

**THE EFFECT OF LIQUIDITY ON THE RETURN ON INVESTMENTS FOR  
SACCOSIN NAIROBI**

**BY:**

**MURAGURI J. KABURE**

**D63/60247/2013**

**A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTERS OF  
SCIENCEIN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI**

**NOVEMBER,2014**

## **DECLARATION**

I certify that this research project is my original work and has not been presented for examination at any University.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

**Muraguri Joseph Kabure**

**D63/60247/2013**

This research project has been presented for examination with my approval as the University Supervisor.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

**Dr. Aduda Josiah O.**

**Senior Lecturer & Dean, School of Business**

University of Nairobi

## **DEDICATION**

This study is dedicated to my wife and son for their unending support and encouragement throughout the project.

## **ACKNOWLEDGEMENT**

The completion of this project relied not only on the work of the author but on the assistance of many unseen parties. First, I thank God for seeing me through all the various stages and few challenges encountered in the study. My sincere thanks and acknowledgement go to my supervisor, Dr. Aduda for his guidance, patience, support and eye for detail throughout the study.

I acknowledge the assistance and encouragement of my friends, relatives and colleagues who dedicated their time and energy when needed. God bless you.

Thank you all!

## ABSTRACT

The coming into force of the SASRA regulations in Kenya changed the way deposit-taking Saccos managed their business. Capital adequacy requirements and liquidity thresholds were introduced. To meet these requirements, Saccos had to reduce on the interest rebates to their members while also retaining more to build on their institutional capital. This study's main objective was to establish the effect that liquidity has on the investments in the deposit-taking Saccos in Nairobi. It also looked at how this liquidity was related to other variables such as capital adequacy and management efficiency. It also looked at whether capital adequacy and management efficiency had a role to play in the investments of these Saccos. The study applied a descriptive analysis approach using regression analysis to analyse the data collected. A random sample from the population of SASRA licensed Saccos in Nairobi was taken and secondary financial data collected for the Saccos in this sample. A linear regression model of the returns on investments versus liquidity and capital adequacy was used to test the relationship between the variables. The study found that liquidity had a positive impact on the return on investments in the Saccos while capital adequacy had a negative influence on the returns. Given this positive effect of liquidity on the returns in investment, the study recommends that the regulations regarding management of liquidity in the deposit-taking Saccos be reviewed to allow the Saccos diversify their investments in high earning portfolios such as listed companies. In addition the study recommends that a central depository fund for Saccos be set up to help Saccos have a cheaper avenue for short term borrowing to help address seasonal liquidity challenges. The study also recommends that the taxation laws regarding withholding tax in financial institutions be clearly expounded to protect the Saccos from double taxation when they put their funds in term deposits with banks.

## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iv</b>
<b>ABSTRACT.....</b>	<b>v</b>
<b>LIST OF TABLES .....</b>	<b>viii</b>
<b>LIST OF ACRONYMS AND ABBREVIATIONS .....</b>	<b>ix</b>
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1    Background of the Study.....	1
1.1.1    Liquidity of Credit Unions .....	1
1.1.2    Investments of Credit Unions .....	2
1.1.3    Credit Union Liquidity and Investments.....	3
1.1.4    SACCOS in Nairobi.....	3
1.1.5    SASRA.....	6
1.2    Research Problem .....	7
1.3    Objective of the Study.....	9
1.4    Value of the Study .....	10
<b>CHAPTER TWO: LITERATURE REVIEW.....</b>	<b>12</b>
2.1    Introduction.....	12
2.2    Review of Theories.....	12
2.2.1    Liquidity Premium Theory.....	12
2.2.2    Q-Theory of Investment.....	13
2.2.3    Shiftability Theory .....	14
2.3    Determinants of Investments by SACCOs.....	16
2.3.1    Liquidity.....	16
2.3.2    Capital Adequacy .....	18
2.3.3    Management Efficiency .....	18
2.4    Review of Empirical Studies.....	20
2.5    Summary of Literature Review.....	24
<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>26</b>

3.1	Introduction.....	26
3.2	Research Design.....	26
3.3	Population .....	26
3.4	Sample.....	27
3.5	Data Collection .....	27
3.6	Data Analysis .....	27
<b>CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS .....</b>		<b>29</b>
4.1	Introduction.....	29
4.2	Investments in Saccos between 2010 – 2013.....	29
4.3	Regression Analysis.....	31
4.4	The Effect of Liquidity on Sacco Investments between Years 2010 And 2013 .....	33
4.5	Discussion of Research Findings .....	34
<b>CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....</b>		<b>38</b>
5.1	Introduction.....	38
5.2	Summary of Findings.....	38
5.3	Conclusions.....	39
5.4	Policy Recommendations.....	40
5.5	Limitations of the Study.....	41
5.6	Suggestions for Future Studies .....	42
<b>REFERENCES.....</b>		<b>44</b>
<b>APPENDIX 1: SASRA LICENSED SACCOS IN NAIROBI - 2013 .....</b>		<b>48</b>

## LIST OF TABLES

**Table 4.1: Analysis of the average investments in deposit taking Saccos in years 2010-2013**

**Table 4.2 : Model descriptive statistics**

**Table 4.3: Analysis of the regression model**

**Table 4.4: Analysis of Correlation between the independent variables**



## **LIST OF ACRONYMS AND ABBREVIATIONS**

**AGM – Annual General Meeting**

**CBK – Central Bank of Kenya**

**CEO – Chief Executive Officer**

**GDP – Gross Domestic Product**

**GoK – Government of Kenya**

**KUSCO – Kenya Union of Savings and Credit Co-operatives**

**MFI – Microfinance Institutions**

**OECD – Organisation for Economic Co-operation and Development**

**ROA – Return on Assets**

**ROI – Return on Investments**

**SACCOs – Savings and Credit Co-operative Societies**

**SASRA – Sacco Societies Regulatory Authority**

**SPSS – Statistical Package for Social Science/Statistical Product and Service Solutions**

**WOCCU – World Council of Credit Unions**

## **CHAPTER ONE: INTRODUCTION**

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

#### **1.1.1 Liquidity of Credit Unions**

Credit unions have played a leading role in the socioeconomic development of all regions in the world for the over a century and a half. The credit unions 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 (Llewel, 2006). Llewel, (2006) noted that if a credit union cannot meet depositor withdrawal requirements, general creditor expenses, or if it is forced to significantly limit new lending, a lack of member confidence can develop.

The level of liquidity which is maintained by credit unions must at a minimum meet regulatory requirements (Easley, et al, 1996b). Easley, et al, (1996b) further noted that liquidity must also be sufficient to satisfy demand for cash withdrawals, financing commitments for approved loans, and routine operating cash outflows. Too much liquidity (excess liquidity), on the other hand, can be an inefficient use of funds, and can restrict the profitability of the credit union.

Liquid assets of credit unions should be managed with due regard to principal safety, yield volatility, and, where liquid assets bear risk, investment diversification. Credit unions should have access to supplemental lines of credit or segregated liquidity pools to satisfy liquidity requirements. A credit union which has not met legislated liquidity requirements is restricted from regular lending and investment activities. Insufficient liquidity may also lead to

intervention by the regulators. A credit union meets standards of sound business and financial practices by ensuring it has developed and implemented liquidity policies, risk and performance measurement techniques, and risk management procedures. Policies, measurement techniques and procedures should be appropriate for the size and complexity of the credit union's operation.

### **1.1.2 Investments of Credit Unions**

During the 2007 financial crisis, several banks, suffered from a liquidity crisis due to their over reliance on short-term wholesale funding from the interbank lending market. These 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.

Credit unions 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 credit unions face over the years is the ability to generate meaningful income from investment portfolios. Portfolio returns vary from credit union to credit union depending on a number of factors, including asset allocation and the maturity profile of the portfolio.

### **1.1.3 Credit Union Liquidity and Investments**

When the impact of lower returns is considered on credit union portfolios of varying sizes, the estimated reduction in annual income per annum is significant (Jansson et al, 1997). Credit unions may struggle to pay competitive dividends. Credit unions are already struggling with bad debts and loan arrears. For those credit unions invested predominantly in cash, the sustained downward pressure on loan demand in addition to rapidly declining income on investment portfolios may result in an inability to pay competitive dividends in the years ahead.

According to Jansson et al, (1997) credit unions reach the risk spectrum in order to achieve higher portfolio returns. Based on a sample of credit union portfolios Jansson et al, (1997) estimate that on average approximately 80-100% of credit union portfolios are allocated to cash deposits. In the event that cash deposits yield the minimal returns outlined credit unions increase their portfolio exposure to higher yielding asset classes such as bonds and in some cases equities. This is likely to increase the price and interest rate risk of portfolios and may result in significantly more volatility in annual portfolio performance (Jansson et al, 1997). Credit unions review lending standards and increase risk. Due to the limited returns available from cash-based investment portfolios, lending standards become compromised which negatively impact loan-book quality.

### **1.1.4 SACCOS in Nairobi**

In Kenya, the Sacco movement has evolved in the past 40 years into a formidable force for the social and economic transformation of the Kenyan people. There are over 12,000 registered co-

operative societies with a membership of over 7 million; out of which 5,000 is non deposit-taking Saccos while 230 are deposit taking (have FOSAs). About 63% of the Kenya population directly and indirectly depends on co-operative related activities for their livelihood. The Sacco sector has mobilized over Ksh 200 billion in savings which is about 31% of the national savings. 70% of Africa's Sacco portfolio is Kenyan which also ranks 7th worldwide. Kenya sits in the group of 10 largest co-operative movement (G10) member countries (Ademba, 2013).

The Sacco sub sector comprises both Deposit Taking (with FOSA concept) and non-Deposit Taking Saccos (without FOSA concept). Deposit Taking Saccos are licensed and regulated by SASRA while non-Deposit Taking Saccos are supervised by the Commissioner for Co-operatives. The FOSA concept is where services like deposit taking and loans, including for non-members, are offered and has seen Saccos expand their customer base and business substantially (Mwaniki, 2013).

All Saccos in Kenya are registered and operate under the Co-operative Societies Act cap 490. This Act gave them a free hand in choosing their investments until 2010 when the Sacco Societies Act 2008 which brought about the SASRA regulations for deposit-taking Saccos was introduced. With these new regulations, Saccos which had embarked on increased investments in real estate business and undeveloped land purchases for onward selling found themselves in the red and having to embark on a divesture from these investments. Most of the Saccos had also taken to external borrowings to fund these ventures and were now faced with huge repayments to be within the set limits for external borrowings. Saccos were now required to have investment

policies in place which set out allowed and prohibited practices (Sacco Societies deposit-taking regulations 2010, articles 47-50).The new Sacco regulations also set risk classification of assets and provisioning guidelines which required the Saccos to classify their loans into five categories and make provisions for each category (Sacco Societies deposit-taking regulations 2010, articles 41 & 44).

The deposit-taking Saccos were required to reduce their investments in land and buildings, to 10% of their total assets within four years. They were also prohibited from purchasing or acquiring land, foreign trade operations and trust operations among other non-core operations. Saccos were required to only purchase land for business expansion and not to hold idle land for more than two years. Saccos were also limited to investments in financial instruments of regulated financial institutions, subsidiaries, and other less risky investment avenues. The regulations also introduced capital ratios which the Saccos were meant to comply with before licensing and within four years of licensing. They also required Saccos to divest from non-core activities and reduce their external borrowings to prescribed limits of not more than 25% of total assets within the four years (Sacco Societies deposit-taking regulations 2010, articles 15(1), 35, 9, 84).

SASRA declined to extend interim deposit-taking licenses for 65 non-compliant Saccos in a move that could result in the closure of several deposit-taking (FOSA) operations. The affected Saccos, with an asset base of Sh45 billion, risk losing revenue emanating from their Front Office Services Activity (Fosa) if they do not raise the required minimum capital by June 2014

(Mwaniki, 2013). According to the SASRA list of licensed Saccos dated 28<sup>th</sup> January, 2014, there were 135 licensed Saccos in Kenya. Of those, 34 had their registered head offices in Nairobi. This number put Nairobi as the county with the highest number of SASRA licensed Saccos. 11 other Saccos in Nairobi had their license applications under review at the end of 2012. In total, these 45 deposit-taking Saccos in Nairobi had over 540,000 members and held deposits amounting to over Ksh. 92 billion. Their total turnover was over Ksh. 14 billion, total assets were over Ksh. 122 billion with loans totaling over Ksh. 98 billion.

### **1.1.5 SASRA**

The Sacco Societies Regulatory Authority (SASRA) is a semi-autonomous Government Agency under the Ministry of Industrialization and Enterprise Development. It is a creation of the Sacco Societies Act No.14 of 2008 and was inaugurated in 2009 charged with the prime responsibility to license and supervise Deposit Taking Sacco Societies in Kenya (Welcome to Sasra, 2014, paras.1). The establishment of SASRA was within the Government of Kenya's reform process in the financial sector which has the dual objectives of protecting the interests of Sacco members and ensuring that there is confidence in the public towards the Sacco sector and spurring Kenya's economic growth through the mobilization of domestic savings (Welcome to Sasra, 2014, para 2). The SACCO Societies Act No.14 of 2008 under section 68 empowered the Minister for Co-operative Development and Marketing in consultation with the SACCO Regulatory Authority (SASRA) to make regulations generally for the implementation of the provisions specified by the Act. To exercise those powers, the minister through the Kenya Gazette dated 18th June 2010 Supplement No. 39 issued the "The SACCO Societies (Deposit – taking SACCO business)

Regulations, 2010” providing for the minimum operations and prudential standards required by a deposit taking SACCO Society in Kenya (Kenya Gazette, Act 2008).

SASRA has joined the league of other financial regulators in Kenya such as the Central Bank of Kenya (CBK), Capital Markets Authority (CMA), Insurance Regulatory Authority (IRA) and Retirement Benefits Authority (RBA) and was admitted into the Kenya Financial Regulators Forum. Being a financial regulator, SASRA is actively involved in financial stability initiatives in Kenya and within the region.

## **1.2 Research Problem**

The emergence of the SASRA regulations for deposit-taking Saccos in 2010 changed the dynamics in the Sacco industry. The deposit-taking Saccos were now faced with increased operational costs as they now embarked on meeting the requirements of these regulations. Money which would have previously been invested was now used in coming up with banking halls, adequate office space, management information systems as well as meeting capital adequacy ratios. Deposit-taking Saccos were now required to be more innovative, flexible and efficient to meet the new regulatory requirements as well as to survive. A regulatory impact assessment is thus required to establish how these regulations have impacted the Saccos investments and to measure their effectiveness and areas of improvement.



Alberto et al, 2005, carried out a study on regulation and investment in the OECD countries. They used a measure of the rate of GDP growth in these countries to assemble data on regulation in several sectors of these economies to provide evidence that regulatory reform is associated with an increase in investment. They concluded that entry liberalization and privatization have substantial effects on investment.

Kassa (2010) carried out a study on the regulation and supervision of MFIs in Ethiopia where he found that to a large extent, the regulatory framework has a host of benefits to the country such as establishing an enabling environment for financial institutions which focused on providing financial services to the poor in the community to be established. However, he also found that the regulatory and supervision framework also had its own constraints and challenges such as the costs of supervision, focus on historical and not future performance of MFIs, weak information management systems, shortage of skilled manpower among other challenges.

Studies done in Kenya have focused on SASRA regulations and their impact on the financial performance, governance and operations of Saccos. No scholar has yet studied the effect of liquidity on the investments returns of SACCOS in Kenya. Liquidity is considered a key aspect in the performance of a Sacco. This study was therefore done to fill the existing knowledge gap in this area and to make policy recommendations based on the findings relevant to the Sacco industry.

Ngaira (2011) carried out a study on the impact of Sacco Regulatory Authority (SASRA) guidelines on Sacco operations in Kenya. She concluded that SASRA has greatly impacted on Sacco performance in terms of outreach, sustainability, general efficiency and performance of Saccos. Most Saccos were said to be complying with the regulator so as not to be locked out of business. Kioko (2012) studied the impact of Sasra regulations on the financial performance of Saccos' in Kenya. He concluded that higher capital requirements and increase in management efficiency impacted positively to Sacco's profitability in the post regulation period. Further, he concluded that capital regulation affects financial performance in Saccos and that financial stability could be at risk as a result of shocks impinging on the economic system and absence of proper policy adjustments to mitigate the effects of these shocks.

This study however focused on the effect of liquidity on the investments returns of SACCOS with Nairobi as the area under scope. This study therefore sought to answer the following question; what is the effect of liquidity on the return on investments of SACCOS in Nairobi, Kenya?

### **1.3 Objective of the Study**

The study sought to determine the effect of liquidity on the return on investments of SACCOS in Nairobi.

#### **1.4 Value of the Study**

The information acquired from this study is useful to policy-makers both in the government and SACCOs, especially in strengthening policy considerations in this sector. Such policy improvement may be handy in enhancing the guidelines on how to improve the performance and effectiveness of SACCOs in an effort to enhance their efficiency for the benefit of the members.

Information on the use of financial resources and their influence on the growth of SACCOs' wealth is useful in ensuring prudent investment and efficiency in the management of the members' wealth. This may also improve efficiency in financial practice of SACCOs' wealth which may lead to members' satisfaction and trust in the societies and hence increased share contribution. As a consequence, SACCOs may be on the right track in the achievement of their goals as stipulated in their official and policy documents. The study may open opportunities for further research in the area of co-operative movement in Kenya and especially in SACCOs. The study findings propose some proprietary financial practice to the SACCOs. It will be noted that especially the low-income group will benefit from this knowledge without having to pay royalty fees. Finally, the study provides information on the vision 2030 as regards SACCOs and the role of SACCO in ensuring achievement of this vision's objectives.

Findings of the study are particularly useful in providing additional knowledge to existing and future institutions on effect of liquidity on the investments of SACCOS in Kenya. This will expand their knowledge on effect of liquidity on the investments of SACCOS and also identify areas of further study. The study is a source of reference material for future researchers on other

related topics; it will also help other academicians who undertake the same topic in their studies. The study will also highlight other important relationships that require further research.

The findings of this study will help in enlightening the key decision makers in the government and the Sacco Societies Regulatory Authority (SASRA) in particular on the effect of other determinants of investments in SACCOs. The study will in addition to the above, be useful to stakeholders, financiers, and investors in formulating and planning areas of intervention and support.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents literature related to objectives of the study. It focuses on the determinants of investments in SACCOs. A review of empirical studies is undertaken as well as reviewing the variables under study in this research, concluding with a summary of how the literature relates to these variables.

### **2.2 Review of Theories**

The following theories are relevant in our study and they include Liquidity premium theory, Q-Theory of Investment and Shiftability Theory.

#### **2.2.1 Liquidity Premium Theory**

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. 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. Thus there is a liquidity premium for less liquid securities which changes over time.

According to Nwankwo (1991), adequate liquidity enables a bank to meet three risks. First is the funding risk – the ability to replace net outflows either through withdrawals of retail deposits or

nonrenewal of wholesale funds. Secondly, adequate liquidity is needed to enable the bank to compensate for the non-receipt of inflow of funds if the borrower or borrowers fail to meet their commitments. The third risk arises from calls to honour maturity obligations or from request for funds from important customers. Adequate enables the bank to find new funds to honour the maturity obligations such as a sudden upsurge in borrowing under atomic or agreed lines of credit or to be able to undertake new lending when desirable, for instance a request from a highly valued customer.

Adequate liquidity is also needed to avoid forced sale of asset at unfavourable market conditions and at heavy loss. Adequate liquidity serves as vehicle for profitable operations especially to sustain confidence of depositors in meeting short run obligations. Finally, adequate liquidity guides against involuntary or non-voluntary borrowing from the regulatory authorities where there is a serious liquidity crisis, the bank is placed at the mercy of the Central Bank, and hence the control of its destiny may be handed over. Having adequate or sufficient liquidity to meet all commitments at all times at normal market rates of interest is indispensable for both large and small banks (Nwankwo, 1991). Liquidity is the life blood of a banking setup.

### **2.2.2 Q-Theory of Investment**

The Q framework is based on the assumption that, in the absence of capital market imperfections (and taxes), the value-maximizing firm will continue to invest as long as the shadow price of a marginal unit of capital,  $Q$ , exceeds unity. The equilibrium level condition for a profit maximizing enterprise is met when the value of a marginal unit of capital is equated to the cost of replacement of that capital, ensuring that the marginal value of  $Q$  is unity. This measure of  $Q$

effectively controls for the assessment by the market of the investment opportunities available to the firm. As Chirinko (1993, p. 1903) points out, "Even though financial market frictions impinge on the firm,  $Q$  is a forward-looking variable capturing the ramifications of these constraints on all the firm's decisions. Not only does  $Q$  reflect profitable opportunities in physical investment, but, depending on circumstances,  $Q$  capitalizes the impact of some or all finance constraints as well." Under the standard application of the  $Q$  model of investment, the dependent variable is investment for firm  $j$  in time  $t$ . The investment behavior of each firm in each period is shaped primarily by the following variables.  $Q$  is defined as the market value of the firm over the replacement cost. This is calculated as the total market value of the firm's equity, divided by the value of the adjusted capital stock of the firm plus inventories. From Hall (1991) and others, we recognize the difficulties in empirically implementing the  $Q$  model, but feel that it is important to estimate this well-known specification.

Cash flow is a proxy measure of the degree to which a firm is subjected to liquidity constraints, and is calculated as the net income of the firm in the previous period. Chirinko (1987), among others, have established the importance of including lagged investment in the model specification in order to control for the past level of investment by the firm. This is calculated as the annual change in the plant, property, and equipment for the firm. Finally the firm's net of tax sales is used as a measure of firm output.

### **2.2.3 Shiftability Theory**

This theory posits that liquidity is maintained if it holds assets that could be shifted or sold to other lenders or investors for cash. This point of view contends that a bank's liquidity could be

enhanced if it always has assets to sell and provided the Central Bank and the discount Market stands ready to purchase the asset offered for discount. Thus this theory recognizes and contends that shiftability, marketability or transferability of a bank's assets is a basis for ensuring liquidity. This theory further contends that highly marketable security held by a bank is an excellent source of liquidity. Dodds (1982) contends that to ensure convertibility without delay and appreciable loss, such assets must meet three requisites. Liability Management Theory Liquidity management theory according to Dodds (1982) consists of the activities involved in obtaining funds from depositors and other creditors (from the market especially) and determining the appropriate mix of funds for a particular bank. This point of view contends that liability management must seek to answer the following questions: How do we obtain funds from depositors? How do we obtain funds from other creditors? What is the appropriate mix of the funds for any bank?

Management must examine the activities involved in supplementing the liquidity needs of the bank through the use of borrowed funds. The liquidity management theory focuses on the liability side of bank balance sheet. This theory contends that supplementary liquidity could be derived from the liabilities of a bank. According to Nwankwo (1991) the theory argues that since banks can buy all the funds they need, there is no need to store liquidity on the asset side (liquidity asset) of the balance sheet. Liquidity theory has been subjected to critical review by various authors. The general consensus is that during the period of distress, a bank may find it difficult to obtain the desired liquidity since the confidence of the market may have seriously affected and credit worthiness would invariably be lacking. However, for a healthy bank, the liabilities (deposits, market funds and other creditors) constitute an important source of liquidity.



## **2.3 Determinants of Investments by SACCOs**

### **2.3.1 Liquidity**

According to WOCCU (2009), there are three key determinants of investment avenues by Saccos namely; Safety, Liquidity and Yield. Safety means the ability to get back the full principal investment as well as interest earned over the investment period. This can be guaranteed by the presence of regulations on investments to reduce the high risk involved. Other investment risks that Saccos face include: Market risk which denotes the possibility of a reduction in value or cash flows from an investment due to changes in market prices. This can be due to a reduction in currency value, interest rates or other price determinants; Interest rate or maturity risk, which denotes the possibility of a reduction in the value of investments resulting from an increase in market interest rates. Saccos like other financial institutions therefore need to ensure that they match their sources of funds to the terms of their investments; Credit risk, which is the risk that a party to a financial transaction may default in his obligation to the other party thus causing him financial loss. In Saccos, credit risk is significant in their lending since a borrower may default in their loan repayment. This risk is best controlled by putting in place adequate lending policies and procedures to ensure information about a borrower's ability and willingness to honour their loan obligations is established before a loan is disbursed to them. Adequate investing policies should also be established detailing how the Sacco will mitigate the credit risk associated with its other investments and ensure the same are followed to the letter. Sacco management should look out for red flags which may increase its credit risk thus affecting its investments such as decline in the financial condition of parent organization which may lead to layoffs of Sacco members, unfavourable economic environment and skewed loan portfolio concentration in one particular

sector; Price-level risk which refers to the possibility of a reduction in the purchasing power of the unit of currency as a result of adverse economic conditions such as inflation.

According to WOCCU (2009) SACCO's can reduce investment risks by fully evaluating each type of investment prior to purchase, including the issuer, analyzing the financial condition and reputation of any intermediary to the transaction, such as a broker/dealer; and diversifying the investment portfolio by type, maturity, geographical location, guarantor and so on.

Investment policy must be flexible enough to allow for changes in the balance sheet items that represent member needs of savings and loans (WOCCU, 2009). Investments can therefore be considered a function of savings (sources of funds) and loan behavior (uses of funds). A shift in savings or loan behavior requires a shift in the investment strategy to ensure the Sacco is still able to meet its obligations to members. For example, if a Sacco starts offering long term loans without a drive to increase the savings contributions, it will be faced with a lack of funds to service new loans over time since the turnover of funds will be slow. The Sacco will therefore need to shorten its investment maturities to plus its loan demand.

Liquidity is also affected by the movement in interest rates. Increasing interest rates lead to a decrease in the value of long term securities. A Sacco with long term securities would therefore be faced with a liquidity crisis unless it has other means of absorbing the losses incurred.

Only after liquidity and safety are considered should investment analysis center on yield (WOCCU 2009). The higher the investment risk and price volatility, the higher the expected

yield. Saccos must therefore consider the risks of reduced liquidity and potential loss against the higher expected income potential. Saccos should invest most of their funds in loans which is their core mandate but they also need to diversify to other investment avenues to spread their credit risk. Such avenues must however give more returns or equal the market rates of return.

### **2.3.2 Capital Adequacy**

Capital provides a cushion to fluctuations in earnings so that firms can continue to operate in periods of loss or negligible earnings (Kahane, 1977). It also provides a measure of reassurance to the members that the organization will continue to provide financial services. Likewise, capital serves to support growth as a free source of funds and provides protection against insolvency. While meeting statutory capital requirements is a key factor in determining capital adequacy, the firms operations and risk position may warrant additional capital beyond the statutory requirements. Maintaining an adequate level of capital is a critical element. Firms that are less than "adequately capitalized" must operate under an approved net worth restoration plan (Harley, 2011). Examiners evaluate capital adequacy by assessing progress toward goals set forth in the plan.

### **2.3.3 Management Efficiency**

Financial management efficiency for the SACCOs involves decisions on how the SACCOs operations will be financed (sources of funds), how the funds are utilised (investment decisions) with the overall objective of achieving the SACCO mission and goals (Barr et al., 2002). Management efficiency thus focuses on the development of strategies to prudently manage the

financial assets of the SACCOs as well as using tools and techniques for financial planning to achieve its organisational objectives.

Like all other microfinance institutions, the managers and board of the SACCOs have a fiduciary duty to prudently manage the financial resources of the SACCO. As part of this responsibility, the directors are legally required to prepare and present financial statements that show the financial performance and position of the SACCO over a specified period (Jansson & Mark, 1997).

According to Jansson and Mark, (1997) the information extracted from the financial statements is then used in assessing the stewardship of the board and management and to what extent the financial objectives have been achieved. Financial management efficiency results to maximizing of capital growth, attaining financial sustainability, prudently managing the assets and liabilities of the SACCO. To extract a meaningful financial statements that relates to the SACCOs vision, mission, objectives and plans, and the extent to which these have been achieved, finance professionals have developed several tools and methods collectively referred to as Financial Analysis which collectively aid in assessing financial management efficiency. Financial ratio analysis is used to broadly assess the financial management efficiency through profitability ratios, liquidity ratios, solvency ratios, portfolio quality ratios and efficiency ratios (Gorton & Winton, 1998).

## **2.4 Review of Empirical Studies**

Alberto et al, 2005 carried out a study on regulation and investment in the OECD countries. They provided evidence that regulatory reforms of product markets are associated with an increase in investment. They used the rate of GDP growth as their comparative factor and compared the average GDP of the United States in the late 1990s of 4.3% to that of large continental European economies (Germany, Italy and France) which had an average growth of 2%. They explained that the stricter regulation of markets in the European countries prevented faster growth in that period of rapid technological advances. They concluded that various measures of product market regulation are negatively related to investment which is an important engine of growth.

Kassa (2010) carried out a study on the regulation and supervision of microfinance business in Ethiopia where he found that the regulation and supervision of MFIs in Ethiopia had brought many benefits. These were such as creating an enabling environment for establishment of specialized formal financial institutions that provided financial services to the country's population previously considered unbankable, enabling MFIs to offer a wide range of products and promoting standardization and transparency in the sector. He also found that the regulatory and supervisory framework also had its own constraints and challenges.

Jansson et al, (1997) studied financial regulation and its significance for microfinance in Latin America and the Caribbean. They focused on those regulations which while appropriate for most financial institutions, were likely to have negative differential impact on microfinance institutions. Their study identified a number of areas where such differential biases existed

such as capital adequacy requirements, provisioning, documentation and restrictions on the operations of financial entities.

Haq et al, (2008) carried out a study on regulation of microfinance institutions in Asia where they found that formal MFIs are generally regulated under the banking legislation and supervised by central banks. In contrast, semiformal institutions were regulated by apex organizations or other government body. They concluded that a prudential regulatory environment for MFIs similar to the banking sector was required with the realization that not all existing banking rules were applicable to MFIs.

Bwoma (2003) carried out a study on the effect of liberalization on the investment practice of reserve funds and payment of dividends in savings and credit co-operatives in Nairobi. He found that the reserve funds mean growth rate increased from 12.66% to 19.85% in pre and post-liberalization respectively. Dividend payment rate increased from a mean of 4.12% to 5.12% in pre and post-liberalization respectively. He concluded that liberalization of the competitive sector has a positive effect on the dividend distribution and reserve funds with 60% of the Saccos shifting to new areas of investment after liberalization.

Makori et al, (2013) reviewed the challenges facing deposit-taking Saccos in compliance focusing on the GUSII region of Kenya. Their study found out that the various challenges facing compliance in these institutions included non-separation of shares from deposits, high

dependence on short-term external borrowing, and lack of liquidity monitoring system, high investment in non-earning assets, inadequate ICT system, inadequate managerial competencies and political interference among others. They also realized that even with the challenges, opportunities were available for compliant Saccos including capital accumulation and agency business largely arising from access to Government funds for on-ward transmission to youth and women groups.

Okundi (2011) carried out a study on the financial challenges facing Saccos in Nairobi where he concluded that Saccos suffered challenges in meeting loan requests by the members partly due to long term investments they engage in. Members therefore preferred loans from commercial banks partly due to the speed in which they were disbursed and the fact that the loan is not pegged on savings as is the case with Saccos.

Opondo (2009) looked at the responses of Saccos based in Nairobi to changes in the external environment where he found that challenges posed by competitive environment were felt by the Saccos since majority of them concentrated on operational issues at the expense of strategic ones.

Kimata (2013) studied the effects of financial innovation on the financial performance of Saccos in Nairobi where she found that Saccos were now embracing new products based on information

technology such as internet banking and money transfer services but were yet to link the money transfer services to their back office systems.

Mwangi (2011) looked into the role of Saccos in financial intermediation in Nairobi County and established that embracing co-operative societies can bring immense benefits to individuals and the entire community as a whole due to the immense financial resources that Saccos control and the ever increasing membership in the formal and informal sectors of the economy.

Muriuki and Ragui (2013) studied the impact of Sacco Regulation on Corporate Governance of Saccos. They found that the regulations had to a great extent positively impacted the Sacco management components and corporate governance. They however noted that there was need to implement fully the provisions of these regulations otherwise the Saccos would continue being faced with mismanagement, poor corporate governance and ethics as well as lack of accountability by both the management and boards.

Mbogo (Business Daily June 2010) noted that the cost of running deposit-taking SACCOs is set to go up significantly due to the new regulations because the regulations are threatening the low interest rates regime that has for decades given the co-operative movement an edge over commercial banks in the lending market.



## **2.5 Summary of Literature Review**

This chapter looks at the theories relevant to our study which include; liquidity premium theory, Q-Theory of Investment and Shiftability Theory. It 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. The Q framework is based on the assumption that, in the absence of capital market imperfections (and taxes), the value-maximizing firm will continue to invest as long as the shadow price of a marginal unit of capital,  $Q$ , exceeds unity. Shiftability theory posits that liquidity is maintained if it holds assets that could be shifted or sold to other lenders or investors for cash.

The determinants of Investments in SACCOs include Capital Adequacy Capital that provides a cushion to fluctuations in earnings so that firms can continue to operate in periods of loss or negligible earnings. There are three key determinants of investment avenues by Saccos namely; Safety, Liquidity and Yield. Safety means the ability to get back the full principal investment as well as interest earned over the investment period. Financial management efficiency for the SACCOs involves decisions on how the SACCOs operations will be financed how the funds are utilized. Management efficiency thus focuses on the development of strategies to prudently manage the financial assets of the SACCOs as well as using tools and techniques for financial planning to achieve its organizational objectives.

A well-planned investment policy statement can increase your chances of success with regards to safety and liquidity. Diversification is the most important factor in reducing risk. A good investment policy will have limitations on issuer, security type, and maturity terms, in order to keep the portfolio diversified; however, the biggest risk that credit unions face is fluctuating interest rates. Rising and falling rates involve risk, but a balanced portfolio can protect against both. One good way to lessen the burden of interest rate risk is to diversify your maturities. If interest rates fall, longer-term investments will pay a nice yield and become more liquid in the portfolio with an increased potential for capital gains. If interest rates rise, you can invest the shorter-term maturities in higher interest rates when they become due. Mixing the portfolio with coupons that may rise, whether because the yield is tied to an index or steps up periodically, protects the overall yield of the portfolio. In other words, if you want to be safe and reduce your exposure to interest rate swings, have all your bases covered and diversify.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter sets out the research methodology, research design, and population used for the study, sampling techniques and data analysis techniques and tools used to assist in data analysis and answering the research questions.

### **3.2 Research Design**

The study adopted a comparative descriptive study design. Borge and Gall (1989) stated that descriptive survey designs are used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification. The survey research is useful because of the economy of taking a sample of the population to generalize results for the whole population. Descriptive survey design was employed because it guarantees breadth of information and accurate descriptive analysis of characteristics of a sample which can be used to make inferences about population (Kerlinger, 1993).

### **3.3 Population**

The target population refers to a group of individuals, objects or items from which samples are taken for measurement (Mugenda and Mugenda, 2003). The target population comprised of all 36 licensed deposit-taking SACCOs in Nairobi, Kenya (See Appendix 1). These Saccos were chosen because they fall under SASRA regulations whose effect on their investments is the focus of this study.

### **3.4 Sample**

Orodho (2004) defines sampling as; “the process of selecting a sub set of cases in order to draw conclusion about the entire set”. In this research, the study took a random sample of 17 deposit-taking Saccos in Nairobi from the list of SASRA licensed Saccos. The sampled Saccos were; Mwalimu Sacco, Harambee Sacco, Afya Sacco, Stima Sacco, Kenya Police Sacco, United Nations Sacco, Ukulima Sacco, Kenya Bankers Sacco, Kingdom Sacco, Wanandegge Sacco, Sheria Sacco, Chai Sacco, Kenpipe Sacco, Asili Sacco, Safaricom Sacco, Orthodox Development Sacco and Nation Staff Sacco. The random sampling ensures that these Saccos are representative of the entire population.

### **3.5 Data Collection**

This research used secondary data such as the Sacco’s published annual reports and financial statements, regulatory filings, and published regulatory reports over a four year reporting period between 2008 and 2013. This data collection method was useful since the published figures are audited by registered and licensed auditors and can therefore be easily authenticated through filings with the regulatory authorities.

### **3.6 Data Analysis**

Data collected was entered into SPSS statistical computer package for analysis. The study adopted measures for liquidity, capital adequacy and management efficiency which formed the independent variables (Xs) while the Sacco investment performance measured by the return on

investments/assets formed the dependent variable (Y).The study employed a regression model to determine the relationship between the variables as follows;

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e$$

Where; Y = Return on Investments/Assets (ROI/ROA) represented by the ratio of netincome to total assets

$\alpha$  = constant term

$X_1$  = Ratio of Capital to total assets (Capital Adequacy Ratio)

$X_2$  = Ratio of Net loans to total deposits and short term borrowing (Liquidity)

$X_3$  = Ratio of Earning Assets to total assets (Management Efficiency)

$\beta_{(1-3)}$  = regression coefficients (change in Y as a result of change in X)

e = error term (to cater for residual or nuisance variables)

The data analysis and testing was done usingIBM SPSS Statistic 20 software package which is equipped with analysis and reporting tools to produce the output required in a concise and reliable manner.

## CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

### 4.1 Introduction

This chapter presents the analysis of data, results and discussion on the effect of liquidity on the investments of Saccos in Nairobi. A linear regression model of the Sacco return on investments/assets as a function of capital adequacy, liquidity and management efficiency was applied to examine the relationship between the variables.

### 4.2 Investments in Saccos between 2010 – 2013

The table 1 below provides a descriptive analysis of the return on investment in the Saccos over a four year period as well as ratios of various variables influencing the investments. The input used in the analysis was the mean of the various variables from the 17 sampled Saccos measured over the four year period.

**Table 4.1: Analysis of the Average Investments in Deposit-taking Saccos in Years 2010-2013**

<b>Averages</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Return on Investment	0.01612	0.01761	0.01073	0.01253
Capital Adequacy	0.02639	0.03520	0.08546	0.07665
Liquidity	1.01238	1.01886	1.01819	1.04286
Management Efficiency	0.78181	0.78821	0.79787	0.78185

*Source: Author, 2014*

The average return on investment as measured by the ROA decreased from 1.6% in 2010 to 1.3% in 2013. Capital adequacy over the same period increased from an average of 2.6% in 2010 to 7.6% in 2013. Liquidity as measured by the ratio of total loans/advances to total deposit liabilities increased marginally to 1.04 in 2013 up from 1.02 in 2010. Management efficiency maintained the same 78% range over the period.

**Table 4.2: Model Descriptive Statistics**

Descriptive Statistics									
	N	Minimum	Maximum	Mean		Std. Deviation	Variance	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error
ROI	4	.01073	.01761	.0142475	.00158470	.00316940	.000	-3.526	2.619
CapAd	4	.02639	.08546	.0559250	.01473003	.02946005	.001	-5.132	2.619
Liq	4	1.01238	1.04286	1.0230725	.00675437	.01350875	.000	3.242	2.619
ManEff	4	.78181	.79787	.7874350	.00378949	.00757898	.000	.473	2.619
Valid N (listwise)	4								

Source: Author, 2014

Return on investments averaged 1.4% over the period while capital adequacy was on average 5.6% over the same period. Liquidity measured as a ratio of loans/advances to deposits was 1.02 indicating that on average, Saccos sampled were lending more than they were receiving in deposits. This indicates that demand for loans was high over the period. Management efficiency was on average 79% over the period indicating the management was making good investment decisions.

### 4.3 Regression Analysis

**Table 4.3: Analysis of the Regression Model**

<b>Model Summary<sup>b</sup></b>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	1.000 <sup>a</sup>	1.000	.	.	

a. Predictors: (Constant), Management Efficiency, Liquidity, Capital Adequacy  
 b. Dependent Variable: ROI

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.000	3	.000	.	. <sup>b</sup>
	Residual	.000	0	.	.	.
	Total	.000	3	.	.	.

a. Dependent Variable: ROI  
 b. Predictors: (Constant), Management Efficiency, Liquidity, Capital Adequacy

<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.410	.000		.	.
	CapAd	-.191	.000	-1.778	.	.
	Liq	.197	.000	.840	.	.
	ManEff	.296	.000	.709	.	.

a. Dependent Variable: ROI

**Note:**  
 For the final model with dependent variable ROI, influence statistics cannot be computed because the fit is perfect.

Source: Author, 2014



Tables 4.3 gives a summary of the model, analysis of variance and the coefficients in the model used in the study. The correlation coefficient (r) and coefficient of determination ( $r^2$ ) measures in Table 4.3 indicate that the regression model perfectly fits the data positively given that both r and  $r^2$  are equal to 1. This is further supported by the analysis of variance with the sum of squares measure being in the 0 range for all the variables.

The model as estimated from the analysis is as follows;

$$Y = -0.410 - 1.778X_1 + 0.840X_2 + 0.709X_3 + E$$

Where Y=return on investment measured by ROA

0.410 = constant

$X_1$  = capital adequacy

$X_2$  = liquidity

$X_3$  = management efficiency

E= error term

From the equation, return on investment will be drop to 0.41 if the coefficients of capital adequacy, liquidity and management efficiency are absent. A unit change in capital adequacy causes a 1.778 decline in return on invested assets while a unit change in liquidity will cause a 0.84 change in the ROA. A unit change in management efficiency will cause a change in ROA equal to 0.709.

These variables therefore have a significant effect on the investments in Saccos as laid out in the model used for the study since they all have an effect as their coefficients illustrate.

#### 4.4 The Effect of Liquidity on Sacco Investments between Years 2010 And 2013

From the analysis of the data, liquidity has a significant influence on the return on investment at 0.840 for every unit change in liquidity. This indicates that liquidity is an important factor, however, it cannot influence the returns on its own without the other variables especially the management efficiency.

**Table 4.4: Analysis of Correlation between the Independent Variables**

Descriptive Statistics				
	Mean	Std. Deviation	N	
Capital adequacy	.0559250	.02946005	4	
Liquidity	1.0230725	.01350875	4	
Management efficiency	.7874350	.00757898	4	
Correlations				
		Capital adequacy	Liquidity	Management efficiency
Capital adequacy	Pearson Correlation	1	.560	.511
	Sig. (2-tailed)		.440	.489
	N	4	4	4
Liquidity	Pearson Correlation	.560	1	-.340
	Sig. (2-tailed)	.440		.660
	N	4	4	4
Management efficiency	Pearson Correlation	.511	-.340	1
	Sig. (2-tailed)	.489	.660	
	N	4	4	4

Source: Author, 2014

From the correlation analysis, liquidity is positively correlated to capital adequacy the two tailed significance level. It is however negatively correlated to management efficiency at the two tailed significance level. This indicates that the variables have a linear relationship as indicated in the model.

#### **4.5 Discussion of Research Findings**

From the analysis above, the average return on investments between 2010 and 2011 increased from 1.6% to 1.8%. It decreased to 1.1% in 2012 and then marginally increased to 1.3% in 2013. This trend may be explained by the impact of the SASRA regulatory requirements which came into force in 2010. Saccos continued with their earlier investment behavior between 2010 and 2011 but were forced to readjust in 2012 by retaining more earnings to capital. The marginal increase in 2013 may be explained by the fact that a majority of the licensed Saccos had complied with the capital adequacy requirements at the end of 2013 leaving only about a third of the deposit-taking Saccos yet to comply (Mwaniki, 2013).

Capital adequacy among the Saccos over the same period increased from an average of 2.6% in 2010 to 3.5% in 2011 then to 8.5% in 2012 and 7.6% in 2013. The sharp increase in 2012 is attributable to the race by the Saccos to meet the capital adequacy requirements in time before the deadline issued by the regulator. In 2013, the figure slightly reduced owing to the fact that some of the Saccos in the sample reduced their reserves slightly to meet expansion needs. The figure is however below the 10% regulatory requirement as some Saccos in the sample were yet to meet this threshold.

Liquidity on the other hand increased throughout the four year period, moving from 101.2% in 2010 to 104.2% in 2013. The measure of liquidity applied in this study was the ratio of net loans to total deposit liabilities. The rates indicate that on average, the Saccos had lent more than their deposits held and the trend continues. This indicates that demand for loans continues to increase and outstrip the deposit savings held by the Saccos. As a result, some of the Saccos borrowed externally to meet the loan demand. This position however has not negatively impacted the Saccos since majority of the deposits held in the Saccos are non-withdrawable and require a notice period for refunds to be made when the members leave a Sacco.

Management efficiency remained in the 78% average over the four year period. This may indicate that the SASRA regulations have controlled the risk that management can take with the members funds especially by limiting the investment avenues for Saccos other than the member loans. It also indicates that the loans remained the major Sacco earning assets over the period and the trend will continue since lending is the key mandate of the Saccos. However, in some Saccos, the management has been able to dispose-off non-earning assets previously held to be in compliance with the regulatory threshold for non-earning assets held.

Results from the regression analysis of the model applied in the study indicated that the model was a perfect fit. This supports the studies done by WOCCU and scholars who have found relationships exist between the returns in Saccos and variables used namely; capital adequacy, liquidity and management efficiency. A sum of squares of 0 indicates that the model has a small random error component and is good for prediction. Correlation Coefficient and Coefficient of

Determination measures of 1 indicate that the model is a perfect fit and that on average, variances in the data used in the model are 100% explained. This also supports the linear relationship between the dependent and independent variables used in the model.

The coefficients used in the model indicate the change in the dependent variable as a result of a unit change in the independent variables. Holding all other factors in abeyance, the return on investment would decline by 0.41. This indicates that for a Sacco to earn returns, it must invest something. This is further supported by the results of the coefficients for the independent variables. A unit change in capital adequacy causes a decrease in returns equivalent to 1.778. This indicates that when the Saccos increase their capital base, the increase is funded by retained earnings and deductions from the deposits held which reduce the borrowing power of the members as well as the amount of funds available for lending.

A unit change in liquidity on the other hand causes a 0.84 increase in returns on investment from the analysis done. This indicates a positive relationship exists between liquidity and returns on investment. More liquidity means the Saccos are able to lend and invest more thus earning more income in the process. More loans given increase the income in the Sacco which is one of the key wins of the regulations since Saccos are now forced to focus on their key mandate of receiving deposits for onward lending to members. These results are also supported by a study carried out by Kioko (2012).

Management efficiency is also positively related to increase in income from investments as a unit change causes a 0.709 increase in return on investments. This means that management teams in Saccos are continue to ensure that most of their assets are earning assets. This is supported by studies carried out locally by among others Kioko (2012) and Kamau (2013).

An analysis of the correlations between the independent variables indicated that liquidity was positively related to capital adequacy and negatively correlated to management efficiency. This is due to the fact that as more earnings are retained, liquidity increases since more funds will be available for lending to support growth in the Sacco. Uncontrolled liquidity on the other hand means reduced management efficiency. Managers must therefore ensure that they are not lending more than the Sacco is able to support to avoid a crisis.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter gives a summary of the study and briefly explains the model that was used in the study to test the relationship between the dependent and independent variables in the study. Conclusions from the study as well as the policy recommendations are also discussed in detail. A brief overview of the limitations of the study and some suggestions for further study are given at the end of the chapter.

### **5.2 Summary of Findings**

The study reviewed the liquidity and investments in credit unions around the world and how the two were related. A brief history of the Saccos in Nairobi and the SASRA regulations was discussed to help the reader understand the background of the study. The study's objective was to establish the effect liquidity has on the investments in the Saccos. It sought to address the knowledge gap as far as liquidity and investments in the Saccos was concerned as previous studies had not focused on the subject. It is hoped that the research will aid in filling this gap and contribute to further research into Saccos and how their operations and performance has changed with the onset of regulations.

A linear regression model was used for the study. It set out three independent variables namely; capital adequacy which was a ratio of the capital to total assets, liquidity which was measured as a ratio of total loans and advances to total deposit liabilities and management efficiency as measured by the ratio of the interest earning assets to total assets. The return on investments was used as the dependent variable and was measured using the return on assets. Secondary data was

used for the study and then analysed using statistical software to establish the relationships between the variables and test the model applied for the study.

The results indicated that the Saccos had to take into account the capital adequacy requirements and the liquidity available to influence their other investment behavior other than the loans to their members.

### **5.3 Conclusions**

The objective of the study was to establish the effect of liquidity on the investments in Saccos. The results of the study indicate that a positive relationship exists between the two variables. Further, return on investments is also influenced by capital adequacy and management efficiency which are correlated with liquidity. Liquidity in Saccos is therefore an important factor since it also determines the health of the Sacco and its ability to meet short term liabilities. Management in the Saccos must therefore ensure that they are able to balance the demands from members for more loans and the stability of the Saccos.

The SASRA regulations have also helped to introduce a good capital base in the Saccos by introducing the share capital among other reserves which form the capital base. Increases in the capital base have helped the Saccos stop the trend of paying unsustainable interest and returns on deposits (SASRA, 2014). This has also helped to safeguard member deposits in case of financial distress through the stringent monitoring on adherence to the regulatory requirements.

Various scholars have undertaken studies which have looked at regulations in Saccos and the impact they have had on the Saccos operations and financial performance. The results from such studies have also supported the findings in this study which give further credence to the



importance of the study. The gaps which were not covered in those studies have been covered to some extent by this study.

The data collected has also indicated that the Saccos have been improving their income levels and have brought competition to the mainstream banks and gained recognition as a result of the important role they continue to play in the local and world economies.

#### **5.4 Policy Recommendations**

The findings from the study show that liquidity has a highly significant effect on the return on investment in the Saccos. Saccos must maintain adequate liquidity since it enables a Sacco to meet short term deposit withdrawals, loan disbursements as well as administrative expenses. They must however avoid excess liquidity which causes a Sacco to be tempted to invest in high risk asset portfolios such as short term unsecured lines of credit to meet the resultant income drop in this era of low savings interest regimes in the mainstream banking.

The study recommends that the regulations regarding management of liquidity in the deposit-taking Saccos be reviewed to allow Saccos to invest their excess funds in more areas since the requirement to have them only invest excess funds in loans, government securities and term deposits in regulated financial institutions has been counterproductive as these avenues offer low income yields. This would help supplement reduced incomes from loans at the various low uptake periods.

The study also recommends that the taxation laws regarding withholding tax in financial institutions be clearly expounded by the relevant Ministry to ensure Saccos are protected from the double taxation when they put their funds in term deposits with banks. This is because the Saccos only invest funds received from their members, income which is tax free as well as being financial institutions themselves which should not be charged the withholding tax on deposits. The taxation also reduces the income they make from such deposits.

The study further recommends that a central depository funds for Saccos, the equivalent of the Central Bank for banks be set up to help Saccos meet cheaper short term borrowing needs to fund member loan requests during periods of low cash liquidity.

## **5.5 Limitations of the Study**

The study was limited to the sample of 17 Saccos in Nairobi from the list of 36 SASRA licensed Saccos as per the 2013 SASRA listing. The study employed a random sampling technique to pick the sample of 17 Saccos used which were as a result assumed to represent the entire licensed Sacco population in Nairobi County.

The study was further limited to the degree of accuracy and precision of the data obtained from the Sacco's audited financial accounts and their regulatory filings. The study therefore relied on the auditors assurance that the audited accounts represented a true and fair view of the status of the various Sacco's financials for the years audited. No independent verification of the data was carried out as the audited accounts were assumed to represent a true and fair view.

The period of the study was limited to four years between 2010 and 2013 and the analysis done based on the averages for the various variables observed over the four year period. The period provided the best accessibility to data and period during which the variables were well documented in the Saccos audited accounts and regulatory filings. This period represented the duration in which Saccos moved to comply with SASRA regulations.

The study also faced limitations in acquiring some of the required information in a timely manner from the Saccos sampled. Some of the respondents delayed in relaying the requested information citing privacy issues which led to more resources being utilized to acquire such information from other parties such as the regulator.

## **5.6 Suggestions for Future Studies**

The study recommends further research into the role that capital adequacy requirements has had on the investments in Saccos since from the analysis of data, it seems to have a significant effect. Given the fact that meeting the capital requirements has been the biggest challenge for the Saccos, such a study will help in assessing the viability of the requirements for the Sacco industry and as a result help inform future regulatory reviews.

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. Based on the SASRA supervision reports, a number of Saccos have been unable to meet the requirements in the four year period set out in 2010.

A study should also be carried out to establish the effect of liquidity on 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. The results from such a study will be valuable as the government moves to regulate the entire Sacco industry which contributes significantly to the country's growth by encouraging savings and development both urban and rural areas for the lower income populace.

The study further recommends a study to establish the effect that the change in regulatory requirements has had on the investment behavior of the Sacco licensed under SASRA. This will help establish if the regulations have impacted positively or negatively to the Sacco's mandate to their members. This will also help establish the direction that the Sacco's have taken following restrictions in the investment avenues introduced by the regulations.

## REFERENCES

- Alberto, A., Fabio, S., Giuseppe, N., & Silvia, A. (2005). Regulation and Investment. *Journal of the European Economic Association*, 2005.
- Ademba, C. (2013). Challenges facing Sacco Regulatory Framework in Africa. *11<sup>th</sup> SACCA Congress*, Swaziland.
- Barr, R. S., Killgo, K. A., Siems, T. F., & Zimmel, S. (2002). Evaluating the productive efficiency and performance of U.S. commercial banks, *Managerial Finance*, 28(8).
- Baldwin, R., & Cave, M. (1999). Understanding Regulation, Theory, Strategy and Practice, *Oxford, Oxford University Press*.
- Borge, R.W., & Gall, M.D. (1989). An Introduction to Theory and Practice. *London, Alley and Becon*.
- Bwoma, B. N. (2003). Effect of Liberalization on the Investment Practice of reserve funds and payment of dividends in Savings and Credit Co-operatives in Nairobi: comparative study.
- Easley, D., Kiefer, N.M., O'Hara, M., & Paperman, J. B. (1996). Liquidity, Information, and Less-Frequently Traded Stocks, *Journal of Finance*, 51 (4): 1405–36.
- Gaffikin, M. (2005). Regulation as Accounting Theory. *Accounting and Finance Working Paper 05/09*, University of Wollongong, School of Accounting and Finance.
- Gorton, G., & Winton, A. (1998), Banking in Transition Economies: Does Efficiency Require Instability, *Journal of Money Credit and Banking*, Vol. 30.
- Harley, T. W. (2011) Determinants of capital adequacy in the Banking Sub-Sector of the Nigeria Economy: Efficacy of Camels (A Model Specification with Co-Integration

- Analysis). *International Journal of Academic Research in Business and Social Sciences*, 2011, Vol. 1, No. 3.
- Haq, M., Hoque, M. & Pathan, S. (2008). Regulation of Microfinance Institutions in Asia: A comparative Analysis. *International Review of Business Papers Journal*, 2008.
- Jansson, T. & Mark, W. (1997). Financial Regulations and its significance for microfinance in Latin America and the Caribbean.
- Kahane, Y. (1977). Capital Adequacy and the Regulation of Financial Intermediaries, *Journal of Banking and Finance*, Vol. 1 (2).
- Kassa, Y. (2010). Regulation and supervision of Microfinance Business in Ethiopia.
- Kenya Gazette Supplementary Acts. (2008) Special Issue. The Sacco Societies Act, 2008 Cap 490, Nairobi, 30th December, 2008.
- Kenya Gazette Supplementary No.39 (Legislative Supplement No.27), Legal Notice No.95, 18th June, 2010 SACCO Societies Regulatory Authority (SASRA)
- Kenya Sacco Net (2009). Retrieved from [www.kenyasacconet.org/docs/investments.pdf](http://www.kenyasacconet.org/docs/investments.pdf). World Council of Credit Unions (WOCCU) Resource.
- Kerlinger, F. N. (1973). *Foundation of Behavior Research*. New York.
- Kobia, S. K. (2011). *The Cooperative Movement in Kenya: Challenges and Opportunities*. Designed & Published by Colors Capes Media Ltd.
- Kioko, B. K. (2012). *The Impact of SASRA Regulations on the Financial Performance of Saccos in Kenya*.

- Kothari, C.R. (2004). *Research Methodology Methods and techniques*. New Delhi. New Age International (P) Ltd Publishers.
- Llewel, D. (2006). *The Regulation and Supervision of Financial Institutions*, London, Chartered Institute of Bankers.
- Lokesh, K. (1992). *Methodology in Education Research*. Vikas Publishing House
- Majone, G. (1996). *Regulating Europe*, London, Routledge
- Makori, J., Munene, C., & Muturi, W. (2013), The Challenges Facing Deposit-Taking Savings and Credit Cooperative Societies regulatory Compliance in Kenya. A case of the Gusii Region. *Interdisciplinary Journal of Contemporary Research in Business*.
- Mbogo, S. (2010). Laws on Sacco, *Business Daily*. June 2010.
- Mugenda, M. (2003). *Research Methods, Qualitative and Quantitative \ approaches*, African Centre for Technology Studies, Nairobi, Kenya.
- Muriuki, K. M., & Ragui, M. (2013). Impact of Sacco Societies Regulatory Authority (SASRA) Legislation on Corporate Governance in Co-operatives in Kenya. *Public Policy and Administrative Research Journal*, 2013.
- Mwaniki, C. (2013). 65 Saccos risk losing their front office status over capital. Retrieved from *Business Daily Online Edition* <http://www.businessdailyafrica.com/Corporate-News/65-Saccos-risk-losing-their-front-office-status-over-capital/-/539550/1969294/-/edtf5i/-/index.html>.

- Ofei, K.A. (2001). *Retooling credit unions: The case of credit union association of Ghana*.  
*IFLIP Research Paper01-3* .Research Paper, International Labour Organization,  
University of Ghana, Legon.
- Orodho, A.J. (2002). *Essential of educational and social sciences researchers' methods*. Nairobi:  
Masda Publishers.
- Peltzman, S. (1979). Toward a More General Theory of Regulation, *Journal of Law and  
Economics*.
- SASRA,(2013).Sacco Supervisory Report 2012.
- SASRA website,(2014).Retrieved from [www.sasra.go.ke/welcome-to-sasra#.U0e4qvmSyGw](http://www.sasra.go.ke/welcome-to-sasra#.U0e4qvmSyGw),  
<http://www.sasra.go.ke/about-us/our-mandate#.U0fREvmSyGw>.
- Stigler, G. J. (1971).The Theory of Economic Regulation, *Bell Journal of Economics and  
Management Science*.
- WOCCU website, (2014).Model Law for Credit Unions.Retrieved from  
<http://www.woccu.org/policyadvocacy/legreg>.



**APPENDIX 1: SASRA LICENSED SACCOS IN NAIROBI - 2013**

<b>No.</b>	<b>Name of sacco</b>
1	Afya Sacco Society Ltd
2	Airports Sacco Society Ltd
3	Asili Sacco Society Ltd
4	Chai Sacco Society Ltd
5	Chuna Sacco Society Ltd
6	Comoco Sacco Society Ltd
7	Fundilima Sacco Society Ltd
8	Harambee Sacco Society Ltd
9	Hazina Sacco Society Ltd
10	Jamii Sacco Society Ltd
11	Kenpipe Sacco Society Ltd
12	Kenversity Sacco Society Ltd
13	Kenya Bankers Sacco Society Ltd
14	Kenya Police Sacco Society Ltd
15	Kingdom Sacco Society Ltd
16	Magereza Sacco Society Ltd
17	Maisha Bora Sacco Society Ltd
18	Mwalimu National Sacco Society Ltd
19	Mwito Sacco Society Ltd
20	Nacico Sacco Society Ltd
21	Nafaka Sacco Society Ltd
22	Naku Sacco Society Ltd
23	Nassefu Sacco Society Ltd
24	Nation Sacco Society Ltd
25	Orthodox Development Sacco Society Ltd
26	Safaricom Sacco Society Ltd
27	Sheria Sacco Society Ltd
28	Stima Sacco Society Ltd
29	Tembo Sacco Society Ltd
30	Ufanisi Sacco Society Ltd
31	Ukristo na Ufanisi Sacco Society Ltd
32	Ukulima Sacco Society Ltd
33	United Nations Sacco Society Ltd
34	Wanaanga Sacco Society Ltd
35	Wanandegge Sacco Society Ltd
36	Waumini Sacco Society Ltd

