SASRA SACCO supervision report of 2020, DT SACCOs in Kenya paid an average interest on non-withdrawable deposits that is way higher that the market rate of return.

CHAPTER FIVE: CONLCUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the study finds summary, discussion, conclusion and recommendations for the study. Presented also in this chapter are suggestions for future studies in relation to the study variables.

5.2 Summary of Findings

The main objective of the study was to determine the effect of capital structure on the liquidity of deposit-taking SACCOs in Kenya. The study arose from conceptual, contextual, theoretical and methodological gaps in the empirical studies. Conceptually, capital structure had been operationalized in exclusion of non-withdrawable funds. Several empirical studies had considered data from listed companies, commercial banks and corporate entities operating in developed economies in exclusion of SACCOs. Methodologically, there are some studies though they examined the effect of capital structure they never reported on diagnostic tests prior to modelling. The study applied causal research design and gathered secondary data from annual final statements for year 2018 to 2022. Fixed effects regression model was fitted so as to determine the effect of long-term debt, share capital and non-withdrawable deposits on liquidity of DT SACCOs in Kenya. Results of the study depicted a positive and significant effect of long-term debt on liquidity of DT SACCOs in Kenya. The study found positive and significant effect of share capital on liquidity of DT SACCOs in Kenya. Results of the study indicates that there was a positive effect of non-withdrawable deposits on liquidity of DT SACCOs.

5.3 Conclusion

Based on the study findings with an R squared value of 59%, it can be concluded that 41% of changes in liquidity of DT SACCOs in Kenya is dependent on extraneous attributes. The 59% of the variations being influenced by the long-term debt, share capital and non-withdrawable deposits.

5.3.1 Long-term debt and Liquidity

The first objective of the study was to determine the effect of long-term debt on liquidity of deposit-taking SACCOs in Kenya. The study findings reveal that long-term debt has a significant and positive influence on the liquidity of deposits-taking SACCOs in Kenya. An increase in debt level improves the liquidity position as it entails injection of cash into the SACCO which the SACCO can use to finance its short-term financial obligations are they fall due.

The results of the study suggest that deposits-taking SACCOs in Kenya can deploy long-term debt as a liquidity enhancement tool. According to the regression results, a unit increase in the long-term debt of deposit-taking SACCO in Kenya, while holding other factors constant shall result in the increase of liquidity by 3.175 units.

5.3.2 Share Capital and Liquidity

The second objective of the study was to determine the effect of share capital on liquidity of deposit-taking SACCOs in Kenya. From the findings of the study, the researcher concludes that share capital has an influence on the liquidity of DT SACCOs in Kenya. The results indicate that there is a positive and significant effect of share capital on liquidity of deposits-taking SACCOs in Kenya.

The results of the study suggest that deposits-taking SACCOs in Kenya can use share capital as a tool to improve their liquidity position. According to the study, a unit positive change in the share capital component of DT SACCOs, while holding other factors constant shall result to 1.122 units increase of the liquidity and therefore, helps in improving the liquidity position of the deposit taking SACCOs in Kenya.

5.3.3 Non-withdrawable deposits and Liquidity

The third objective of the study was to determine the effect of non-withdrawable deposits on liquidity of deposits-taking SACCOs in Kenya. The findings of the study reveals that SACCO members' non-withdrawable deposits have a positive and significant influence on the liquidity of DT SACCOs in Kenya.

The results of the study suggest that deposits-taking SACCOs in Kenya can deploy non-withdrawable deposits as a liquidity enhancement tool. According to the study findings, a unit increase in the members' non-withdrawable deposits, while holding other factors constant shall result in the increase of liquidity by 3.0106 units.

5.4 Recommendations

From the findings the following recommendations can be drawn.

5.4.1 Recommendations to DT SACCOs Managers

There is need for examination of the link between interest revenue generated from loans issued to members and interest costs associated with long-term debt and long-term lending. Through, matching of costs and benefits to be accrued respective DT SACCOs would be better informed

on the most optimal proportion of long-term debt that may mitigate odds of liquidity risk exposure. Since share capital positively affected the liquidity, there is need for adoption of proper governance principles that may manage the likelihood of minimizing shareholders' wealth as a result of using more capital in liquidity management. Examination of heterogeneous liquidity management models would guide DT SACCOs on the most optimal liquidity ratio that may maximize shareholders' wealth and profitability of respective DT SACCOs.

Non-withdrawable deposits positively contributed to liquidity of DT SACCOs, therefore there is need for examination of the co-movement of non-withdrawable funds with shareholders' wealth so as to enhance management of liquidity risks. Moreover, there is need for adoption of aggressive measures aimed at increasing amount of non-withdrawable funds so as to minimize the cost of financing associated with debt. The SACCOs management also need on the other hand manage the interest rate paid to Members on the BOSA deposits, as most DT SACCOs are paying interest that is way above the market rate, making non-withdrawable deposits, also known as BOSA deposits more expensive even compared to external borrowing.

5.4.2 Recommendations to SACCO Members

During the AGM or ADM of the SACCO, members when approving financing policies presented by the board of management and board of directors, they should adopt a funding method that does not expose the SACCO to future liquidity challenges. To secure their funds in the SACCO, and ensure the continuous going concern status of the SACCO, they ought to critically examine the pros and cons of each source of funds in relation to liquidity need of the SACCO before adopting any source of funds resolution.

5.4.3 Recommendations to Policy Makers

The findings of study show a significant and positive effect of both the Share capital and non-withdrawable deposits on liquidity of deposits taking SACCOs in Kenya. As argued by Mwatu (2013), DT SACCOs compete on who is paying more dividends and highest interest rate on deposits, as some SACCOs end up borrowing to fund dividends and interest on deposits payment, zero-sum game in liquidity enhancement too through deposits mobilization. As it is provided in the SACCO Societies act of 2008, SASRA must approve DT SACCOs audited financial reports before being presented to members, there is a need for SASRA to introduce a clear guidance on rate of return on deposits and come up with strict prudential guidelines on liquidity management as SACCOs seeks more deposits form members.

As the study reviewed, non-withdrawable members' deposits can pose a lower liquidity risk to SACCOs if several members decide to withdrawal from the SACCO at once and their deposits must be refunded, the study recommends that the deposits taking SACCOs regulators develop regulations that guides membership withdrawals to cushion SACCOs from such actions.

5.5 Suggestions for Further Studies

The study focused on long-term debt, share capital and non-withdrawable deposits of deposits taking SACCOs in Kenya and relied on published secondary data covering a sample of 40 DT SACCOs. Future research is suggested that relies on primary data by using in-depth questionnaires and interviews to the management of SACCOS covering all the licensed DT SACCOs in Kenya is recommended irrespective of the period the SACCO has been operating. Further a future research study is recommended that covers non-deposit taking SACCOs in Kenya as the form the majority number of SACCOs in the country and their operations are

slightly different from those of DT SACCOs and they are loosely regulated by the department of cooperatives.

From the current findings there is need for increasing the sample size from 40 DT SACCOs to at least 100. This may help in management of small panel data problem. Future studies examining the effect of capital structure on liquidity ought to consider data over a longer period and break down their analysis to heterogeneous changes such as regulations that may have effect on capital structure or liquidity. The choice of DT SACCOs as 40 was subjectively selected there is need for consideration of scientific selection so as to minimize biasness. Future studies may consider examining the effect of financial structure and liquidity and rather than deploying regression analysis structural equation modelling to be used. A study covering other sources of funds of DT SACCOs is recommended.

5.6 Limitation of the Study

The study was limited to only those SACCOs that had been in operation as deposit taking SACCO between the year 2018 to 2022. Further the study was limited to only three independent variables; long-term debt, share capital and non-withdrawable deposits with the study findings generalized to the context of deposits taking SACCOs in Kenya and all the sources of the funds available to deposits taking SACCOs in Kenya. A future study covering non-deposit taking SACCOs and covering other source of financing may yield results and this consequently would lead to the invalidation of the generalized research findings.

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APPENDIXES

Appendix I: Data Collection Sheet

	2018	2019	2020	2021	2022
Liquidity					
Cash and Cash Equivalents					
Marketable Securities					
Accounts Receivable					
Current Liabilities					
Long-term Debt					
Long term liabilities					
Total assets					
Share Capital					
Share Capital					
Non-withdrawable Deposits					
Non-withdrawable Deposits					

Appendix II: Deposit Taking SACCOs in Kenya

Tier One

1	Afya Sacco Society Ltd	18	Metropolitan National Sacco Society Ltd
2	Bandari Sacco Society Ltd	19	Mombasa Port Sacco Society Ltd
3	Bingwa Sacco Society Ltd	20	Mwalimu National Sacco Society Ltd
4	Boresha Sacco Society Ltd	21	Nacico Sacco Society Ltd
5	Cosmopolitan Sacco Society Ltd	22	Ollin Sacco Society Ltd
6	Gusii Mwalimu Sacco Society Ltd	23	Safaricom Sacco Society Ltd
7	Harambee Sacco Society Ltd	24	Sheria Sacco Society Ltd
8	Hazina Sacco Society Ltd	25	Solution Sacco Society Ltd
9	Imarika Sacco Society Ltd	26	Stima Sacco Society Ltd
10	Imarisha Sacco Society Ltd	27	Tower Sacco Society Ltd
11	Invest And Grow (Ig) Sacco Society Ltd	28	Trans Nation Sacco Society Ltd
12	Kenya Bankers Sacco Society Ltd	29	Ukulima Saco Society Ltd
13	Kenya Police Sacco Society Ltd	30	Unaitas Sacco Society Ltd
14	Kimisitu Sacco Society Ltd	31	United Nations Sacco Society Ltd
15	Kitui Teachers Sacco Society Ltd	32	Waumini Sacco Society Ltd
16	Magereza Sacco Society Ltd	33	Winas Sacco Society Ltd
17	Mentor Sacco Society Ltd	34	New Forties Sacco Society Ltd

Tier Two

35	Amica Sacco Society Ltd	64	Tembo Sacco Society Ltd
36	Ardhi Sacco Society Ltd	65	Trans- Elite County Sacco Society Ltd
37	Asili Sacco Society Ltd	66	Trans-National Times Sacco Society Ltd
38	Azima Sacco Society Ltd	67	Ukristo Na Ufanisi Wa Anglicana Sacco
39	Biashara Sacco Society Ltd	68	Unison Sacco Society Ltd
40	Capital Sacco Society Ltd	69	Universal Traders Sacco Society Ltd
41	Centenary Sacco Society Ltd	70	Ushuru Sacco Society Ltd
42	Chai Sacco Society Ltd	71	Wakenya Pamoja Sacco Society Ltd
43	Daima Sacco Society Ltd	72	Wana-anga Sacco Society Ltd
44	Dimkes Sacco Society Ltd	73	Wananchi Sacco Society Ltd
45	Eco-Pillar Sacco Society Ltd	74	Wanandege Sacco Society Ltd
46	Egerton Sacco Society Ltd	75	Yetu Sacco Society Ltd
47	Elimu Sacco Society Ltd	76	Chuna Sacco Society Ltd
48	Faridi Sacco Society Ltd	77	Ndege Chai Sacco Society Ltd
49	Fortune Sacco Society Ltd	78	Ng'arisha Sacco Society Ltd
50	Fundilima Sacco Society Ltd	79	Noble Sacco Society Ltd
51	GDC Sacco Society Ltd	80	NSSF Sacco Society Ltd
52	Jamii Sacco Society Ltd	81	Nyati Sacco Society Ltd
53	Kenpipe Sacco Society Ltd	82	Qwetu Sacco Society Ltd
54	Kenversity Sacco Society Ltd	83	Shirika Deposit Taking Sacco Society

				Ltd
55	Kenya Highlands Sacco Society Ltd		84	Simba Chai Sacco Society Ltd
56	Kingdom Sacco Society Ltd		85	Skyline Sacco Society Ltd
57	Kite Sacco Society Ltd		86	Smart-Life Sacco Society Ltd
58	K-Unity Sacco Society Ltd		87	Southern Star Sacco Society Ltd
59	Kwetu Sacco Society Ltd		88	TAI Sacco Society Ltd
60	Maisha Bora Sacco Society Ltd		89	Taifa Sacco Society Ltd
61	Mwito Sacco Society Ltd		90	Taqwa Sacco Society Ltd
62	Nation Sacco Society Ltd		91	Telepost Sacco Society Ltd
63	Nawiri Sacco Society Ltd			

Tier Three

92	2NK Sacco Society Ltd	134	Nandi Farmers Sacco
93	Acumen Sacco Society Ltd	135	Nanyuki Equator Sacco Society Ltd
94	Agro-Chem Sacco Society Ltd	136	Ndosha Sacco Society Ltd
95	Ainabkoi Sacco Society Ltd	137	Nexus Sacco Society Ltd
96	Airports Sacco Society Ltd	138	NRS Sacco Society Ltd
97	Ammar Sacco Society Ltd	139	Nufaika Sacco Society Ltd
98	Baraka Sacco Society Ltd	140	Nyala Vision Sacco Society Ltd
99	Baraton University Sacco Society Ltd	141	Nyambene Arimi Sacco Society Ltd
100	Biashara Tosha Sacco Society Ltd	142	Nyamira Tea Farmers Sacco Society Ltd
101	Bi-High Sacco Society Ltd	143	Orient Sacco Society Ltd
102	Comoco Sacco Society Ltd	144	Patnas Sacco Society Ltd
103	County Sacco Society Ltd	145	Prime Time Sacco
104	Dhabiti Sacco Society Ltd	146	PUAN Sacco Society Ltd
105	Dumisha Sacco Society Ltd	147	Rachuonyo Teachers Sacco Society Ltd
106	Enea Sacco Society Ltd	148	Shoppers Sacco Society Ltd
107	Fariji Sacco Society Ltd	149	Siraji Sacco Society Ltd
108	Fortitude Sacco Society Ltd	150	Smart Champions Sacco Society Ltd
109	Golden Pillar Sacco Society Ltd	151	Sotico Sacco Society Ltd
110	Good Faith Sacco Society Ltd	152	Stake Kenya Sacco Society Ltd
111	Goodhope Sacco Society Ltd	153	Stawisha Sacco Society Ltd
112	Goodway Sacco Society Ltd	154	Suluhu Sacco Society Ltd
113	Ilkisonko Sacco Society Ltd	155	Supa Sacco Society Ltd

114	Jacaranda Sacco Society Ltd	156	Tabasamu Sacco Society Ltd
115	Jitegemee Sacco Society Ltd	157	Tabasuri Sacco Society Ltd
116	Joinas Sacco Society Ltd	158	Taraji Sacco Society Ltd
117	Jumuika Sacco Society Ltd	159	Tenhos Sacco Society Ltd
118	Kencream Sacco Society Ltd	160	Thamani Sacco Society Ltd
119	Kenya Achievas Sacco Society Ltd	161	The Apple Sacco Society Ltd
120	Kenya Midland Sacco Society Ltd	162	Times-U Sacco Society Ltd
121	Kimbilio Daima Sacco Society Ltd	163	Trans-Counties Sacco Society Ltd
122	Kipsigis Edis Sacco Society Ltd	164	Uchongaji Sacco Society Ltd
123	Kolenge Tea Sacco Society Ltd	165	Ufanisi Sacco Society Ltd
124	Koru Sacco Society Ltd	166	Uni-County Sacco Society Ltd
125	K-Pillar Sacco Society Ltd	167	Vihiga County Farmers Sacco Society Ltd
126	Lainisha Sacco Society Ltd	168	Viktas Sacco Society Ltd
127	Lamu Teachers Sacco Society Ltd	169	Vision Africa Sacco Society Ltd
128	Lengo Sacco Society Ltd	170	Vision Point Sacco Society Ltd
129	Mafanikio Sacco Society Ltd	171	Wakulima Commercial Sacco Society Ltd
130	Magadi Sacco Society Ltd	172	Washa Sacco Society Ltd
131	MMH Sacco Society Ltd	173	Wevarsity Sacco Society Ltd
132	Mudete Factory Tea Growers Sacco Society Ltd	174	Mwietheri Sacco Society Ltd
133	Muki Sacco Society Ltd	175	Nafaka Sacco Society Ltd

Source: SASRA