

**FINANCIAL FACTORS AFFECTING LIQUIDITY OF SAVINGS  
AND CREDIT CO-OPERATIVE SOCIETIES IN KIRINYAGA  
COUNTY, KENYA**

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## DECLARATION

This research project is my original work and has not been presented in any other university or college for award of degree, diploma or certificate.

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## **DEDICATION**

This research project is dedicated to my family, my wife Faith, my son Courtney and my daughter Tiffaney for their inspiration to further my studies. It is also dedicated to my parents Francis Githaka and Nancy Wanjiku for their enormous resources support in all my studies and for their constant reminder that I ought to be a role model in life, and more so, in academics.

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## TABLE OF CONTENTS

	Page
<b>DECLARATION</b> .....	ii
<b>DEDICATION</b> .....	iii
<b>ACKNOWLEDGEMENT</b> .....	iv
<b>LIST OF TABLES</b> .....	vii
<b>LIST OF FIGURES</b> .....	ix
<b>LIST OF APPENDICES</b> .....	x
<b>ABBREVIATIONS AND ACRONYMS</b> .....	xi
<b>DEFINITIONS OF TERMS</b> .....	xii
<b>ABSTRACT</b> .....	xiii
<b>CHAPTER ONE</b> .....	1
<b>INTRODUCTION</b> .....	1
1.1 Background of the Study .....	1
1.2 Statement of the Problem.....	5
1.3 General Objective .....	6
1.4 Research Questions .....	6
1.5 Scope of the study.....	6
1.6 Significance of the Study .....	7
1.7 Limitations of the study .....	7
<b>CHAPTER TWO</b> .....	8
<b>LITERATURE REVIEW</b> .....	8
2.1 Introduction.....	8
2.2 Theoretical Review .....	8
2.3 Conceptual Framework .....	10
2.4 Empirical Review .....	13
2.5 Summary of Literature Review .....	14
2.6 Research Gaps .....	15
<b>CHAPTER THREE</b> .....	16
<b>RESEARCH METHODOLOGY</b> .....	16
3.1 Introduction.....	16
3.2 The Research Design .....	16
3.3 Target Population.....	16
3.4 Sampling Technique and Sample Size .....	16

3.5	Data Collection Instruments .....	17
3.6	Data Collection Procedures .....	17
3.7	Pre-testing of Research Tools .....	17
3.8	Data Processing and Analysis .....	17
	<b>CHAPTER FOUR .....</b>	<b>20</b>
	<b>RESEARCH FINDINGS AND DISCUSSIONS .....</b>	<b>20</b>
4.1	Introduction .....	20
4.2	Response Rate .....	20
4.3	Demographic Information .....	20
4.4	Descriptive Statistics .....	38
4.5	Inferential Findings .....	43
4.6	Regression Analysis .....	45
	<b>CHAPTER FIVE .....</b>	<b>49</b>
	<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>49</b>
5.1	Introduction .....	49
5.2	Summary of Findings .....	49
5.3	Conclusions .....	51
5.4	Recommendations of the Study .....	51
5.5	Suggestions for Further Research .....	52
	<b>REFERENCES .....</b>	<b>53</b>
	<b>APPENDICES .....</b>	<b>58</b>

## LIST OF TABLES

	Page
<b>Table 3.1:</b> Statistical Analysis Table .....	18
<b>Table 4.1:</b> Cronbach Alpha for Reliability Assessments .....	20
<b>Table 4.2:</b> Gender of the respondents .....	21
<b>Table 4.3:</b> Age of the respondents .....	22
<b>Table 4.4:</b> Educational Level of the Respondents .....	23
<b>Table 4.5:</b> Department/Section of the Respondents .....	25
<b>Table 4.6:</b> External Financial Engagements .....	27
<b>Table 4.7:</b> Internal Financial Engagements .....	28
<b>Table 4.8:</b> Performing Loans .....	30
<b>Table 4.9:</b> Watch Loans .....	30
<b>Table 4.10:</b> Sub-standard Loans .....	31
<b>Table 4.11:</b> Doubtful Loans .....	32
<b>Table 4.12:</b> Loans Loss .....	33
<b>Table 4.13:</b> SACCOS' New Investments .....	33
<b>Table 4.14:</b> Land and Buildings .....	34
<b>Table 4.15:</b> Listed Company Shares .....	35
<b>Table 4.16:</b> Treasury Bills .....	36
<b>Table 4.17:</b> Treasury Bonds .....	36
<b>Table 4.18:</b> Off-Shore Investments .....	37
<b>Table 4.19:</b> Cash and Cash Equivalents .....	38
<b>Table 4.20:</b> Descriptive Statistics for Liquidity Management .....	39
<b>Table 4.21:</b> Descriptive Statistics for Net Cash Flows .....	40
<b>Table 4.22:</b> Descriptive Statistics for Credit Lending .....	41
<b>Table 4.23:</b> Descriptive Statistics for Investment in Non-Core Business .....	42
<b>Table 4.24:</b> Descriptive Statistics for Liquidity of SACCOS .....	43
<b>Table 4.25:</b> Correlation between Liquidity Management and Liquidity of SACCOS .....	44
<b>Table 4.26:</b> Correlation between Net Cash Flows and Liquidity of SACCOS.....	44
<b>Table 4.27:</b> Correlation between Credit Lending and Liquidity of SACCOS .....	45
<b>Table 4.28:</b> Correlation between Investment in Non-Core Business and Liquidity of SACCOS .....	45
<b>Table 4.29:</b> Regression Analysis Model .....	46

<b>Table 4.30:</b> Analysis of Variance (ANOVA) .....	47
<b>Table 4.31:</b> Regression Coefficients .....	48



## LIST OF FIGURES

	Page
<b>Figure 2.1:</b> Conceptual Framework .....	9
<b>Figure 4.1:</b> Length of Service of the Respondents .....	22
<b>Figure 4.2:</b> Position of the Respondents .....	24
<b>Figure 4.3:</b> Average Monthly Members' Contribution .....	26
<b>Figure 4.4:</b> Average Yearly Members' Withdrawal Rate .....	27
<b>Figure 4.5:</b> Average Monthly Loan Repayment .....	29

## LIST OF APPENDICES

	Page
<b>Appendix I</b> Questionnaires .....	58
<b>Appendix II</b> Record Survey Sheet .....	65

## **ABBREVIATIONS AND ACRONYMS**

<b>ACCOSCA</b>	African Confederation of Co-operative Savings and Credit Associations
<b>CFF</b>	Central Finance Facility
<b>FOSA</b>	Front Office Services Activity
<b>FSD</b>	Financial Services Deepening
<b>ICA</b>	International Co-operative Alliance
<b>IMF</b>	International Monetary Fund
<b>KUSCCO</b>	Kenya Union of Savings and Credit Co-operatives
<b>MFI</b> s	Micro Finance Institutions
<b>SACCO</b>	Savings and Credit Co-operatives
<b>SASRA</b>	SACCO Societies Regulatory Authority
<b>WOCCU</b>	World Council of Credit Unions

## DEFINITION OF TERMS

### **Savings and Credit Co-operative (SACCO)**

It is a democratic, unique member driven, self-help co-operative. It is owned and governed by its members who have the same common bond (ICA, 2007).

### **Liquidity**

Liquidity is a measure of the extent to which a person or organization has cash to meet immediate and short-term obligations (Omino, 2014).

### **Liquidity Risk**

It is the potential financial loss arising from inability either to meet obligations or to fund increases in assets as they fall due without incurring unacceptable costs or losses (Omino, 2014).

### **Liquidity Risk Management**

It is the planning and controlling of current assets/liabilities in such a manner that eliminates the risk of inability to meet due short-term obligations and to avoid excessive investment in these assets (Brunnermeier & Pedersen, 2009).

### **Liquidity Management**

It involves a daily analysis and estimation of the size and timing of cash inflows and outflows over the future to minimize the risk that savers will be unable to access their deposits in the moments they demand them (Brunnermeier & Pedersen, 2009).

### **Net Cash Flow**

It is the total amount of money being transferred into and out of a business, especially as affecting liquidity. (Maina, 2011).

### **Credit**

It is a contractual agreement in which a borrower receives something of value now and agrees to repay the lender at some date in the future (Maina *et al.*, 2016).

### **Credit Risk**

It occurs when a borrower defaults and does not honor his or her obligation to service debt on time (Maina *et al.*, 2016).

## ABSTRACT

Savings and Credit Co-operative Societies are quasi financial institutions that mobilize savings, provide loans as well as other products to their members. Liquidity is considered as one of the serious concern and challenge for the modern era SACCOs. A SACCO having good asset quality, strong earnings and sufficient capital may fail if it is not maintaining adequate liquidity. The general objective of the study was to assess the financial factors that influence liquidity of Savings and Credit Co-operatives Societies in Kenya. A cross-sectional survey research design was used in this study. The target population consisted of all the 60 registered SACCOs in Kirinyaga County from which a sample size of 18 SACCOs was drawn. The study employed stratified random sampling technique. Primary data was collected by use of self-administered semi-structured questionnaires, while secondary data was collected from audited financial statements of the SACCOs and regulator. A pilot test was conducted to ascertain the validity and reliability of questionnaire. The Cronbach's alpha coefficient was used for reliability test while the content validity technique was used in validating the research instruments. The data was analyzed using descriptive statistics tools such as percentages, mean, standard deviation, mode and variances. Inferential statistics was done by use of Pearson's product moment of correlation. Multiple regression analysis was performed to assess the relationship between study variables.  $R^2$  was used to assess the contribution of independent variable on dependent variable. Data was presented using frequency tables, charts and graphs. The F-test was used to evaluate the significance of the obtained results. The study findings is of great importance to the SACCO management to formulate proper policies. The study helps the regulator and the government to improve on the framework for regulation of SACCO's. The study found the relationship between liquidity management, net cash flows, credit lending and investment in non-core business and liquidity of SACCOs to be positively correlated. The study concluded that SACCOs in Kirinyaga County mostly capitalized on liquidity management and as such it affected the SACCOs' liquidity. In addition, the study concluded that it was critical for SACCOs to have adequate liquidity in order to ensure that they meet short term maturing obligations. The study also concludes that cautious credit lending in SACCOs would result to helpfulness in liquidity of SACCOs. The study recommends that the SACCO management must put in place financial strategies to ensure that liquidity is effectively managed on a regular and timely basis and that appropriate policies and procedures are established to limit and control material sources of liquidity risk. It also recommends that SACCOs should also reconsider their loan recovery strategies and collateral for their loans and advances.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

Savings and Credit Co-operative Societies (SACCOs) are quasi financial institutions that mobilize savings, provide loans as well as other products to their members [Kenya Union of Savings and Credit Co-operatives (KUSCCO, 2009)]. SACCOs plays an important role in Kenya's financial sector in provision of affordable financial services to their members both urban and rural households (Co-operative Bank of Kenya, 2013). The co-operatives in Kenya can be traced back in 1908 when European settlers formed the Lumbwa Co-operative Society near Kericho (Kiragu, 2014). Kenya Co-operative movement is currently ranked 1st in Africa and 7th internationally (SASRA, 2013). In July 2013, World Council of Credit Unions recognized Kenya SACCOs as the fastest growing subsector in the World [World Council of Credit Unions (WOCCU, 2013)].

#### **1.1.1 Financial Factors that Influence Liquidity**

Savings mobilization is not an end in itself, it plays an important role in sustaining growth and development (Odhiambo, 2013). A high saving economy accumulates assets faster, and thus grows faster, than does a low saving economy (Muriuki, 2013). Members' savings deposits forms the major source of funding for the SACCO Societies (Kiragu, 2014). These are deposits contributed on a monthly basis by members and are used for borrowing from the SACCO Society (SACCO Societies Act, 2008). The SACCOs had mobilized savings to the tune of Ksh.380 billion with asset base of 493 billion as at 31st December, 2012. Savings mobilization in the SACCO subsector has been growing at the average rate of 30% per annum (SASRA, 2013). Members' contributions are deducted from their salaries or products' pay out on a regular basis and remitted to the SACCO Society (Godfrey, 2015). Loan recoveries are similarly made on a regular basis (Keitany, 2013).

SACCO societies are prohibited to grant a loan or credit facility to a member where the loan or credit facility, in the aggregate, exceeds such limit of the SACCO society's core capital (SACCO Societies Act, 2008). Loans to members in the Kenya's SACCO subsector increased by 23% in 2011 to stand at 221 billion up from 179.9 billion

(SASRA, 2012). The SACCOs are now significant partners in national financial markets of most world economies. The ability of a financial institution to meet demand for deposit withdrawals and other cash outflows is a visible indicator of its viability (Muraguri, 2014). During the 2007 financial crisis, the financial institutions were unable to roll over short-term financing which resulted in a major liquidity event and their subsequent collapse which, among other factors, had a detrimental effect on the global economy. SACCOs have largely invested their funds in the following investment channels; loans which take a major share, liquid investments such as money transfer services, financial investments such as term deposits, bonds, treasury bills, non-financial investments such as land and buildings, and investments in regulated financial institutions such as shares (WOCCU, 2009). In an environment of ultra-low interest rates, one of the biggest challenges that SACCOs face over the years is the ability to generate meaningful income.

The vision 2030 blue print in Kenya recognizes SACCO societies as important players in deepening financial access to mobilize savings for investments in enterprises and personal development (Karagu & Okibo, 2014). SACCO Societies investment decisions are shown to be directly related to financial factors (Maina, 2011). SACCO Societies are prohibited from investing in non-earning assets or property and equipment in excess of 10% of total assets, of which land and buildings shall not exceed 5% (SACCO Societies Act, 2008). SACCO Societies are also required to dispose of the investment in property acquired for the purpose of future expansion, if the property remains unutilized for 2 years from the date of acquisition (Ademba, 2010).

Default on loan repayments poses the greatest risk to stability of the multi-billion shilling savings and credit co-operative movement (SASRA, 2013). The risk of defaults on personal loans granted by SACCOs is high, as the debts are secured only by member guarantees (Maina, Kinyariro & Muturi, 2016). The regulator has also warned that reliance on expensive bank loans, instead of members' share contributions, raised the probability of the SACCOs defaulting on their debt (Keitany, 2013). This is indicated by SACCOs' low liquidity and solvency ratios especially since borrowing costs have sharply increased over the past periods.

### **1.1.2 Liquidity of Savings and Credit Co-operative Societies**

Liquidity is the ability of a business entity to honor all cash payment commitments as they fall due (Kimathi, 2014). Funding liquidity is the ability to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses (Basel Committee on Banking Supervision, 2008). An asset is therefore said to be liquid if it can be easily bought or sold (Goodhart, 2008). The cash payment commitments can be met either by drawing from a stock of cash holdings, by using current cash inflows, by borrowing cash or by converting liquid assets into cash (Goodhart, 2008). Effective liquidity risk management helps ensure a SACCO's ability to meet cash flow obligations, which are uncertain as they are affected by external events and other agent's behaviour (Song'e, 2015). Liquidity risk management is of paramount importance because a liquidity shortfall at a single institution can have system-wide repercussions (Muraguri, 2014). Liquidity is essential in all SACCOs to meet customer withdrawals, compensate for balance sheet fluctuations, and provide funds for growth (Njeri, 2014).

Liquidity management involves estimating liquidity requirements and meeting those needs in a cost-effective way (Owino, 2011). An effective liquidity management requires financial institutions to estimate and plan for liquidity demands over various periods and to consider how funding requirements may evolve under various scenarios, including adverse conditions (Njeri, 2014). SACCOs must maintain sufficient levels of cash, liquid assets, and prospective borrowing lines to meet expected and contingent liquidity demands (Ogol, 2011). The management of SACCOs has to present the capital adequacy return reports, liquidity statement report, statement of financial position and statement of deposit return as well as return on investments report which compares land, building, and financial assets to the SACCO's total assets and its core capital (WOCCU, 2013). Karagu and Okibo (2014) documented that liquidity enables firms to survive during bad economic times and is achieved by holding a portfolio of liquid investment.

### **1.1.3 Financial Factors versus Liquidity of Savings and Credit Co-operative Societies**

The SACCO business, like the banking business thrives on trust and confidence of the depositors and investors (Odhiambo, 2013). The importance of the SACCO sub-sector



in Kenya led the Government to enact the SACCO Act 2008 and the SACCO Societies Regulations 2010 (Kiragu, 2014). The SACCO Societies Act 2008 and its attendant regulations 2010, are risk oriented providing minimum operational regulations and prudential standards required of deposit-taking SACCO Societies to ensure financial stability of the SACCO subsector (SACCO Societies Act, 2008). The policy objective of establishing prudential regulation of deposit taking SACCOs is to enhance transparency and accountability in the SACCO subsector (Kimathi, 2014).

The prudential standards target all areas that entail significant risk for the SACCO business from a going-concern perspective. These areas include the availability of capital funds to face any potential unexpected losses arising from poorly performing loans or investments and the quality of the loan portfolio as the main income-generating asset in SACCO Societies as well as ensuring that loan granting and lending conforms to the approved credit policy (SACCO Societies Act, 2008). Other areas are the continuing availability of liquid funds to finance loan portfolio growth and to respond to depositors' and creditors' needs and the overall asset structure in terms of non-earning assets, fixed assets and investments in private sector securities (SASRA, 2012).

As at December 31<sup>st</sup> 2012, average liquidity (net liquid assets divided by savings deposits and short term liabilities) for the licensed deposit taking SACCOS stood at 36% against a statutory minimum of 15%. However, the demand for loans continues to put pressure on liquidity with the industry ratio of loans to deposits exceeding 100% (SASRA, 2012). As financial institution, SACCOS should manage the demand and supply of liquidity in an appropriate manner in order to safely run their business, maintain good relations with the stakeholders and avoid liquidity problem (Njeri, 2014).

#### **1.1.4 Savings and Credit Co-operative Societies in Kirinyaga County**

Kirinyaga County borders Embu County to the east, Machakos County to the south, Murang'a County to the south west and Nyeri County to the west. In 2009, the County had a population of 528,054 persons and an area of 1,478.1 square kilometers with an annual growth rate of 1.5 percent. In Kirinyaga County, the first Savings and Credit Co-operative Societies were started in the seventies and they have grown tremendously (Kamonjo, 2014). There are over 60 registered co-operatives with over

10 deposit taking SACCOs in Kirinyaga County (Kamonjo, 2014). The movement is estimated to have over Ksh. 10 billion in savings and over Ksh. 2.5 billion in share capital while employing about 500 directly and another 1,000 indirectly (SASRA, 2013). SACCOs in Kirinyaga County has led to growth of many small scale businesses but the loans has been defaulted to a large extent such that it has become a concern of the all the stakeholders within the county (Kamonjo, 2014).

## **1.2 Statement of the Problem**

SACCOs have been providing financial products to their members without any competition from other financial service providers (Song'e, 2015). SACCOs convert immediately available savings deposits into loans with longer maturities (Muriuki, 2013). However, individual savings deposits are typically much smaller than an average loan, requiring multiple deposits to fund a single loan (Obbuyi, 2014). These predispose them to liquidity risks (Kimathi, 2014). More so, liberalization have also resulted in a lot of competition from other financial service providers leading to liquidity problems (Kimathi, 2014). The liquidity challenges seems to impair the SACCOs' ability to offer timely services. Low liquidity make the SACCO not to be able to meet share capital and savings withdrawals, external borrowing repayments, member loan demand and operating expenses (Maina, 2011). It can also lead to low income generation as disbursements are low and membership withdrawals (Kimathi, 2014). This has been a major cause of failure of many SACCOs (Godfrey, 2015). In return it lead to business failure due to fund shortage, low economic development, loss of investors' confidence and unemployment in the country.

In Kenya, studies have been done in regard to SACCOs. Muraguri (2014) studied the effect of liquidity on the return on investments for SACCOs in Nairobi. Okundi (2011) studied the financial challenges facing savings and credit co-operative societies in Kenya. Karagu (2014) did a study on the financial factors influencing performance of savings and credit co-operative organization in Kenya. Keitany (2013) studied the relationship between loan default and the financial performance of SACCOs in Kenya. Song'e (2015) carried out a survey on the effect of liquidity management on the financial performance of deposit taking SACCOs in Nairobi County. Kamonjo (2014) studied the effects of corporate governance practices on financial performance of SACCOs in Kirinyaga County. It is evident that there is hardly any empirical

literature that discusses the assessment of financial factors that affect the liquidity of SACCOs in Kirinyaga County. It is against this background that the study intended to fill this pertinent gap by focusing on the financial factors that affect the liquidity of SACCOS with Kirinyaga as the area under scope.

### **1.3 General Objective**

The general objective of the study was to assess the financial factors that affect liquidity of Savings and Credit Co-operatives Societies in Kirinyaga County, Kenya.

#### **1.3.1. Specific Objectives**

- i) To investigate the effect of liquidity management on liquidity of SACCOs in Kirinyaga County
- ii) To establish the effect of net cash flow on liquidity of SACCOs in Kirinyaga County
- iii) To evaluate the effect of lending on liquidity of SACCOs in Kirinyaga County
- iv) To examine the effect of investment in non-core business on liquidity of SACCOs in Kirinyaga County

### **1.4 Research Questions**

- i) What is the effect of liquidity management to the liquidity of SACCOs in Kirinyaga County?
- ii) What is the effect of net cash flow to the liquidity of SACCOs in Kirinyaga?
- iii) What is the effect of lending to the liquidity of SACCOs in Kirinyaga County?
- iv) What is the effect of investment in non-core business to the liquidity of SACCOs in Kirinyaga County?

### **1.5 Scope of the study**

The research focused on financial factors affecting liquidity of SACCOs in Kirinyaga County. There are 6007 registered SACCOs in Kenya. The total population of SACCOs in Kirinyaga County is 60. The major focus on Kirinyaga County was because it is one of the top drivers of Kenya's economy contributing a significant portion of the national wealth despite its small size. The research was conducted using financial factors such as liquidity management, cash flow, credit lending and investment in none-core business as independent variables and their relationship with liquidity as dependent variable.

## **1.6 Significance of the Study**

The study findings benefits the management board which has been mandated by law to formulate proper policies to ensure effective running of the SACCO and the managers by gaining insight on how their SACCOs can cease liquidity problems and especially currently when we have new regulator. The study is of great importance to future scholars and academicians as there is inadequate literature in the field of SACCO's regulations, especially in the developing countries. This study forms the basis for future researches as it provides literature basis. The SACCO Society Regulatory Authority can use the study to improve on the framework for regulation of SACCO's in Kenya even as they continue with the role of regulating the SACCO's in this infancy stages. The study assists SASRA in the implementation of the new regulations to deal with the investment of SACCO funds and business continuity as way of promoting SACCOs. The study assists the Government and its agencies in coming up with policies through the SACCO regulatory authority, SASRA and Vision 2030 Secretariat especially in strengthening policy considerations in the subsector.

## **1.7 Limitations of the Study**

Although the research reached its aims, there were some unavoidable limitations. The main limitation of this study was the information disclosure, owing to the fact that it is touching on heart of SACCO's operations. This was due to the other fact that the information required by the researcher was considered classified and confidential implying to share with a stranger is not encouraged. Then the aspect of time due to limited time because the researcher is a full-time employee. However, a coherent system in collecting and analyzing data should minimize the risks of research process.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

In this chapter, theoretical literature, conceptual framework, empirical review, summary of reviewed literature and research gaps are discussed.

#### **2.2 Theoretical Review**

This study was guided by commercial loan theory of liquidity, Baumol's model of cash management, anticipated income theory, free cash flow theory and liquidity premium theory.

##### **2.2.1 Commercial Loan Theory of Liquidity**

Andersen (1969) argued that short-term loans advanced to finance salable goods on the way from producer to consumer are the most liquid loans the SACCO can make. These are self-liquidating loans because the goods being financed will soon be sold. The loan finances a transaction and the transaction itself provides the borrower with the funds to repay the financial institution and therefore in managing its investment portfolio a SACCO must strike a balance between the objectives of liquidity and profitability. SACCO liquidity depends on the availability and cost of borrowings (Muraguri, 2014). If it can borrow large amounts at any time without difficulty at a low cost (interest rate), it will hold very little liquid assets. But if it is uncertain to borrow funds or the cost of borrowing is high, the SACCO will keep more liquid assets in its portfolio.

##### **2.2.2 Baumol's Model of Cash Management**

The Baumol's model of cash management, first suggested by William in 1952, is an economic model of the transactions demand for money. The model helps in determining a firm's optimum cash balance under certainty. The theory relies on the trade off between the liquidity provided by holding money (the ability to carry out transactions) and the interest foregone by holding one's assets in the form of non-interest-bearing money. SACCO should optimally manage cash and marketable securities so as to achieve a balance between the risk of insufficient liquid or near liquid resources, and the cost of holding excessively high levels of these resources. The model has various limitations. It does not allow cash flows to fluctuate. Overdraft is not considered in the model and there are uncertainties in the pattern of future cash

flows. Since most of the SACCO's operations revolve around advancement of cash then it is imperative for a considerable minimum level of cash to be maintained (Huseyin, 2011). The theory therefore is of essence on the bases of the policy the SACCOs may have in place with regard to cash retention so as to avoid illiquidity.

### **2.2.3 The Anticipated Income Theory**

Herbert (1948) outlined that liquidity can be ensured if scheduled loan payments are made on future income of the borrower. This theory holds that a SACCO liability can be influenced by the maturity pattern of loans and investment portfolios. The theory recognized that certain types of loans have more liquidity than others. On the basis of this theory, SACCO management should adopt ladder effect in the investment portfolio as this will ensure a certain amount of securities are maturing annually and at times when funds might be demanded for lending or withdrawal (Muraguri, 2014).

### **2.2.4 Free Cash Flow Theory**

Jensen (1986) argues that free cash flows should be paid out to investors in order to avoid poor use of funds by managers. Managers have an incentive to hoard cash to increase the amount of assets under their control and to gain discretionary power over the firm investment decision. Managers of firms with poor investment opportunities are expected to hold more cash to ensure the availability of funds to invest in growth projects, even if the Net Present Value of these projects is negative. This would lead to destruction of shareholder value and, even if the firm has a large investment programme and a low market-to-book ratio. This is critical in management of liquidity in the firm and ensuring there is a balance between meeting the current obligation to mitigate liquidity short fall and investing in the interest of shareholders wealth maximization.

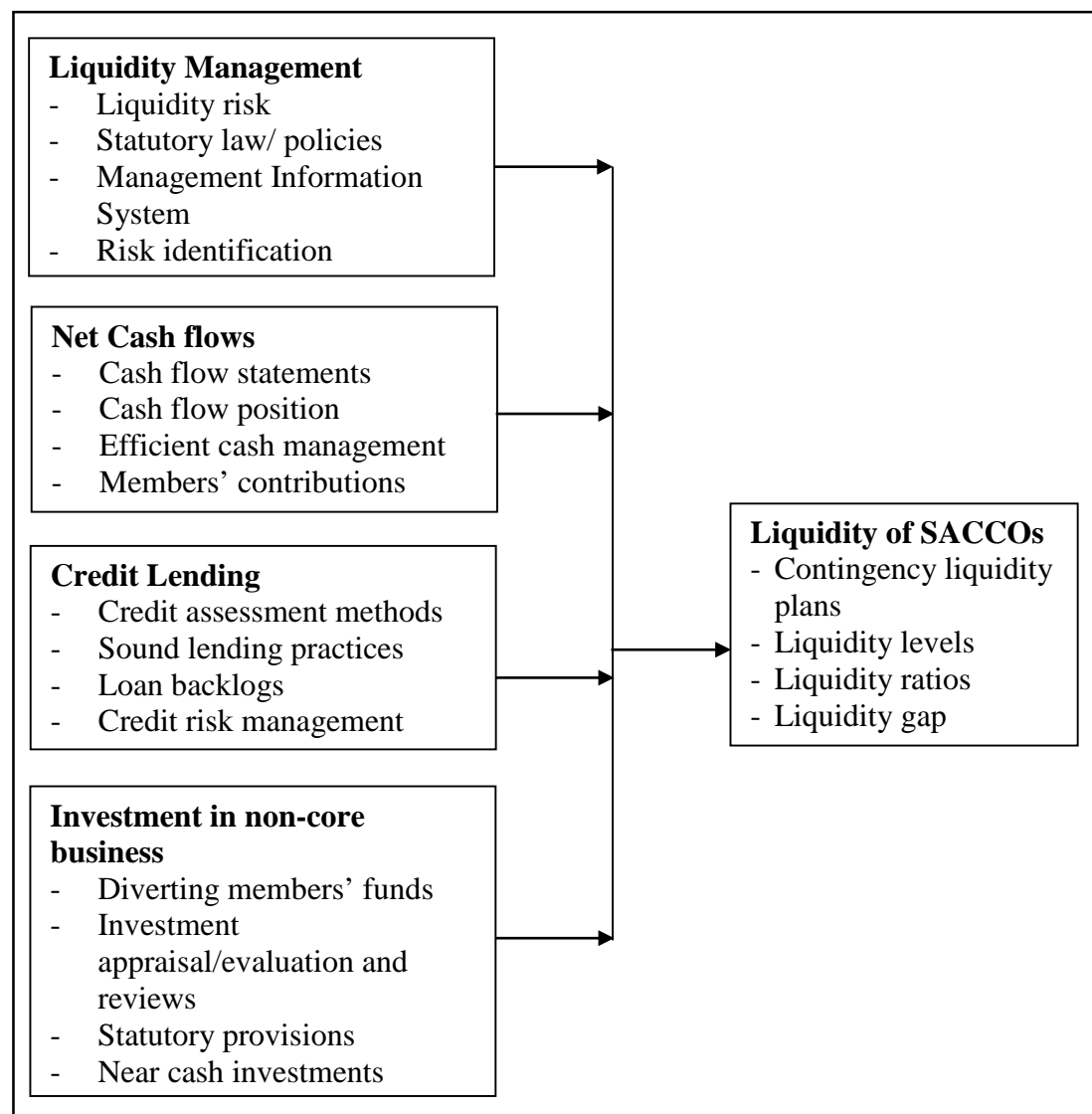
### **2.2.5 Liquidity Premium Theory**

This theory was advanced by John Maynard Keynes in 1936. He argued that some investors may prefer to own shorter rather than longer term securities because a shorter maturity represents greater liquidity. In such case they will be willing to hold long-term securities only if compensated with a premium for the lower degree of liquidity. Short-term securities are usually considered to be more liquid because they are more likely to be converted to cash without a loss in value. Adequate liquidity is needed to avoid forced sale of asset at unfavorable market conditions and at heavy

loss (Basel Committee on Banking Supervision, 2008). Adequate liquidity serves as vehicle for profitable operations especially to sustain confidence of depositors in meeting short run obligations.

### 2.3 Conceptual Framework

A conceptual framework in this research identifies both independent variables and dependent variable. The independent variables refer to the conceptualized factors or variables that may influence the outcome in the dependent variable.



**Independent Variables**

**Dependent Variable**

**Figure 2.1: Conceptual framework for financial factors influencing liquidity of SACCOs.**

### **2.3.1 Liquidity Management**

The liquidity management process is effective in identifying, measuring, monitoring and controlling liquidity risk (Njeri, 2014). Poor liquidity management will expose financial institution to liquidity risk which will have impact on its performance (Song'e, 2015). To realize positive financial education outcomes and ensure checks and balances within the SACCO ranks, it is important that stakeholders get exposed to key financial education tools that include understanding the dynamics of savings, budgeting, borrowing, banking operations and dynamics of long term wealth acquisition and management (Odhiambo, 2013). A SACCO is in a liquid position if it is able to meet its current obligations as they become due, if demands for funds are readily met while balancing the need to earn revenue (Sam, 2015).

### **2.3.2 Net Cash Flows**

All the receipts over the period are referred to as cash inflow while all the payments made are termed as cash outflows (Maina, 2011). On comparing the cash inflows and cash outflows at period end, the net cash inflow or outflow is determined. In a SACCO, cash flows in when cash is paid in as share contribution by the employers on behalf of the employees, loan interest is paid in for the loans issued, interest is paid in by other financial institutions in which the SACCO may have made deposits, loans previously issued to members are repaid, the SACCO disposes some of its fixed assets, when a SACCO gets a loan from a financial institution and when members pay entrance fees (Maina, 2011). Cash flows out when loans are issued to members, dividends and interest are paid out to members for their deposits and investments in the SACCO, loans are repaid to the SACCO creditors like financial institutions, payments are made when fixed assets are acquired, normal operating expenses like salaries, rents and rates are paid for by the SACCO (Okundi, 2011).

When the cash inflows are higher than the cash outflow there is a net positive cash position while if the cash outflows are higher than cash inflows the cash position is negative (Owino, 2011). When the cash flow is positive, the organization has a healthy financial position and can be said to be financially stable since it will be able to meet its cash requirements easily (Ombado, 2010). On the other hand, a negative cash flow position leads to instability with the SACCO not being able to meet its obligations and core responsibility of issuing loans to members in good time (Ombado, 2010).



### **2.3.3 Credit Lending**

Sound lending procedures in financial institutions involve identifying high-risk loan applicants, modifying lending conditions such as security requirements and monitoring repayments (Njeru *et al.*, 2015). SACCO managers need to reduce the risk of loan default because the institutions financial viability is weakened by the loss on principle and interest, the cost of recovery and the opportunity cost of management time taken to recover (Njeru *et al.*, 2015). SACCO's operates under the objective of maximizing benefits to members which include providing loans to help members achieve their standards of living goals. The non-performing loans can definitely cause too much stagnation of the financial sources (Lagat *et al.*, 2013). Effective provision of credit risk management depends on the lenders assessment of the risk of default of the loaners. For SACCO's this is typically based on the borrower's incomes, employment and the credit history at the time of loan application (Lagat *et al.*, 2013). Therefore, it is stressed that collection policies and procedures are measures and disciplines complementary to the primary loan portfolio granting and management activities (Kipngetch & Muturi, 2015).

### **2.3.4 Investment in Non-Core Business**

An investment is the outlay of a sum of money in the expectation of a future return which more than compensates for the original outlay plus a premium to cover inflation, interest foregone and risk (Kimathi, 2014). High investment in non-earning investments and inadequate managerial competence contributes to the failure of SACCOs in Kenya (Kimathi, 2014). Non-profitable investments should be discouraged because, despite the enormous amount of resources input in such projects, returns are almost nil, hence reducing the capital base where interest is drawn from (Mwithiga, 2012). The law clearly prohibits investments that are not related to the core objective of the SACCO (SACCO Societies Act, 2008). SACCOs should limit their investment on non-productive assets such as land, buildings, vehicles, furniture and cash, to a maximum of 5% of the total assets and thereby invest 95% of their funds into those assets that earn a return greater than the cost of funds and operating costs [Financial Services Deepening (FSD, 2009)].

### **2.3.5 Liquidity of SACCOs**

Liquidity level indicates an institution's ability to fund increase in assets and meet obligations when they fall due (Kimathi, 2014). Liquidity of the firm is a key determinant of the firm's financial performance. Liquidity is the amount of capital that is available for investment and spending. Most of the capital is credit rather than cash. This is because the large financial institutions that do most investments prefer using borrowed money (Muraguri, 2014). At any date, a positive gap between assets and liabilities is equivalent to a deficit. Liquidity ratios are various balance sheet ratios which should identify main liquidity trends. These ratios reflect the fact that firm should be sure that appropriate, low cost funding is available in a short time (Muraguri, 2014). This might involve holding a portfolio of assets that can be easily sold cash reserves, minimum required reserves or government securities.

## **2.4 Empirical Review**

A number of studies on liquidity of SACCOs have been done nationally and internationally. Njeri (2014) carried a study on the effect of liquidity on financial performance of deposit taking micro finance institutions in Kenya. From the analysis, it's evidently that financial performance of the MFIs in Kenya is highly dependent on the level of institutional liquidity. Muraguri (2014) studied the effect of liquidity on the return on investment for SACCOs in Nairobi. The study found that liquidity has a positive impact on the return on investments in the SACCOs while capital adequacy had a negative influence on the returns. Sam (2015) researched on effect of cash management practices on the growth of matatu SACCOs in Kimilili Su-county, Bungoma County. The study concluded that cash management is critical as a liquidity management tool in matatu SACCO's. Ogol (2011) conducted a study to find out liquidity risk management practices in microfinance institutions in Kenya. The findings of the study indicate that most MFIs have laid down policies to refer to in identifying liquidity risks and that the MFIs have their core risk policy formulation done by the risk committee.

Kimathi (2014) carried a study on the effect of financing strategies on the liquidity of SACCOs licensed by SASRA operating in Nairobi County. The study concludes that financial strategies positively and significantly influence the liquidity in SACCOS licensed by SASRA operating in Nairobi County. Song'e (2015) conducted a study

on the effect of liquidity management on the financial performance of deposit taking SACCOs in Nairobi County. The findings were that financial performance as measured by profit before tax over total assets is positively related to Liquidity, funding liquidity risk, operational efficiency, quick ratio and log of total assets. Omino (2014) carried out a study on liquidity risk mitigation measures and financial performance of SACCOs in Kisumu County. The study found that liquidity risk mitigation approaches adopted by different SACCOs had a significant effect on their financial performances.

Okundi (2011) carried out a study on the financial challenges facing SACCOs in Nairobi and concluded that SACCOs suffered challenges in meeting loan requests by the members partly due to long term investments they engage in. Njeru *et al.* (2015) researched on effect of cash management on financial performance of deposit taking SACCOs in Mount Kenya region. They concluded that cash management is critical as a liquidity management tool in deposit taking SACCO's. Hence cash management policy should be put in place to attain optimal financial performance of deposit taking SACCOs. Godfrey (2015) carried out a research on liquidity and bank performance and examined nexus between Net Interest Margin and liquidity on South African banks. The research concluded that there is an insignificant co-integrating relationship between Net Interest Margin (NIM) and two measures of liquidity, namely market liquidity and funding liquidity.

## **2.5 Summary of Literature Review**

Many researchers have come up with a number of theories on the financial factors influencing liquidity of SACCOs in Kenya. The Commercial Loan Theory of liquidity reveals that though long-term securities may be liquidated prior to maturity, their prices are more sensitive to interest rate movements. Short-term securities are usually considered to be more liquid because they are more likely to be converted to cash without a loss in value (Crowe, 2009). The Baumol's model of cash management theory argues that there is tradeoff between the liquidity provided by holding money (the ability to carry out transactions) and the interest foregone by holding one's assets in the form of non-interest-bearing money. There is therefore need for contingency funding plan which should be well developed, effective and useful (Maina, 2011).

The Anticipated Income theory of liquidity holds that liquidity can be ensured if scheduled loan payments are made on future income of the borrower. The doctrine of anticipated income embodies the ideas and equates intrinsic soundness of term loans with appropriate repayment schedules adapted to the anticipated income or cash flow of the borrower (Crowe, 2009). The free cash flow theory of liquidity argues that free cash flows should be paid out to investors in order to avoid poor use of funds by managers. Having cash available to invest, the manager does not need to raise external funds and to provide capital markets detailed information about the firm's investment projects (Huseyin, 2011). The liquidity premium theory asserts that some investors may prefer to own shorter rather than longer term securities because a shorter maturity represents greater liquidity. According to the theory, investors will be willing to hold long-term securities only if compensated with a premium for the lower degree of liquidity (Kimathi, 2014).

## **2.6 Research Gaps**

From the review of relevant literature, it is evident that research in the area of liquidity of SACCOs has been done both internationally and locally. Kimathi (2014) studied the effect of financing strategies on the liquidity of SACCOs licensed by SACCO Societies Regulatory Authority in Nairobi County. Song'e (2015) studied the effect of liquidity management on the financial performance of deposit taking SACCOs in Nairobi County. Njeri (2014) carried a study on the effect of liquidity on financial performance of deposit taking micro finance institutions in Kenya. Omino (2014) studied the liquidity risk mitigation measures and financial performance of SACCOs in Kisumu County. Muraguri (2014) studied the effect of liquidity on the return on investment for SACCOs in Nairobi. From survey of relevant literature, it was found that there is no studies specific to Kenya in regard to the assessment of financial factors that influence liquidity of SACCOs in Kirinyaga County in Kenya. This study was therefore conducted in order to fill the gaps in literature by studying variables that affect liquidity of SACCOs in Kirinyaga County.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter provides a discussion of the procedures that was employed in this study. It also covers the research design, target population, sampling technique and sample size, research instruments, pre-testing, data processing and analysis.

#### **3.2 The Research Design**

A cross sectional descriptive survey research design was employed in this study. Descriptive research is the investigation in which data is collected and analyzed in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time. Descriptive research design was chosen because it enabled the researcher to generalize the findings to a larger population. It guarantees breadth of information and accurate descriptive analysis of characteristics of a sample which can be used to make inferences about population (Mugenda & Mugenda, 2011).

#### **3.3 Target Population**

The targeted population in the study was the 60 registered SACCOs in Kirinyaga County. In this study, the sampling frame consisted of the 60 registered SACCOs in Kirinyaga County.

#### **3.4 Sampling Technique and Sample Size**

The study employed stratified random sampling technique. Kirinyaga County is administratively divided into four sub-counties and therefore, SACCOs were categorized into the four sub-counties i.e. Kirinyaga Central, Kirinyaga East, Kirinyaga South and Kirinyaga West. From each sub-county 30% of the SACCOs were selected randomly so as to make the sample that was studied. A sample size of 30% was preferred so as to make the sample reasonable, economic and reliable (Zikmund, Bahin & Graffin, 2010). Purposive sampling technique was used to identify three management staff from the credit, finance and operations departments from each of the selected SACCO Society. Purposive sampling helps the researcher to obtain reliable and accurate information from all the levels of liquidity management and to avoid bias. Therefore, 3 management staff from each of the 18 SACCOs were selected for the study giving a sample size of 54 respondents.

### **3.5 Data Collection Instruments**

The study made use of primary and secondary data. Primary data was collected through the use of questionnaires. Secondary data was drawn from audited financial statements.

### **3.6 Data Collection Procedures**

Primary data was collected from the branch managers, finance officers and credit officers of the selected SACCOs through self-administered questionnaires. Secondary data was collected by filling in the record survey sheet the statistical data from the audited financial statements of SACCOs for three years period.

### **3.7 Pre-testing of Research Tools**

To ascertain the validity and reliability of questionnaire, a pre-testing was conducted. A sample size of 54 respondents was used in this study. The pre-testing constituted 10 percent of the sample size and therefore 6 questionnaires were administered.

#### **3.7.1 Reliability Test**

The Cronbach's alpha coefficient was used for reliability test to measure the degree to which a research instrument yields consistent results or data after repeated trials. The threshold cutoff point of 0.7 and above was used. The point is acceptable since it indicates consistency or reliable measure.

#### **3.7.2 Validity Test**

Content validity technique was used in validating the study by specifying the domain of indicators which are relevant to the concept being measured using professionals or experts in the particular field.

### **3.8 Data Processing and Analysis**

Data was first subjected through a sequence of operations which includes editing, coding, classification and analysis using SPSS (Statistical Package for the Social Scientists). Analysis was done through descriptive statistics tools such as percentages, mean, standard deviation, mode and variances. Inferential statistics was done by use of Pearson Product-Moment correlation which was used to measure the strength of relationships between the study variables where linear function was formulated to help assess the influence of the independent variables on the dependent variable. Data was presented using frequency tables, charts and graphs.

The general form of the multiple regression model is as shown in equation 3.1.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \dots \dots \dots \text{Equation 3.1}$$

Where; Y is SACCO liquidity,  $\beta_0$  is Constant,  $X_1$  is Liquidity management,  $X_2$  is Net cash flows,  $X_3$  is Credit lending,  $X_4$  is Investment in non-core business,  $\beta_1, \beta_2, \beta_3, \beta_4$  is Regression coefficients of independent variables and  $\varepsilon$  is the error term.

The F-test was used to evaluate the significance of the results obtained. An F-test is any statistical test in which the test statistic has an *F*-distribution under the null hypothesis. It is most often used when comparing statistical models that have been fitted to a data set, in order to identify the model that best fits the population from which the data were sampled (Mugenda & Mugenda, 2011). A test of significance helped to determine whether the obtained results truly hold at 95% confidence level.

**Table 3.1: Statistical Analysis Table**

<b>Objective</b>	<b>Independent variable</b>	<b>Dependent variable</b>	<b>Statistical tools</b>	<b>Means of data collection</b>
To investigate the effect of liquidity management on liquidity of SACCOs	Liquidity Management	Liquidity of SACCOs in Kirinyaga County	Mean, standard deviation, mode, variances and Pearson product-Moment correlation	Questionnaires and record survey sheet
To establish the effect of net cash flow on liquidity of SACCOs	Net Cash flows	Liquidity of SACCOs in Kirinyaga County	Mean, standard deviation, mode, variances and Pearson product-Moment correlation	Questionnaires and record survey sheet
To evaluate the effect of credit lending on liquidity of SACCOs	Credit Lending	Liquidity of SACCOs in Kirinyaga County	Mean, standard deviation, mode, variances and Pearson product-	Questionnaires and record survey sheet

			Moment correlation	
To examine the effect of investment in non-core business on liquidity of SACCOs	Investment in Non-core business	Liquidity of SACCOs in Kirinyaga County	Mean, standard deviation, mode, variances and Pearson product-Moment correlation	Questionnaires and record survey sheet



## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents the results and findings of the study based on the research objectives. The purpose of this study was to determine the financial factors affecting liquidity SACCOs in Kirinyaga County, Kenya. The study uses liquidity management, net cash flows, credit lending and investment in non-core business as independent variables and liquidity of SACCOs as dependent variable. The chapter presents the response rate and the demographic information of the respondents. The data has been analyzed for each of the specific objective by use of descriptive and inferential statistics.

#### 4.2 Response Rate

Out of the 54 questionnaires distributed for this research, 45 of them were filled and returned giving a response rate of 83 per cent. According to Mugenda and Mugenda (2003), 50% response rate is adequate, 60% good, above 70% is rated very good. This implies that the response rate was good, representative and acceptable as it had surpassed the 70% response rate threshold.

#### 4.3 Pre-testing Results for Research Instruments

The study sought to test the reliability and validity of the research instruments. Table 4.1 shows the findings of the study. From the findings of the study, the reliability coefficients ranged between 0.736 and 0.886. This implies that all the items were reliable since they met the threshold value of 0.7 as recommended by Cooper and Schindler (2011) thus they were reliable.

**Table 4.1: Cronbach Alpha for Reliability Assessments**

Variables	Number of items	Cronbach Alpha Values
Liquidity Management	4	0.754
Net Cash flows	4	0.736
Credit Lending	4	0.886
Investment in non-core business	4	0.762

### 4.3 Demographic Information

The researcher was interested in the distribution of respondents by their gender, age, length of service, level of education, department/section in which they work and position in the SACCOs.

#### 4.3.1 Gender of the Respondents

The study sought to know the gender of the respondents. The sampled respondents provided information relating to their gender. Table 4.2 shows the gender of the respondents. The findings of the study revealed that majority of the respondent (55.6%) were females whereas 44.4% of the respondent were males. This indicates that more female respondents participated in the study than males. It therefore implies that leadership of most SACCOS in Kirinyaga County is female dominated. The findings are in line with those of Luoga (2013) who carried out a study to determine the factors influencing loan delinquency and non-performance of loan repayment in traders SACCOs and found that nowadays women are motivated to be employed rather than becoming just a housewife or employing themselves through businesses.

**Table 4.2: Gender of the Respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Female	25	55.6
Male	20	44.4
<b>Total</b>	<b>45</b>	<b>100.0</b>

#### 4.3.2 Age of the Respondents

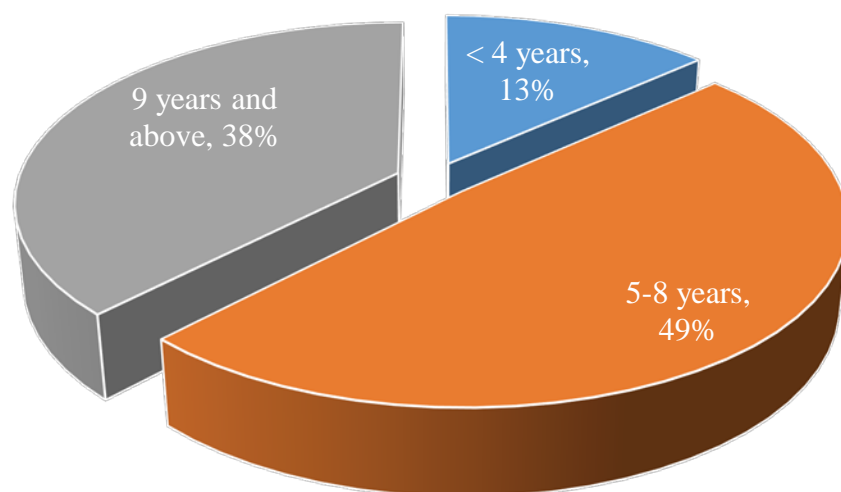
Respondents were classified according to their age category. They were grouped into four sub-categories namely; 18-26 years, 27-35 years, 36-45 year and those above 44 years. Table 4.3 shows the distribution of respondents based on their age. The study found that majority of the respondents (40%) were aged 27 to 35 years while those with 36-43 years accounted for 35.6% of the sampled population. Respondents who were between 18 and 26 years accounted for 15.6% while very few (8.9%) aged above 44 years of age. The findings implied that most of the employees working with SACCOs in Kirinyaga County were middle aged. This age group is usually energetic, very active, is experienced, responsible and has skills (Teeples & Glyers, 2007).

**Table 4.3: Age of the Respondents**

<b>Age Categories</b>	<b>Frequency</b>	<b>Percent</b>
18 to 26 years	7	15.6
27 to 35 years	18	40
36 to 43 years	16	35.6
Above 44 years	4	8.9
<b>Total</b>	<b>45</b>	<b>100.0</b>

### **4.3.3 Length of Service of the Respondents**

The study sought to determine how the length of service of the respondents affected their participation in the study. Figure 4.1 indicates the period that the respondents had worked with SACCOs in Kirinyaga County. It was established that majority (49%) of the respondents concurred that they had been in the SACCOs for a period of between 5-8 years. The study findings also show that 38% of the respondents had worked in SACCOs for a period of 9 years and above while a small proportion (13%) had worked for a period below 4 years. This implies that most of the SACCOs retained their employees for a long time and data collected thereof could give reliable information. The findings are in line with Karagu and Okibo (2014) who carried out a study that was geared towards finding financial factors influencing performance of SACCOs in Kenya.



**Figure 4.1: Length of Service of the Respondents**

#### 4.3.4 Educational Level of the Respondents

The study examined the distribution of respondents according to their highest academic qualifications. The level of education of the respondents was categorized into four sub-groups; O-level, Tertiary, University and Post-graduate as shown in Table 4.4. The study findings indicated that majority (64.4%) of the respondents working with SACCOs in Kirinyaga County were bachelor degree holders. In addition, 17.8% of the respondents had tertiary education while 15.6% held post graduate degrees or diplomas. A very small (2.2%) proportion of the respondents had only attained the O-level qualifications. This implies that majority of the respondents had at least a first degree and could give relevant information on the subject matter. The findings illustrated that SACCOs employed academically qualified workforce (Mwithiga, 2012).

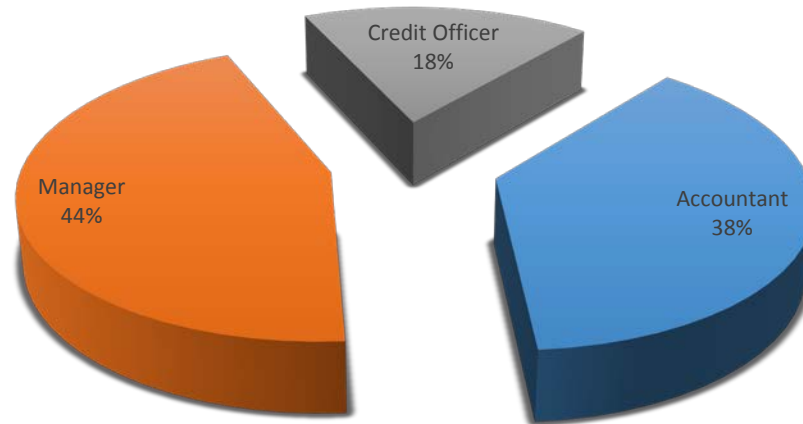
**Table 4.4: Educational Level of the Respondents**

<b>Education Levels</b>	<b>Frequency</b>	<b>Percent</b>
Post-Graduate	7	15.6
University Degree	29	64.4
Tertiary	8	17.8
O-Level	1	2.2
<b>Total</b>	<b>45</b>	<b>100.0</b>

#### 4.3.5 Position of the Respondents

The study aimed at ascertaining the respondents' designation with the SACCOs in Kirinyaga County. The findings are illustrated by Figure 4.2. The designation was categorized into three main groups that is, the accountant, the manager and the credit officer. The Manager category (44%) comprised of the chief executive officers, Back office services and activities (BOSA) managers, front office services and activities (FOSA) managers, operations managers, finance managers, human resource manager, and the secretary managers. The Accountant category (38%) comprised of the accountants, accounts clerk, cashiers, chief cashiers and the savings clerks. The Credit officer category (18%) comprised of the credit officers, loan officers and the loans clerks. This implied that most of the study respondents were serving in high profile

positions. This shows that most of the data was collected from senior managers and therefore the data collected gave reliable information (Kamonjo, 2014).



**Figure 4.2: Position of the Respondents**

#### **4.3.6 Department/Section of the Respondents**

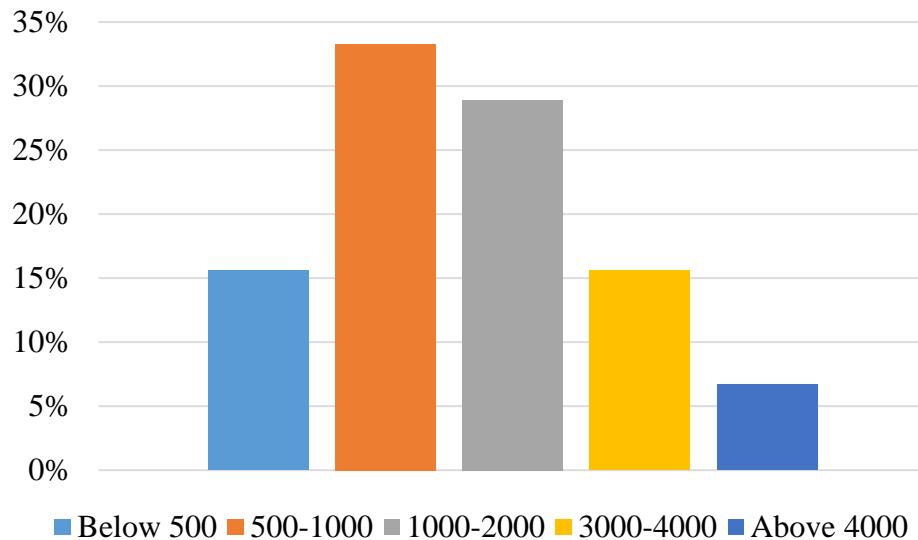
The study intended to establish the department/Section to which the sampled respondents work in or were attached. The results were illustrated in Table 4.5. The study noted that majority (22.2%) of the respondent were attached to the finance and operations departments. A total of 8 respondents that translated to 17.8% were attached to the accounts department. Those in administration section were 15.6% of the sampled population. Only 11.1% and 8.9% were attached to the credit and loans sections respectively. Very few (2.2%) worked in the human resource department. This implies that most of the respondents were attached in the finance, operations and accounts departments and therefore reliable information on liquidity was obtained. The findings are in line with Tonui (2016) who carried out a study on financial factors influencing growth of horticultural sector in Nakuru County and found that the accounts and finance departments are the most central and important in any business organization.

**Table 4.5: Department/Section of the Respondents**

<b>Department/Section</b>	<b>Frequency</b>	<b>Percentage</b>
Finance	10	22.2
Operations	10	22.2
Accounts	8	17.8
Administration	7	15.6
Credit	5	11.1
Loans	4	8.9
Human Resource	1	2.2
<b>Total</b>	<b>45</b>	<b>100.0</b>

#### **4.3.7 Average Monthly Members' Contributions**

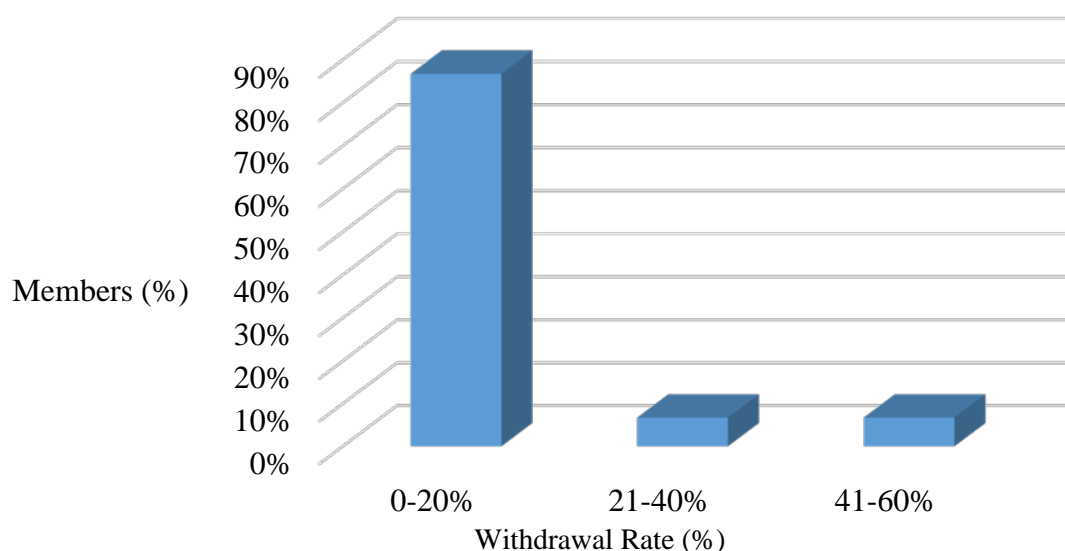
The study sought to ascertain the average monthly members' contribution to the SACCO. This is illustrated by Figure 4.3. A majority (33.3%) of the respondents concurred that average monthly members' contribution in SACCOs stood at between Ksh. 500-Ksh. 1,000. The findings also shows that 28.9% of the respondents indicated that the average monthly contributions by members was between Ksh. 1,000-Ksh. 2,000 while 15.6% of the respondents indicated that the average monthly members' contribution was below Ksh. 500 and between Ksh. 3,000-Ksh. 4,000. A little number of respondents (6.7%) indicated that the average monthly contribution by members of a SACCO was above Ksh. 4,000. The study found out that the monthly contribution by the members of SACCOs in Kirinyaga County was between Ksh. 500-Ksh. 1,000. This implies that the SACCO members are able to make their contributions without straining much. The study findings are in line with Muraguri (2014) who carried out a study on the effect of liquidity on the return on investments for SACCOs in Nairobi and found that the services of SACCOs are affordable to its members.



**Figure 4.3: Average Monthly Members' Contribution**

**4.3.8 Average Yearly Members' Withdrawal Rate**

The study sought to establish the average yearly withdrawal rate by the members of the SACCOs in Kirinyaga County. This was grouped into different ranges namely; 0-20%, 21-40%, 41-60%, 61-80% and 81-100% as shown in Figure 4.4. The study noted that majority (86.7%) of the respondents agreed that the yearly members' withdrawal rate was between 0-20%. The study findings also showed that 13.3% of the respondents indicated that the withdrawal rate of members at the range of 21-40% and 41-60%. This implies that the members are satisfied with the wide range of products and services offered by their SACCOs in Kirinyaga County which are tailored to meet various needs of a diversified membership with each member's unique needs being catered for in this array of products and services (SASRA, 2012).



**Figure 4.4: Average Yearly Members' Withdrawal Rate**

#### 4.3.9 SACCOs' Constraint as a Result of Financial Engagements

##### (a) External Financial Engagements

The study wanted to establish how the SACCOs are constrained as a result of external financial engagements. This was categorized into three sub-groups, that is, very constrained, averagely constrained and not constrained as illustrated in Table 4.6. According to the study, majority (40%) of the respondents indicated that SACCOs are very constrained due to external financial engagements. The study also noted that 33.3% of the respondents indicated that SACCOs are not constrained while few (26.7%) of the respondents argued that SACCOs are averagely constrained due external financial engagements. This implies that SACCOs borrows heavily externally from other financial institutions in order to finance their operations. This was confirmed by the findings of the African Microfinance Transparency (AMT) report (2008) that discovered that funding structures indicated growth in SACCOs being mostly funded by access to debt rather than by savings.

**Table 4.6: External Financial Engagements**

Constraint Level	Frequency	Percent
Very Constrained	18	40
Averagely Constrained	12	26.7
Not Constrained	15	33.3
<b>Total</b>	<b>45</b>	<b>100.0</b>



**(b) Internal Financial Engagements**

The study also wanted to establish how the SACCOs are constrained as a result of internal financial engagements. This was also categorized into three sub-groups, that is, very constrained, averagely constrained and not constrained. The study findings indicated that majority (42.2%) of the respondents argued that SACCOs are averagely constrained as a result of internal financial engagements. The study also noted that 35.6% of the respondents indicated that the SACCOs are very constrained while 22.2% indicated that the SACCOs are not constrained due to internal financial engagements. This implies that SACCOs had managed to mobilize their internal resources to finance their operations and therefore averagely constrained. This means SACCOs had a balanced internal resource mobilization strategy (Song’e, 2015).

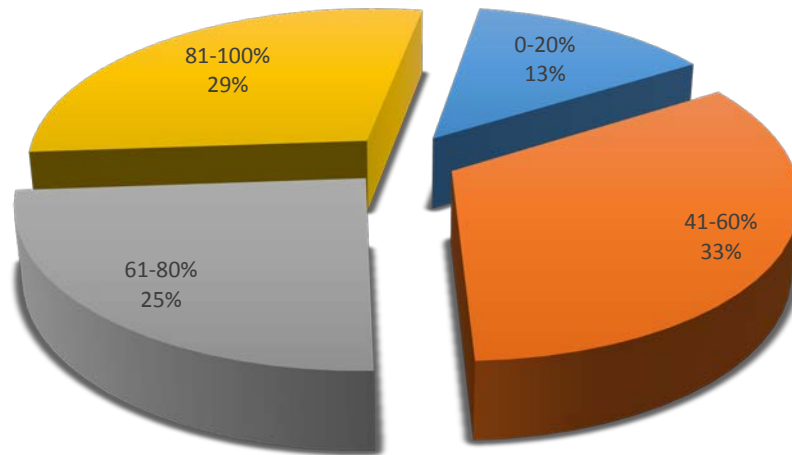
**Table 4.7: Internal Financial Engagements**

<b>Constraint Level</b>	<b>Frequency</b>	<b>Percent</b>
Very Constrained	16	35.6
Averagely Constrained	19	42.2
Not Constrained	10	22.2
<b>Total</b>	<b>45</b>	<b>100.0</b>

**4.3.10 Average Monthly Loan Repayment**

The study was conducted to ascertain the average loan repayment by members of SACCOs. This was grouped into different ranges namely; 0-20%, 21-40%, 41-60%, 61-80% and 81-100%. The results were as illustrated in Figure 4.5. The study found out that majority (33%) of the respondents concurred that between 41-60% of the total loan portfolio of the SACCOs was repaid in time as per their schedules. Only 81-100% of the gross loans are repaid by the loan applicants as per the agreement according to 29% of the respondents. The study also noted that 25% of the respondent argued that 61-80% of the SACCO loan are repaid by the borrowers while 13% of the respondents agreed that 0-20% of the loans are repaid. This implies that SACCO members paid their loans instalments as scheduled and therefore the cases of loan delinquencies were very minimal. Allen & Makhumbi (2009) maintained that the loan evaluation system and ability of members to repay within a specified timeframe had not always been considered sufficiently in the loan application process and that the

co-operative model of finance relied to a certain extent on the common bonds shared by members, which fostered a trust between members.



**Figure 4.5: Average Monthly Loan Repayment**

#### **4.3.11 Proportion of the SACCOs' Loan Portfolio**

The study sought to ascertain the proportion of the SACCOs' gross loan portfolio based on their risk classification. This was grouped into five sub-categories, that is, performing, watch, substandard, doubtful and loss.

##### **(a) Performing Loans**

The study intended to ascertain the proportion of the SACCOs' loan portfolio which was classified as performing. The SACCOs' performing loans were categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100%. The results are shown in Table 4.8. The study showed that majority (51.1%) of the respondents indicated that their SACCOs loan portfolio of between 61-80% was performing. Only 26.7% of the respondents indicated that 81-100% of loan portfolio was performing. The findings also showed that 15.6% of the sampled population argued that 41-60% was performing while 6.7% indicated that 21-40% of the loan portfolio was performing. This implies that loans of most SACCOs are current and up to date in payments of principal and interest. The loans were well documented and performing according to contractual terms (SACCO Societies Act, 2008).

**Table 4.8: Performing Loans**

<b>Percentage of Performing Loans</b>	<b>Frequency</b>	<b>Percent</b>
21-40%	3	6.7
41-60%	7	15.6
61-80%	23	51.1
81-100%	12	26.7
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(b) Watch Loans**

The study intended to ascertain the proportion of the SACCOs' loan portfolio which was classified as watch. The SACCOs' watch loans were categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100% as shown in Table 4.9. The study established that majority (46.7%) of the respondents concurred that the loans between 21-40% of the total loan portfolio of their SACCOs were classified as watch. The study also noted that 37.8% of the respondents argued that only between 0-20% of the loan portfolio of their SACCOs was classified as watch while 15.6% of the respondents indicated that only between 41-60% of the total loan portfolio was classified as watch. There were no responses from the respondents for the categories of 61-80% and 81-100%. This implies that in most SACCOs, a very little portion of the loans whose principal instalment or interest remained unpaid for 1-30 days or one instalment for either principal or interest was outstanding (SACCO Societies Act, 2008).

**Table 4.9: Watch Loans**

<b>Percentage of Watch Loans</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	17	37.8
21-40%	21	46.7
41-60%	7	15.6
61-80%	0	0.0
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(c) Sub-Standard Loans**

The study intended to ascertain the proportion of the SACCOs' loan portfolio which was classified as sub-standard. The SACCOs' sub-standard loans were categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100% as shown in Table 4.10. The study ascertained that majority (62.2%) of the respondents agreed that the sub-standard loans were between 21-40% of the total loan portfolio while 37.8% indicated that the sub-standard loans were between 0-20% of the total loan portfolio of their SACCOs. There were no responses from the respondents for the categories 41-60%, 61-80% and 81-100%. This implies that only a small proportion of loans were not adequately protected by the current repayment capacity and the principal instalment or interest remained unpaid between 31-90 days or 2-3 instalments remained outstanding. The study is in line with Okundi (2011) who carried out a study on financial challenges facing Savings and Credit Co-operative Societies in Kenya.

**Table 4.10: Sub-standard Loans**

<b>Percentage of Sub-standard Loans</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	17	37.8
21-40%	28	62.2
41-60%	0	0.0
61-80%	0	0.0
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(d) Doubtful Loans**

The study intended to ascertain the proportion of the SACCOs' loan portfolio which was classified as doubtful. The SACCOs' doubtful loans were categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100% as shown in Table 4.11. The study noted that 60% of the respondents concurred that only between 21-40% of the total loans for the SACCOs were doubtful. Only 31.1% of the respondents agreed that the doubtful loans were between 0-20% while 8.9% of the respondents argued that only between 41-60% of the total loans were classified as doubtful. There were no responses from the respondents for the categories 61-80% and 81-100%. This implies that a small proportion of the SACCOs loans were not adequately protected

by the current repayment capacity and the principal instalment or interest remained unpaid between 91-180 days or 4-6 instalments remained outstanding. Njiru (2006) carried a study on a list of non-performing loans including all relevant details and found that loan delinquency arises when there are no strategies for loan recoveries and security collaterals.

**Table 4.11: Doubtful Loans**

<b>Percentage of Doubtful Loans</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	14	31.1
21-40%	27	60
41-60%	4	8.9
61-80%	0	0.0
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(e) Loans Loss**

The study intended to ascertain the proportion of the SACCOs' loan portfolio which was classified as loss. The SACCOs' loss loans were categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100% as shown in Table 4.12. The study ascertained that majority (46.7%) of the respondents indicated that a small proportion (0-20%) of the loans portfolio were loss. The same number (46.7%) of respondents also concurred that a proportion of 21-40% of the total loans was classified as loss. A few (6.7%) respondents argued that the only 41-60% of the loans were classified as loss. There were no responses from the respondents for the categories 61-80% and 81-100%. This implies that only a small proportion of the loans which were considered uncollectible or of such little value that their continuous recognition as receivable assets was not warranted, not adequately protected and had remained unpaid for more than 180 days or 6 instalments had remained outstanding. Gisemba (2010) researched on the relationship between risk management practices and financial performance of SACCOs and found out that the SACCOs adopted various approaches in screening and analyzing risk before awarding credit to client to minimize loan loss.

**Table 4.12: Loans Loss**

<b>Percentage of Loans Loss</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	21	46.7
21-40%	21	46.7
41-60%	3	6.7
61-80%	0	0.0
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

#### **4.3.12 SACCOs' New Investments**

The study wanted to establish the extent to which SACCOs undertook new investments using the members' funds. The results of the findings are shown in Table 4.13. From the study, it was noted that 31.1% of the respondents agreed that the extent to which SACCOs undertook new investments was moderate. Only 28.9% of the respondents revealed that SACCOs undertook new investments to a high extent. A few (26.7%) respondents indicated that their SACCOs undertook new investments to a low extent while 13.3% argued that SACCOs undertook new investments to a very high extent. This implies that SACCOs were not using more members' funds to undertake new investments. It was found that members' funds were used moderately to undertake new investments and therefore more funds were used to meet their core objectives (SACCO Societies Act, 2008).

**Table 4.13: SACCOs' New Investments**

<b>Extent of New Investments</b>	<b>Frequency</b>	<b>Percent</b>
Very High	6	13.3
High	13	28.9
Moderate	14	31.1
Low	12	26.7
<b>Total</b>	<b>45</b>	<b>100.0</b>

#### **4.3.13 Proportion of the SACCOs' Total Assets**

The study intended to establish the proportion of the specific assets that were owned by SACCOs. The assets that were included in the study were land and buildings, listed

company shares, treasury bills, treasury bonds, off-shore investments and cash and cash equivalents.

**(a) Land and Buildings**

The study sought to ascertain the proportion of land and buildings from the total assets held by the SACCOs. The results are illustrated in Table 4.14. The proportion of land and buildings was categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100%. From the study, it was noted that majority (51.1%) of the respondents concurred that land and buildings actually took a very small (0-20%) proportion of the total SACCOs assets while only 28.9% of the respondents argued that land and buildings only account for between 41-60% of the total assets owned by the SACCOs. A few (13.3%) responded that the proportion of the land and buildings was only 61-80% while 6.7% of the respondents argued that the proportion of the land and buildings only accounted for 21-40% of the total assets. There was no response from the respondents for the category 81-100%. This implies that SACCOs do not tie the members' funds by investing in non-interest earning assets like the land and buildings which requires huge investments. SACCOs therefore have not invested in land and buildings and hence are not tying their capital (Maina, 2008).

**Table 4.14: Land and Buildings**

<b>Percentage of Land and Buildings</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	23	51.1
21-40%	3	6.7
41-60%	13	28.9
61-80%	6	13.3
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(b) Listed Company Shares**

The study also wanted to ascertain the proportion of limited company shares from the list of all assets held and owned by the SACCOs. The proportion of listed company shares was categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100% as shown in Table 4.15. The study findings revealed that the majority (71.1%) of the respondents concurred that only a very small proportion (0-20%) of

the total assets were held in form of shares from listed companies. Few (28.9%) of the respondents indicated that a proportion of between 21-40% were held in form of listed company shares. There were no responses from the respondents for the categories 41-60%, 61-80% and 81-100%. This implies that SACCOs do not invest their capital in financial assets like listed company shares which can be turned into cash within a short time (Maina, 2008).

**Table 4.15: Listed Company Shares**

<b>Percentage of Listed Company Shares</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	32	71.1
21-40%	13	28.9
41-60%	0	0.0
61-80%	0	0.0
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(c) Treasury Bills**

The study also wanted to establish the proportion of the treasury bills held by the SACCOs from the total assets. The proportion of treasury bills was categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100%. The results pertinent to this was analyzed in Table 4.16. The study found out that majority (66.7%) of the respondents agreed that SACCOs invested very little (0-20%) in form of treasury bills while 33.3% of the respondents indicated that treasury bills accounted for a proportion of between 21-40% of the total SACCOs assets. There were no responses from the respondents for the categories 41-60%, 61-80% and 81-100%. This implies that SACCOs do not invest heavily in financial assets like the treasury bills. Investment in treasury bills do not affect the cash flow position but only serves as a prudent way of cash management since it can be converted into cash within a short period of time. This was in line with Sam (2015) who carried out a study on the effect of cash management practices on the growth of Matatu SACCOs in Kimilili Sub-county, Bungoma County and found that SACCOs mostly invest in convertible securities in the short term.



**Table 4.16: Treasury Bills**

<b>Percentage of Treasury Bills</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	30	66.7
21-40%	15	33.3
41-60%	0	0.0
61-80%	0	0.0
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(d) Treasury Bonds**

The study also wanted to establish the proportion of the treasury bonds from the total assets owned by the SACCOs. The proportion of treasury bonds was categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100% as shown in Table 4.17. The study findings were that a majority (73.3%) of the total respondents agreed that only a small (0-20%) proportion of the total assets were owned in form of treasury bonds. Only 26.7% of the respondents argued that the investments in treasury bonds by the SACCOs only accounted for a proportion of between 21-40%. There were no responses from the respondents for the categories 41-60%, 61-80% and 81-100%. This implies that SACCOs uses very little members' funds to make financial investments in form of treasury bonds which are easily convertible into cash. The study was also in line with Sam (2015) who carried out a study on the effect of cash management practices on the growth of Matatu SACCOs in Kimilili Sub-county, Bungoma County and found that SACCOs mostly invest in convertible securities in the short term.

**Table 4.17: Treasury Bonds**

<b>Percentage of Treasury Bonds</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	33	73.3
21-40%	12	26.7
41-60%	0	0.0
61-80%	0	0.0
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(e) Off-shore Investments**

The study intended to establish the proportion of assets held by SACCOs in form of off-shore investments. Table 4.18 shows the proportion of the off-shore investment. The proportion of the off-shore investments was categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100%. From the study, it was noted that majority (73.3%) of the respondents agreed that off-shore investments accounted for only 0-20% of the total assets. A few (13.3%) of the respondents were indifferent that the proportion of offshore investments was between 21-40% and 41-60% of the total assets. There were no responses from the respondents for the categories 61-80% and 81-100%. This implies that SACCOs do not use the members' funds to make investments from abroad and therefore the only available funds were used to meet their objectives of loaning to their members. The study is in line with Mwithiga (2012) who carried a study on strategic responses adopted by SACCOs to the changing operation environment in the Kenyan financial sector and found that SACCOs' funds are invested prudentially to maximize their wealth.

**Table 4.18: Off-Shore Investments**

<b>Percentage of Off-Shore Investments</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	33	73.3
21-40%	6	13.3
41-60%	6	13.3
61-80%	0	0.0
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

**(f) Cash and Cash Equivalents**

The study also intended to establish the proportion of the cash and cash equivalents that was held by the SACCOs out of their total assets. The proportion of the cash and cash equivalents was categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100% as shown in Table 4.19. The study found out that 33.3% of respondents concurred that the proportion of the cash and cash equivalents out of the total assets stood at 41-60%. Only 31.1% agreed that the proportion of cash and cash equivalents stood at between 21-40% of the total assets while 22.2% of the

respondents argued that the cash and cash equivalents accounted for 61-80% of the total assets. Only 13.3% gave their views that the cash and cash equivalents only accounted for 0-20% of the total assets. There was no response from the respondents for the category 81-100%. This implies that SACCOs maintained cash balances in order to be liquid. They complied with the law that required them to maintain a liquidity level of at least 15% (SACCO Societies Act).

**Table 4.19: Cash and Cash Equivalents**

<b>Percentage of Cash and Cash Equivalents</b>	<b>Frequency</b>	<b>Percent</b>
0-20%	6	13.3
21-40%	14	31.1
41-60%	15	33.3
61-80%	10	22.2
81-100%	0	0.0
<b>Total</b>	<b>45</b>	<b>100.0</b>

#### **4.4 Descriptive Statistics**

The study requested respondents to give opinions in regard to liquidity management, net cash flows, credit lending, investment in non-core business and SACCOs' liquidity. The responses were on a scale of five points where 5, 4, 3, 2, and 1 represented strongly agree, agree, don't agree or disagree, disagree, and strongly disagree respectively. Their responses were assessed and analyzed. In this section, the findings in respect to the aforementioned are presented. The findings are presented in form of means and standard deviations.

##### **4.4.1 Liquidity Management and Liquidity of SACCOs**

The study assessed the views of the respondents concerning liquidity management and liquidity of SACCOs. The pertinent findings of the study are illustrated in Table 4.20. The study noted that respondents agreed (Mean = 4.93; Std Dev = 0.252) that proper liquidity management is vital to SACCO solvency. They also argued (Mean = 4.40; Std Dev = 0.618) that automation of SACCOs' operations has enhanced proper liquidity management. In addition, the respondents also concurred (Mean = 4.16; Std Dev = 1.043) that the statutory laws and provisions do affect SACCO's liquidity. Respondents disagreed (Mean = 2.88; Std Dev = 1.031) that proper identification of

risk ensures optimal liquidity is maintained. It therefore implies that SACCOs in Kirinyaga County uses proper liquidity management practices so as to remain liquid. It was also noted that the SACCOs had automated their operations and have adhered with the provisions of law. Liquidity risk management practices are important to the day to day operations of an entity (Ogol, 2011).

**Table 4.20: Descriptive Statistics for Liquidity Management**

Liquidity Management Statements	N	Min	Max	Mean	Std. Dev
1. Liquidity Risk: Proper liquidity management is vital to SACCO solvency	45	4	5	4.93	0.252
2. Management Information System: Automation of SACCO operations has enhanced proper liquidity management	45	3	5	4.40	0.618
3. Statutory Laws/Policies: Statutory laws & policies affects SACCO's liquidity	45	1	5	4.16	1.043
4. Risk Identification: Proper identification of risk ensures optimal liquidity is maintained.	45	1	5	2.88	1.031

#### **4.4.2 Net Cash Flows and Liquidity of SACCOs**

The opinions of the respondents in relation to net cash flows and liquidity of SACCOs in Kirinyaga County are outlined in Table 4.21. The findings illustrated that respondents admitted (Mean = 4.91; Std Dev = 0.288) that cash flow statements guides SACCO management in maintaining optimal liquidity. In addition, the respondents were in agreement (Mean =4.53; Std Dev = 0.588) that efficient cash management improves the liquidity position of the SACCO. The respondents also agreed that (Mean = 4.42; Std Dev = 0.621) cash flow position helps in determining the financial soundness of the SACCO. Respondents agreed (Mean = 4.33; Std Dev = 0.603) that members' contributions enhances the liquidity of SACCOs. This implies that it is always important for a SACCO to include the statement of cash flows in its financial statements since it guides its management in maintaining an optimal liquidity. It is noted that efficient cash management improves the liquidity of SACCOs. Cash flow position helps in determining the financial soundness of the SACCOs while members' contributions enhances the liquidity of SACCOs. Abioro (2013) studied cash management on the performance of manufacturing companies in Nigeria and found

out that the concept of efficient cash management and effective cash flow management procedures will lead to success of a business.

**Table 4.21: Descriptive Statistics for Net Cash Flows**

<b>Net Cash Flows Statements</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Dev</b>
1. Statement of Cash Flows: Cash flow statements guides management in maintaining optimal liquidity	45	4	5	4.91	0.288
2. Efficient Cash Management: Efficient cash management improves the liquidity position of the SACCO	45	3	5	4.53	0.588
3. Cash flow Position: Cash flow position helps in determining the financial soundness of the SACCO.	45	3	5	4.42	0.621
4. Members' Contribution: Members' contributions enhances the liquidity of the SACCO.	45	3	5	4.33	0.603

#### **4.4.3 Credit Lending and Liquidity of SACCOs**

The study further sought the opinions of the respondents in respect to credit lending in the SACCOs they worked with in Kirinyaga County. The findings are shown in Table 4.22. The study revealed that the respondents agreed (Mean = 4.60; Std Dev = 0.720) that proper credit assessment ensure high recovery of loans. The respondents also agreed (Mean = 4.56; Std Dev = 0.503) that effective credit risk management ensures high recovery of loans. In addition, respondents also strongly agreed (Mean = 4.47; Std dev = 0.625) that sound lending practices reduces level of bad-debts. Respondents agreed (Mean = 4.29; Std Dev = 0.458) that proper management of credit ensures minimal loan backlogs. This implies that proper credit assessment methods ensures high recovery of loans by employing effective credit risk management. It was also noted that sound lending practices reduces level of bad debts and that proper management of credit ensures minimal loan backlog. Lack of credit analysis, credit follow-ups as well as hostile lending are the key factors that contribute to poor performance in loan lending by SACCO Societies in Kenya (Mwaura, 2005).

**Table 4.22: Descriptive Statistics for Credit Lending**

<b>Credit Lending Statements</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Dev</b>
1. Credit Assessment Methods: Proper credit assessment ensure high recovery of loans	45	3	5	4.60	0.720
2. Credit Risk Management: Effective credit risk management ensures high recovery of loans	45	4	5	4.56	0.503
3. Sound Lending Practices: Sound lending practices reduces level of bad-debts	45	3	5	4.47	0.625
4. Loan Backlogs: Proper management of credit ensures minimal loan backlogs	45	4	5	4.29	0.458

#### **4.4.4 Investment in Non-Core Business and Liquidity of SACCOs**

The study further sought to determine the extent to which the respondents agreed or disagreed with the statements provided in respect to investment in non-core business in the SACCOs. The pertinent results are shown in Table 4.23. It was noted that respondents agreed (Mean = 4.51; Std Dev = 0.589) that evaluations, appraisals & reviews of investment projects ensures maximum return to the members of a SACCO. Respondents also agreed (Mean = 4.49; Std Dev = 0.506) that near cash investments enables SACCOs to maintain liquidity position. Respondents were also in agreement (Mean = 4.36; Std Dev = 0.613) that adhering to statutory provisions ensures optimal liquidity is maintained. The respondents concurred (Mean = 4.31; Std Dev = 0.874) that diverting members' funds greatly affect SACCO liquidity. It therefore implies that investments projects appraisals are important since they ensure maximum returns to the members who are the providers of capital. Management of investments in both short term and long term financial and non-financial assets is important since it directly contributes to the maximization of a business's profitability, liquidity and total performance (Njeru *et al.*, 2015).

**Table 4.23: Descriptive Statistics for Investment in Non-Core Business**

<b>Investment in Non-Core Business Statements</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Dev</b>
1. Evaluations, Appraisals & Reviews of Investment projects: Proper investment appraisal ensures maximum return	45	3	5	4.51	0.589
2. Near Cash Investments: Near cash investments enables SACCOs to maintain liquidity position	45	4	5	4.49	0.506
3. Statutory Provisions: Adhering to statutory provisions ensures optimal liquidity is maintained	45	3	5	4.36	0.613
4. Diverting Members' Funds: Diverting members' funds greatly affect SACCO liquidity	45	3	5	4.31	0.874

#### **4.4.5 Liquidity of SACCOs**

Lastly, the respondents were asked to indicate their level of agreement or disagreement regarding propositions floated to them regarding the liquidity of SACCOs. Table 4.24 illustrates the findings. Respondents concurred (Mean = 4.40; Std Dev = 0.618) that proper liquidity contingency plans enable SACCO to uphold liquidity position. In addition, it was also agreed (Mean = 4.40; Std Dev = 0.495) that adhering to liquidity level ensure optimal liquidity is maintained. The respondents were also in agreement (Mean = 4.22; Std Dev = 0.560) that liquidity gap helps in maintaining SACCO liquidity level. It was agreed (Mean = 4.20; Std Dev = 0.405) that liquidity ratios help in tracking the SACCO liquidity position. This implies that SACCOs hold and maintain minimum liquidity, develop and implement contingency liquidity plans so as to effectively serve their members. Satisfaction and meeting member's needs has been in forefront for every financial institution including SACCOs and hence the necessity of optimal liquidity to these institutions (Song'e, 2015).

**Table 4.24: Descriptive Statistics for Liquidity of SACCOs**

Liquidity Statements	N	Min	Max	Mean	Std. Dev
1. Contingency Liquidity Plans: Proper liquidity contingency plans enable SACCO to uphold liquidity position	45	3	5	4.40	0.618
2. Liquidity Level: Adhering to liquidity level ensure optimal liquidity is maintained	45	4	5	4.40	0.495
3. Liquidity Gap: A liquidity gap helps in maintaining SACCO liquidity level	45	3	5	4.22	0.560
4. Liquidity Ratios: Liquidity ratios help in tracking the SACCO liquidity position	45	4	5	4.20	0.405

#### **4.5 Inferential Findings**

This section puts into perspective the relationship between the independent variables and the dependent variable. The study established the relationship between liquidity management, net cash flows, credit lending, investment in non-core business and, liquidity of the SACCOs. Therefore, the section outlines the results of both correlation and multiple regression analysis.

##### **4.5.1 Relationship between Liquidity Management and Liquidity of SACCOs**

The relationship between liquidity management and liquidity of SACCOs was determined. Table 4.25 shows the results of correlation analysis. From the study, it was noted that there was a moderate statistically significant correlation between liquidity management and liquidity of SACCOs ( $r = 0.546$ ;  $p < 0.05$ ). This means that increased liquidity management significantly relate to increased liquidity of SACCOs. Therefore, SACCOs in Kirinyaga County were liquid hence able to honour short-term and long-term obligations and furthermore fund the ongoing operations. The findings are in line with the Basel Committee on Banking Supervision report (2008) on principles for sound liquidity risk management and supervision.



**Table 4.25: Correlation between Liquidity Management and Liquidity of SACCOs**

		Liquidity of SACCOs
<b>Liquidity Management</b>	Pearson Correlation	.546**
	Sig. (2-tailed)	.000
	N	45

\*\* . Correlation is significant at the 0.05 level (2-tailed).

#### 4.5.2 Relationship between Net Cash Flows and Liquidity of SACCOs

The relationship between the net cash flows and liquidity of SACCOs was determined. Table 4.26 shows the results of correlation analysis. The study findings noted that there was a positive and statistically significant relationship between net cash flows and liquidity of SACCOs ( $r = 0.434$ ;  $p < 0.05$ ). This means that changes in net cash flows correlate with changes in liquidity of SACCOs. This implies that there is need for careful planning and monitoring of cash flows over time so as to determine the optimal cash to hold (Njeru *et al.*, 2015).

**Table 4.26: Correlation between Net Cash Flows and Liquidity of SACCOs**

		Liquidity of SACCOs
<b>Net Cash Flows</b>	Pearson Correlation	.434**
	Sig. (2-tailed)	.003
	N	45

\*\* . Correlation is significant at the 0.05 level (2-tailed).

#### 4.5.3 Relationship between Credit Lending and Liquidity of SACCOs

The study examined the relationship between credit lending and liquidity among SACCOs in Kirinyaga County. The results of correlation analysis are shown in Table 4.27. The findings indicated that credit lending and liquidity of SACCOs had positive and statistically significant relationship ( $r = 0.449$ ;  $p < 0.05$ ). This means that increases or decreases in credit lending significantly relate to increases or decreases in liquidity of SACCOs. This implies that a SACCO's sustainability and financial viability depends on sound lending procedures and effective credit risk management practices (Lagat *et al.*, 2013).

**Table 4.27: Correlation between Credit Lending and Liquidity of SACCOs**

		<b>Liquidity of SACCOs</b>
<b>Credit Lending</b>	Pearson Correlation	.449**
	Sig. (2-tailed)	.002
	N	45

\*\* . Correlation is significant at the 0.05 level (2-tailed).

#### **4.5.4 Relationship between Investment in Non-Core Business and Liquidity of SACCOs**

The study determined how investment in non-core business is correlated to the liquidity of SACCOs. Table 4.28 displays the results. The study established that there existed a positive, moderately weak but statistically significant ( $r = 0.323$ ;  $p < 0.05$ ) correlation between investment in non-core business and liquidity of SACCOs. Investment in non-core business significantly and moderately affected liquidity of SACCOs. The findings are in line with Okundi (2011) carried out a study on the financial challenges facing SACCOs in Nairobi and concluded that SACCOs suffered challenges in meeting loan requests by the members partly due to long term investments they engage in.

**Table 4.28: Correlation between Investment in Non-Core Business and Liquidity of SACCOs**

		<b>Liquidity of SACCOs</b>
<b>Investment in Non-Core Business</b>	Pearson Correlation	.323**
	Sig. (2-tailed)	.030
	N	45

\*\* . Correlation is significant at the 0.05 level (2-tailed).

#### **4.6 Regression Analysis**

The study evaluated how the financial factors under study (liquidity management, net cash flows, credit lending and investment in non-core business) affected liquidity of SACCOs in Kirinyaga County. Using multiple regression analysis and Analysis of Variance (ANOVA), the combined effect of liquidity management, net cash flows,

credit lending and investment in non-core business on liquidity of SACCOs was established.

Table 4.29 shows the relationship between financial factors under investigation and liquidity of SACCOs. The findings indicate that the relationship was positive and strong ( $R = 0.637$ ). The coefficient of determination ( $r^2 = 0.405$ ) shows that 40.5% of the liquidity could be attributed to the financial factors under investigation, that is, liquidity management, net cash flows, credit lending and investment in no-core business. The findings gave emphasis to the importance of financial factors on liquidity. The 59.5% of the liquidity of SACCOs resulted from other non-financial factors such as industry specific factors, economic factors among others not investigated by the current study.

**Table 4.29: Regression Analysis Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.637 <sup>a</sup>	.405	.346	.88415

a. Predictors: (Constant), Investment in non-core business, Credit lending, Net cash flows, Liquidity management

b. Dependent Variable: Liquidity

#### 4.6.1 Analysis of Variance

F statistics was used to test whether the overall model was statistically predicting that independent variables (Liquidity management, Net cash flows, Credit lending and Investment in non-core business) has effect on liquidity of SACCOs in Kirinyaga County. The ANOVA results are illustrated in Table 4.30. According to the ANOVA results the association between the financial factors under study and liquidity of SACCOs was positive and significant as indicated by the F calculated ( $F = 6.815$ ;  $P < 0.05$ ). This implies that there is strong evidence that the regression model developed is statistically significant and the variation in the results is insignificant.

**Table 4.30: Analysis of Variance (ANOVA)**

<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	21.309	4	5.327	6.815	.000 <sup>b</sup>
Residual	31.269	40	0.782		
Total	52.578	44			

a. Dependent Variable: Liquidity

b. Predictors: (Constant), Investment in non-core business, Credit lending, Net cash flows, Liquidity management

#### 4.6.2 Overall Regression Model

Table 4.31 shows the overall significant test results for the hypothesized research model. The interpretations of the findings indicated follow the following regression model.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Therefore,

$$Y = 5.270 + 0.285X_1 + 0.079X_2 + 0.243X_3 + 0.076X_4$$

From the model, it is clear that, all the variables are positively related to the dependent variable as all the coefficients are positive. From the equation, it was noted that holding the financial factors (liquidity management, net cash flows, credit lending, and investment in non-core business) constant, the liquidity of the SACCOs would be 5.270. This would be as a result of other factors not investigated in the study. Further, the results show that, liquidity management has a positive relationship with liquidity of SACCOs where a unit increase in liquidity management, a 0.285 unit increase in liquidity is predicted, holding all other variables constant. From the model, it is also clear that for every unit increase in net cash flows, there is expected 0.079 unit increase in the liquidity, holding all other variables constant. For every unit increase in credit lending, there is an expected an approximately 0.243 unit increase in liquidity, holding all other variables constant. For every unit increase in investment in non-core business, there is an expected 0.076 unit increase in the liquidity.

At 95% confidence level, the regression test results indicated that the effect of liquidity management ( $t = 2.371$ ;  $p < 0.05$ ) and credit lending ( $t = 2.061$ ;  $p < 0.05$ ) were statistically significant to the liquidity of SACCOs. However, the effect of net

cash flows ( $t = 0.772$ ;  $p > 0.05$ ) and investment in non-core business ( $t = 0.819$ ;  $p > 0.05$ ) were statistically insignificant to the liquidity of SACCOs. This illustrates that efforts of creating a unit change in liquidity management would see the SACCOs experiencing significant changes in terms of liquidity. Credit lending was also evaluated to be significantly affecting liquidity of SACCOs and thus, cautious credit lending in SACCOs would result to helpfulness in liquidity of SACCOs.

**Table 4.31: Regression Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	T	
(Constant)	5.270	2.598		2.028	.049
Liquidity Management	.285	.120	.357	2.371	.023
Net cash flows	.079	.102	.121	.772	.445
Credit lending	.243	.118	.271	2.061	.046
Investment in non-core business	.076	.093	.112	.819	.418

a. Dependent Variable: Liquidity

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary, conclusions and recommendations of the study on determining the effect of financial factors on liquidity of Savings and Credit Co-operative Societies in Kirinyaga County. Also highlighted in this chapter are possible suggestions for further research.

#### 5.2 Summary of Findings

The study findings are summarized and presented in this section. The summary is in line with the study objectives. To address the aim of the study, inferential statistics were conducted where correlation analysis was used to study the association between the variables and regression analysis undertaken to study the relationship between the variables. A multiple regression analysis was conducted to develop the regression model relating to the study variables. The significance of the results was tested at 5% level in a 2-tailed test.

##### 5.2.1 Liquidity Management

Maintaining a robust liquidity management is very challenging and difficult in a current competitive and open economic system with strong external influences and sensitive market players. The study revealed that proper liquidity management is vital to SACCO solvency and that automation of SACCOs' operations has enhanced proper liquidity management. Moreover, the statutory laws and provisions usually affect SACCO's liquidity. However, respondents disagreed that proper identification of risk ensures optimal liquidity is maintained. Liquidity risk management practices are important to the day to day operations of an entity. This means that increased liquidity management considerably relate to increased liquidity of SACCOs.

##### 5.2.2 Net Cash Flows

The study found that it is always important for a SACCO to include the statement of cash flows in its financial statements since it guides its management in maintaining an optimal liquidity. It is noted that efficient cash management improves the liquidity of SACCOs. Cash flow position helps in determining the financial soundness of the SACCOs while members' contributions enhances the liquidity of SACCOs. This

illustrates that efforts of making changes in liquidity management would see the SACCOs experiencing weighty growth in terms of liquidity. This means that changes in net cash flows connect with changes in liquidity of SACCOs.

### **5.2.3 Credit Lending**

The study noted that proper credit assessment methods ensures high recovery of loans by employing effective credit risk management. It was also noted that sound lending practices reduces level of bad debts and that proper management of credit ensures minimal loan backlog. Lack of credit analysis, credit follow-ups as well as hostile lending are the key factors that contribute to poor performance in loan lending by SACCOs. This means that increases or decreases in credit lending expressively relate to increases or decreases in liquidity of SACCOs. Thus cautious credit lending in SACCOs would result to helpfulness in liquidity of SACCOs. SACCO's sustainability and financial viability depends on sound lending procedures and effective credit risk management practices.

### **5.2.4 Investment in Non-Core Business**

It was noted that respondents agreed that evaluations, appraisals & reviews of investment projects ensures maximum return to the members of a SACCO and that near cash investments enables SACCOs to maintain liquidity position. It was agreed that adhering to statutory provisions ensures optimal liquidity is maintained and that diverting members' funds greatly affect SACCO liquidity. This indicates that, proper appraisal of investment projects and investing members' funds only in interest-earning assets would result to increases in the liquidity of SACCOs.

### **5.2.5 Liquidity of SACCOs**

SACCOs are always striving to maintain their liquidity at safe levels. This move is informed by the need to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. Liquidity can be understood in terms of flows. Inability of realizing these flows would render the financial entity illiquid. Respondents concurred that proper liquidity contingency plans enable SACCO to uphold liquidity position and that adhering to liquidity level ensure optimal liquidity is maintained. The study also noted that liquidity gap helps in maintaining SACCO liquidity level and that liquidity ratios help in tracking the SACCO liquidity position.

### **5.3 Conclusions**

The objective of the study was to establish the effect of financial factors on the liquidity of SACCOs. It was noted that liquidity management and credit lending were the most important financial factors that affected the liquidity of SACCOs in Kirinyaga County. The study concluded that efforts of creating a unit change in liquidity management would see the SACCOs experiencing significant change in terms of liquidity. Credit lending was also evaluated to be significantly affecting liquidity of SACCOs and thus, cautious credit lending in SACCOs would result to helpfulness in liquidity of SACCOs.

The study concluded that SACCOs in Kirinyaga County mostly capitalized on liquidity management and as such it affected the SACCOs' liquidity position. In addition, the study concluded that it was critical for SACCOs to have adequate liquidity in order to ensure that they meet short term maturing obligations.

### **5.4 Recommendations of the Study**

The contribution of SACCOs in Kenyan economy cannot be ignored. However, this contribution has been affected in the recent past by some financial factors. To address this, SACCOs should have a management structure in place to effectively execute their financial strategies to enhance liquidity. They must ensure that liquidity is effectively managed on a regular and timely basis and that appropriate policies and procedures are established to limit and control material sources of funding liquidity risk. SACCOs should manage the demand and supply of liquidity in an appropriate manner in order to safely run their business, maintain good relations with the stakeholders and avoid liquidity problem. The SACCOs' board of directors should be informed regularly of the liquidity position of the firm, and immediately notified if there are any material changes in the SACCOs' current or prospective liquidity positions.

SACCOs should also reconsider their loan recovery strategies and collateral for their loans and advances. For example, members' non-withdrawable deposits and guarantors are not adequate measures to loan delinquency. SACCOs should bring in the idea of loan insurance (loan guard) like commercial banks other financial institutions in order to cushion their members from unnecessary burden from defaulted loans and collaterals. There is also need for the government and the regulator



(SASRA) to introduce a SACCO system driven Central Finance Facility (CFF) to aid in liquidity management. This will enable control of liquidity in the SACCOs and also help on overnight borrowing to assist the SACCOs assess the cash during cash shortage and release cash surpluses when there is excess funds. It will also facilitate competitiveness of SACCOs as alternative financial service providers in line with Vision 2030 and the Medium-Term Plan for the Financial Sector.

### **5.5 Suggestions for Further Research**

This study focused on the effect of financial factors on the liquidity of savings and credit co-operatives societies operating in Kirinyaga County. It is recommended that another study should be conducted to establish whether similar results would be replicated in other financial institutions such as commercial banks, insurance companies and Micro Finance Institutions (MFIs).

The study also recommends that a further study should be carried out to determine the challenges facing the SACCOs in their quest to ensure implementation of SASRA regulations such as capital adequacy and liquidity requirements and at the same time meet the demands of their members.

A study should also be carried out to establish the effect of non-financial factors on liquidity of the non-deposit-taking SACCOs. This will help to establish if the results obtained with the deposit-taking SACCOs also apply to the entire SACCO industry.

## REFERENCES

- ACCOSCA (African Confederation of Co-operative Savings and Credit Associations). (2011). Using Co-operative Model to Tackle Challenges in Africa. *Monthly Newsletter*, 3(11), 2-3.
- Ademba, C. (2010). Challenges Facing Sacco Regulatory Framework in Africa. *SACCO Supervision Annual Report*. 1(2), 6-7.
- Basel Committee on Banking Supervision. (2008). *Principles for Sound Liquidity Risk Management and Supervision*. Available at: [www.bis.org/publ/bcbs138.htm](http://www.bis.org/publ/bcbs138.htm).
- Brunnermeier, M. & Pedersen, L. H. (2009). Market Liquidity and Funding Liquidity. *Review of Financial Studies*, 22(6), 201-238.
- Co-operative Bank of Kenya. (2013). *The History of Co-operative Bank of Kenya*. Retrieved from <http://co-opbank.co.ke/index.php/about-us/history>.
- Cooper, D. R., Schindler, P. S. (2007). *Business Research Methods*. Berkshire: McGrawHill Education.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Los Angeles: CA, Sage Publications.
- Crowe, K. (2009). Liquidity Risk Management – more important than ever. *Harland Financial Solutions*, 5(2), 3.
- Dawson, C. (2009). *Introduction to Research Methods*. A practical Guide for Anyone Undertaking a Research Project. London: Newtec.
- Essendi, L. K. (2013). *Effect of Credit Risk Management on Loans Portfolio among SACCOs in Kenya*. Nairobi: University of Nairobi.
- Godfrey, M. (2015). Liquidity and Bank Performance. *International Business & Economics Research Journal*, 4(3), 12-29.
- Goodhart, C. (2008). Liquidity Risk Management. *Financial Stability Review*, 11(6).
- Huseyin, Y. (2011). Another Perspective to Corporate Cash Management: A New Model and Definition. *International Journal of Humanities and Social Science*, 1(11), 302-313.
- ICA (International Co-operative Alliance). (2007). *Statement on the Co-operative Identity*. Available from the University of Wisconsin Center for Co-operatives at [Http://www.wisc.edu/uwcc/rin-html](http://www.wisc.edu/uwcc/rin-html).
- Kamonjo, K. L. (2014). *Corporate Governance Practice and its Effect on Financial Performance in SACCOs. A Case Study of Urban SACCOs in Kirinyaga County-Kenya*. Nairobi: Kenyatta University.

- Karagu, J. M., & Okibo, B. (2014). Financial Factors Influencing Performance of Savings and Credit Co-operative Organization in Kenya. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(2), 295-306.
- Keitany, N. J. (2013). *Relationship between Loan Default and the Financial Performance of SACCOs in Kenya*. Nairobi: University of Nairobi.
- Kilonzi, B. K. (2012). *Assessments of Impacts of SASRA Regulations on Financial Performance of SACCOs in Kenya, Case Study of 30 SACCO's in Nairobi County*. Nairobi: Kenyatta University.
- Kimathi, P. M. (2014). *The Effect of Financing Strategies on the Liquidity of Savings and Credit Co-operatives Societies Licensed by SACCO Societies Regulatory Authority operating in Nairobi County*. Nairobi: University of Nairobi.
- Kinyua, J. (2013). *Role of Financial Management Practices in the Performance of Public Service Vehicle Savings and Credit Co-operative Societies in Kenya*. Nairobi: University of Nairobi.
- Kipngetch, S., & Muturi, W. (2015). Effect of Credit Risk Management on Financial Performance of Savings and Credit Co-operative Society. *The Strategic Journal of Business & Change Management*, 2(44), 900-915.
- Kiragu, D. N. (2014). *The Effect of SACCO Societies Regulatory Authority's Regulations on Financial Performance of SACCOs in Nairobi County*. Nairobi: University of Nairobi.
- Kithunzi, M. (2009). *Effectiveness of Guarantorship in Loan Recovery in Co-operative Societies in Kenya: Case study of Mwalimu SACCO*. Nairobi: University of Nairobi.
- KUSCCO. (2009). *SACCO Star Magazine*. 1(54), 9-13. Nairobi, Kenya.
- Lagat, F. K., Mugo, R., & Otuya, R. (2013). Effect of Credit Risk Management Practices on Lending Portfolio among Savings and Credit Co-operatives in Kenya. *European Journal of Business and Management*, 5(19).
- Maina, H. (2011). *Relationship between the Liquidity and Profitability of Oil Companies in Kenya*. Nairobi: University of Nairobi.
- Maina, J. N., Kinyariro, D. K., & Muturi, H. M. (2016). Influence of Credit Risk Management Practices on Loan Delinquency in Savings and Credit Co-operative Societies in Meru County, Kenya. *International Journal of Economics, Commerce and Management*. United Kingdom, 4(2), 763-773.

- Miriti, J. M. (2014). *Factors Influencing Financial Performance of Savings and Credit Co-operatives. A case of Capital SACCO, Meru County, Kenya.* Nairobi: University of Nairobi.
- Mugenda, M., & Mugenda, G. A. (2011). *Research Methods; Quantitative and Qualitative Approaches.* Nairobi: Laba Graphics Services.
- Muraguri, J. K. (2014). *The Effect of Liquidity on the Return on Investments for SACCOs in Nairobi.* Nairobi: University of Nairobi.
- Muriuki, (2013). *Investigation into the Cash Balance Management Approaches in Saving and Credit Co-operative Societies (SACCOS) in Nakuru County, Kenya.* Nakuru: Egerton University.
- Murugu, H. M. (2012). *Effect of Credit Risk Management Practices on the Performance of SACCOs in Kenya. A case of Nairobi Based SACCOs.* Nairobi: University of Nairobi.
- Mwithiga, R. W. (2012). *Strategic Responses Adopted by SACCOs to the Changing Operation Environment in the Kenyan Financial Sector. A case of Nairobi Based SACCOs with Front Office Service Activity.* Nairobi: Kenyatta University.
- Ng'ang'a, S. I., Kosgei, Z. K., & Gathuthi, E. W. (2008). *Management Research Methods. A Learner's Guide.* Nairobi: African Center for Technology Studies (ACTS) Press.
- Njeru, M. D., Njeru, M. A, Memba, F., & Ondabu, I. T. (2015a). Effect of Cash Management on Financial Performance of Deposit Taking SACCOs in Mt. Kenya Region. *International Journal of Scientific and Research Publications*, 5(2), 124-133.
- Njeru, M. D., Njeru, M. A, Memba, F., & Ondabu, I. T. (2015b). Effect of Loan Repayment on Financial Performance of Deposit Taking SACCOs in Mt. Kenya Region. *International Journal of Innovation and Applied Studies*, 10(4), 238-244.
- Njeri, M. M. (2014). *The Effect of Liquidity on Financial Performance of Deposit Taking Microfinance Institutions in Kenya.* Nairobi: University of Nairobi.
- Obbuyi, P. I. (2014). *The Effect of Credit Rating Policies on the Loan Uptake in Savings and Credit Co-operatives (SACCOs) in Nairobi County.* Nairobi: University of Nairobi.

- Odhiambo, J. (2013). *The Relationship between Working Capital Management and Financial Performance of Deposit Taking Savings and Credit Co-operative Societies Licensed by SACCO Societies Regulatory Authority in Nairobi County*. Nairobi: University of Nairobi.
- Ogol, G. O. (2011). *Liquidity Risk Management Practices in Microfinance Institutions in Kenya*. Nairobi: University of Nairobi.
- Okundi, H. O. (2011). *Financial Challenges Facing Savings and Credit Co-operative Societies in Kenya: Case of SACCOS in Nairobi*. Nairobi: University of Nairobi.
- Ombado, G. (2010). Identifying and Maximizing SACCO's Potential. *ACCOSA Newsletter*. 2(2), 2-6.
- Omino, P. A. (2014). *Liquidity Risk Mitigation Measures and Financial Performance of Savings and Credit Co-operative Societies (SACCOs) in Kisumu County*. Nairobi: University of Nairobi.
- Owino, E. O. (2011). *The Relationship between Liquidity and Leverage of Companies Quoted at the Nairobi Securities Exchange*. Nairobi: University of Nairobi.
- Polit, D., & Beck, C. (2003). *Research Principles and Methods*, (7th Ed.). Lippincott.
- SACCO Societies Act. (2008). *Kenya Gazette Supplement No. 98 (Acts No. 14)*. Nairobi: The Government Printer.
- Sam, N. W. (2015). Effect of Cash Management Practices on the Growth of Matatu SACCOs in Kimilili Sub-county, Bungoma County. *The International Journal of Business & Management*, 3(1), 78-89.
- SASRA. (2012). Licensed Deposit Taking SACCOs. *SACCO Supervision Annual Report 2012*. Nairobi: SACCO Societies Regulatory Authority, 1(2), 7-16.
- SASRA. (2013). *Deposit-Taking SACCOs Licensed by the SACCO Societies Regulatory Authority*. Retrieved from [http://www.sasra.go.ke/downloads/Licensed\\_Saccos\\_2013.pdf](http://www.sasra.go.ke/downloads/Licensed_Saccos_2013.pdf).
- Song'e, H. K. (2015). *The Effect of Liquidity Management on the Financial Performance of Deposit Taking SACCOs in Nairobi County*. Nairobi: University of Nairobi.
- WOCCU (World Council of Credit Unions). (2013). *Member Statistics*. Retrieved from <http://www.woccu.org/about/intlucusystem>.

Zikmund, W. G., Babin B. J. & Graffin, M. (2010). *Business Research Methods*.  
Mason, Ohio: South-Western.



- Very constrained { }
- Averagely constrained { }
- Not constrained { }

10. The average monthly loan repayment from members is within which range in your SACCO.

- 0-20% { }                      61-80% { }
- 21-40% { }                      81-100% { }
- 41-60% { }

11. Kindly indicate the proportion in which the SACCO loan portfolio falls:

	0-20%	21-40%	41-60%	61-80%	81-100%
Performing	{ }	{ }	{ }	{ }	{ }
Watch	{ }	{ }	{ }	{ }	{ }
Substandard	{ }	{ }	{ }	{ }	{ }
Doubtful	{ }	{ }	{ }	{ }	{ }
Loss	{ }	{ }	{ }	{ }	{ }

12. How do you rate the level in which the SACCO undertakes new investments?

- Very high { }
- High { }
- Moderate { }
- Low { }
- None { }

13. Indicates the proportion of the following assets in relation to the total SACCO assets.

	0-20%	21-40%	41-60%	61-80%	81-100%
Land and buildings	{ }	{ }	{ }	{ }	{ }
Listed Company Shares	{ }	{ }	{ }	{ }	{ }
Treasury bills	{ }	{ }	{ }	{ }	{ }
Treasury bonds	{ }	{ }	{ }	{ }	{ }
Off shore investments	{ }	{ }	{ }	{ }	{ }
Cash and cash equivalent	{ }	{ }	{ }	{ }	{ }



## SECTION B: LIQUIDITY MANAGEMENT

This section has statements regarding the effect of liquidity management on liquidity of SACCOs. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes using a tick (✓) or a cross mark (x).

Liquidity Management Statement		Strongly Agree	Agree	Don't Agree or Disagree	Disagree	Strongly Disagree
		5	4	3	2	1
1.	<b>Liquidity risk:</b> Proper liquidity management is vital to SACCO solvency.	[ ]	[ ]	[ ]	[ ]	[ ]
2.	<b>Statutory laws/policies:</b> Statutory laws & policies affects SACCOs' liquidity.	[ ]	[ ]	[ ]	[ ]	[ ]
3.	<b>Management information systems:</b> Automation of SACCO operations has enhanced proper liquidity management.	[ ]	[ ]	[ ]	[ ]	[ ]
4.	<b>Risk identification:</b> Proper identification of risk ensures optimal liquidity is maintained.	[ ]	[ ]	[ ]	[ ]	[ ]

## SECTION C: NET CASH FLOWS

This section has statements regarding the effect of net cash flows on liquidity of SACCOs. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes using a tick (✓) or a cross mark (x).

Net Cash Flows Statement		Strongly Agree	Agree	Don't Agree or Disagree	Disagree	Strongly Disagree
		5	4	3	2	1
1.	<b>Statement of cash flows:</b> Cash flow statement guides management in maintaining optimal liquidity.	[ ]	[ ]	[ ]	[ ]	[ ]
2.	<b>Cash flow position:</b> Cash flow position helps in determining the financial soundness of the SACCO.	[ ]	[ ]	[ ]	[ ]	[ ]
3.	<b>Efficient cash management:</b> Efficient cash management improves the liquidity position of the SACCO	[ ]	[ ]	[ ]	[ ]	[ ]
4.	<b>Members' contributions:</b> Members contribution enhances the liquidity of the SACCO	[ ]	[ ]	[ ]	[ ]	[ ]

## SECTION D: CREDIT LENDING

This section has statements regarding the effect of credit lending on liquidity of SACCOs. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes using a tick (✓) or a cross mark (x).

Credit Lending Statement		Strongly Agree	Agree	Don't Agree or Disagree	Disagree	Strongly Disagree
		5	4	3	2	1
1.	<b>Credit assessment methods:</b> Proper credit assessment ensure high recovery of loans.	[ ]	[ ]	[ ]	[ ]	[ ]
2.	<b>Sound lending practices:</b> Sound lending policies reduces level of bad-debts.	[ ]	[ ]	[ ]	[ ]	[ ]
3.	<b>Loan backlogs:</b> Proper management of credit ensures minimal loan backlogs.	[ ]	[ ]	[ ]	[ ]	[ ]
4.	<b>Credit risk management:</b> Effective credit risk management ensures high recovery of loans.	[ ]	[ ]	[ ]	[ ]	[ ]

## SECTION E: INVESTMENT IN NON-CORE BUSINESS

This section has statements regarding the effect of investment in non-core business on liquidity of SACCOs. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes using a tick (✓) or a cross mark (x).

Investment in Non-core Business Statement		Strongly Agree	Agree	Don't Agree or Disagree	Disagree	Strongly Disagree
		5	4	3	2	1
1.	<b>Diverting members' funds:</b> Diverting members' funds greatly affect SACCO liquidity.	[ ]	[ ]	[ ]	[ ]	[ ]
2.	<b>Evaluations, appraisals and reviews of investment projects:</b> Proper investment appraisal ensures maximum return.	[ ]	[ ]	[ ]	[ ]	[ ]
3.	<b>Statutory provisions:</b> Adhering to statutory provision ensures optimal liquidity is maintained.	[ ]	[ ]	[ ]	[ ]	[ ]
4.	<b>Near-cash investments:</b> Near cash investments enables SACCO to maintain liquidity position.	[ ]	[ ]	[ ]	[ ]	[ ]

## SECTION F: LIQUIDITY

This section has statements regarding the liquidity of SACCOs. Kindly respond with the response that matches your opinion. Please tick as appropriate in the boxes using a tick (✓) or a cross mark (x).

Liquidity Statement		Strongly Agree	Agree	Don't Agree or Disagree	Disagree	Strongly Disagree
		5	4	3	2	1
1.	<b>Contingency liquidity plans:</b> Proper liquidity contingency plans enable SACCO to uphold liquidity position.	[ ]	[ ]	[ ]	[ ]	[ ]
2.	<b>Liquidity level:</b> Adhering to liquidity level ensure optimal liquidity is maintained.	[ ]	[ ]	[ ]	[ ]	[ ]
3.	<b>Liquidity ratios:</b> Liquidity ratios help in tracking the SACCO liquidity position.	[ ]	[ ]	[ ]	[ ]	[ ]
4.	<b>Liquidity gap:</b> A liquidity gap helps in maintaining SACCO liquidity level.	[ ]	[ ]	[ ]	[ ]	[ ]

## APPENDIX II: RECORD SURVEY SHEET

The record survey sheet will be filled by using the data from the audited financial statements of SACCOs for three years from 2013 to 2015.

	<b>2013</b>	<b>2014</b>	<b>2015</b>
Turnover			
Total expenditure			
Total assets			
Share capital			
Cash and cash equivalents			
Net loan portfolio			
Members' deposits			