The Impact of Credit Management and Liquidity on financial performance of Deposit Taking Savings and Credit Cooperatives In Kenya

David Gitonga Kahuthu
Business Administration – Finance, Jomo Kenyatta University of Agriculture

Willy Muturi, PhD
JOMO KENYATTA UNIVERSITY OF AGRICULTURE (JKUAT)- KENYA

Mboya Kiweu,PhD
STRATHMORE UNIVERSITY – KENYA

ABSTRACT

Savings and credit cooperative Societies (SACCOs) have granted loans over the years without concentrating on the quality of loans in their portfolios and hence maintained key assets in their books that would not be accounted for. Similarly they have provided cash to clients without any purposive determination of cash levels. The study therefore sought to ascertain if liquidity and credit management played important roles in determination of revenues of deposit taking SACCOs in Kenya. To ascertain factually if the two variables had any role, the study chose to examine the coefficients of Beta before statutory management which was implemented in 2010 and the coefficients of Betas after 2010. The vigorous processes of research exercise were undertaken with findings, conclusions and recommendations being made on the basis of analytical manipulation of data. The study findings were that liquidity and credit management had great impact on SACCOs financial performance especially if managed prudently and strengthened by the legal framework as a moderating variable. The study recommends that SACCOs should continuously formulate proper loan products and maintain adequate cash balances for profitability and financial stability of the SACCO. They should also develop key policies on staff recruitment and retention, liquidity and loan provisioning to enable SACCOs increase financial performance. This study will empower SACCOs with Knowledge on prudential credit and liquidity management guaranteeing sustainability and profitability while using own resources.

1.1 Introduction

SACCO is a financial cooperative defined as autonomous association of persons united voluntarily to meet the common economic, social and cultural needs of the group members, through a jointly owned and democratically controlled enterprise, Manyara (2003). Mishkin & Eakins (2011) define credit unions also known as SACCOs in other countries as financial institutions designed to service the needs of consumers who are also the owners and are distinguished by their ownership structure and "common bond" requirements. The core objective of any SACCO is to encourage thrifty among group members and also to grant loans among members at affordable rates (Offei, 2001). Munyiri (2006) asserted that SACCOs are usual local institutions started by community to reduce poverty and are therefore mostly entrenched in rural and urban areas alike. Since SACCO loans rely on guarantee as the only form of security, the SACCOs sometimes undergo substantial losses due to inability to provide for loan losses (Olando et al., 2013). Allowance for loan loss is a contra asset account on the balance sheet used for offsetting losses on loan assets. In other words, it is reduction in the loan asset by a provision estimated based on loan repayment installments unpaid on due dates (Harvey 2012). According to Zoubu (2007) analyses, it is a valuation allowance to offset credit losses specifically identified in the quick cash portfolio. It is the management's best estimates of probable losses in the remainder of the portfolio as at the balance sheet date.

Management estimates the allowance balance required using past same day loan experience, an assessment of the financial condition of individual borrowers, a determination of the value and adequacy of the underlying collateral, the condition of the local economy and an analysis of the levels of trend of the portfolio and a review of delinquent and classified loans. Actual losses could differ significantly from the amounts estimated by the

management. Olando et al., (2013) recommended that SACCOs should review credit policies continuously and also develop loan loss provision policies to benefit from the loan portfolio held by SACCOs.

The most critical asset in any financial institution (especially banks and   SACCOs) are loans to members (Monteverde, 2000). Two characteristics that make   SACCOs' loans to members critical is the materiality of the earning asset and the asset's exposure to credit and default risk. Legally loans to members form the core business of any SACCO and for it to continue to be in operations the SACCO must sustain all activities surrounding savings and credit. This is supported by the loanable funds theory, (Mishikin and Eakins, 2012). For a SACCO to be successful, it must disburse loans and collect loan repayments from the members as per contractual documents, (Plachka, 1989). The impact of not collecting loan repayments are: direct reduction on SACCOS' liquidity and direct reduction on profitability (Ochoki, 2007). When provision for loan loss is not deducted from the comprehensive income, the income statement will be overstated and if the entity (credit Union) pays dividends it will be paying from capital which is illegal, Leventis ; Dimitropoulos & Anandarajan (2012). Paying dividends from capital threatens a firms going concern and if it is done periodically over a number of years, it can lead to insolvency, Saunders and Cornet (2007).

1.2 Overview of the SACCO Sector in Kenya

The first SACCO was registered in 1964 after the country became independent in 1963. In the 1960s, the other African countries were at various stages of forming cooperatives including savings and credit cooperatives which formed a continental force known as ACCOSCA (African Confederation of Cooperative Savings and Credit Associations). Ondieki, Okioga and Okwena (2011) acknowledged that Kenyan Cooperatives (SACCOs included) play a significant role in Kenyan financial sector.

The Kenyan SACCO subsector is the largest subsector in Africa with several of Kenya's large SACCOs having capital base large enough to rival the banks (Owen, 2007). Ademba (2010) noted that the SACCO movement has evolved in the past 40 years into a formidable force for the social and economic transformation of Kenyan people with about 63% of the Kenyan population directly or indirectly depending on the cooperative related activities for their livelihoods.   With the committed members' movement of 5.7 million memberships, representing 63% of the adult population as at 31st December 2012, the financial cooperatives had accumulated Ksh 293 billion assets (SASRA, 2012) which represented 31% of the national savings. The expanded institutions are currently offering banking like services in the name of Fosas and Sasas, (Manyara 2003) which posed new risks in credit, fraud and liquidity among others.

Owen (2007) noted that a major innovation in the development of the sector in Kenya was the development of front office service activities (fosas) or direct deposit taking services (DTS) which offered banking like services to members. For the purposes of distinguishing the SACCOs accepting deposits directly, the SACCO laws (Republic of Kenya, 2008) acknowledged them as Deposit taking SACCOs.

Manyara (2003) cited the beginning of evolution of cooperative movement through government initiative contained in the sessional paper No 10 of 1965. It encouraged Kenyans to form cooperatives to eradicate poverty and accelerate development. The institutions formed relied on government for guidance and hence had strong government presence and when the strong government supervisorial powers were abused, the cooperatives sought autonomy. The regulated cooperatives lobbied strongly for Autonomy and in 1997 the sessional paper no. 6 led to revision of Cooperative Societies Act to embrace cooperative development in a liberalized environment and repealed the Cooperative Societies Act of 1966, Kobia (2011).

Kobia (2011) further noted the challenges which emerged raging from mismanagement by the boards, corruption deals especially in procurement, un-researched business ventures to outright embezzlement of   SACCOs funds as significant threats to members' deposits. Therefore the government in 2004 realized that the 1997 Act did not meet the intended objectives and revised the 1997 Act through the amended Act of 2004, (Republic of Kenya, 2004).

1.2.1 Overview of Credit Management in the SACCO Subsector.

In Kenya, credit management is regulated by law, specifically in Republic of Kenya (2008), which provides how loans are disbursed by the SACCO societies and places emphasis on policies and limitations on loans disbursements. Republic of Kenya, (2008b) provided the following criteria for computing allowance for loan loss:-

  i.   Performing loans - 1%-well documented and performing
  ii.   Watch - 5% - One installment outstanding
  iii. Substandard- 25%-2-6 installments unpaid
  iv.   Doubtful-50%-7-12 installments unpaid
  v.   Loss-100%, >12 installments unpaid

The international standard for Woccu is 35% for delinquency loans to the total loan portfolio while the charge off collections should be strengthened as a standard practice (Zoubu et al., 2007). The recommended international best practice is a proportion greater than >75 % as demonstrated hereunder:-

Recoveries of Charge offs =Accumulated charge offs recovered > or =75 %

                                        Accumulated charge offs

Therefore provision for loan losses, may appear to reduce surplus for a short period but because of the pressure it puts on management on loan recoveries, the   SACCOs eventually improve on liquidity and profitability, Leventis et al., (2012).The importance for providing for loan losses can be attributed to information asymmetry difficulties brought by the opening of common bonds on SACCO membership (Ochoki, 2007).

Literature Review
2.1 Introduction

This chapter examines the theoretical and empirical literature covering the impact of prudential regulations on the deposit taking SACCOs.

2.2.1 The SACCO Theories

The theories explain the evolution of SACCOs from initiation in the early 19th century to the present position. The original mode of existence is supported by the shareholders theory where shareholders unite with a view of solving a certain economical problem and then benefit from their efforts, Freindman (1970) and Coolho et al., (2003). The SACCO's corporate governance is in the hand of the "invisible hand" the AGM where the joint principals (members) guide the destiny of the SACCO and delegate some responsibilities to the management Committee.   The agency theory is similar to shareholders theory which states that the SACCO exists to maximize shareholders wealth, Olando et al (2013).The theory is an efficient market model (Blair 1995, Keasey et al., 2004), which stresses that the firm value is determined by the firm's short term performance and thus sacrificing long term investments.

As the SACCO expands both in membership and total assets, the need to hire a manager arises who acts as the steward responsible of protecting and maximizing shareholders value and hence the stewardship theory, Davis et al., (1997). The steward is satisfied when the organizational objectives are achieved, Donaldson and Davis (1991). Olando; Jagongo & Mbewa, (2013) extended it and called it financial stewardship which is meant to increase and sustain SACCOs' value while satisfying the needs of the members at the same time.

 Abdullah and Valentine (2009), advanced "stakeholders theory" which acknowledged that all the stakeholders' interests in the SACCO need to be addressed adequately for the success of the institution and overall membership. The theory asserts that satisfying shareholders only is only beneficial in the short term while satisfying all stakeholders is more sustainable and benefits shareholders more in the long term.

Jagongo et al., (2013) proposed the Solow-Swan class growth theory which focuses on capital and labour with major findings that capital is added when SACCOs invest but is lost due to depreciation. The indication is that there is capital growth in wealth only when the investment exceeds depreciation (Gatner, 2006). The theory is

strongly supported by Damar (1946) which explains growth rate in terms of savings and productivity of capital. It explains that increase in investments leads to accumulation of capital.

However, the degeneration theory can largely explain the diversity in the SACCOs objectives among the existing SACCOs. Cornforth et al (1988), appreciates the change in paradigm by the SACCOs due to pressure it receives from other market forces and amplified by members' demands for higher returns. The degeneration theory compromises the original principles of SACCOs of open membership, democratic member control, limited capital ownership, education and training among members and cooperation among cooperatives. As the SACCOs expand to become a financial institution like banks, they often respond to market pressures to operate like other financial institutions. Unlike the initial objective of saving with a major objective of obtaining credit, the shareholders start demanding more immediate services using the current technology like ATMs and higher returns on their investments among others. The change in paradigm leads to increased risks and hence the prudential regulation on the deposit taking SACCOs by the government. The earning assets must be addressed as SACCOs expanded both in loans to members asset and incessant demand for cash.

2.2 Allowance for loan loss theory

According to Harvey (2012) allowance for loan loss is a contra asset account on the balance sheet used for offsetting losses on loan assets. It is the management's best estimates of probable losses in the remainder of the portfolio as at the balance sheet date. Allowance for loan loss is a provision or reserve estimated showing the amount of loans made past due and likely to continue in default. Republic of Kenya (2008) defines allowance for loan loss as an amount aside in the statement of financial position (Balance Sheet) to recognize probable loan losses so that the true value of the loan portfolio is fairly stated. The provision for loan losses is defined by the same Act as an expense in the income statement to reflect an increase in the probability of losses due to uncollected loans. The weaknesses in loans repayment led to the financial turmoil of 2007 and 2009 US financial crisis. Brunnermiar (2009), Berger, Herring and Szego (1995) noted that inability to make loan losses provision lead to depletion of capital and hence losses in US banks in 1980's and similar findings were made by Peek and Rosengren (1995a).

The most critical asset in any financial institution (especially banks and SACCOs) are loans to members (Monteverde 2000). Two characteristics that make SACCOS' loans to members critical is the materiality of the earning asset and the assets exposure to credit and default risk. Legally loans to members form the core business of the SACCO and for it to continue to be in operations the SACCO must sustain all activities surrounding savings and credit. This is supported by the loanable funds theory, (Mishikin and Eakins 2012). For a SACCO to be successful, it must be able to disburse loans and collect loan repayments from the members, (Plachka 1989). The impact of not collecting loan repayments are: direct reduction on SACCOs' liquidity and direct reduction on profitability. When provision for loan loss is not deducted from the comprehensive income, the income statement will be overstated and if the SACCO pays dividends, it will be paying from capital which is illegal, Leventis; Dimitropoulos & Anandarajan (2012). If it is done periodically over a number of years, it can lead to insolvency, Saunders and Cornet (2007).

In Kenya, credit management is regulated by law, specifically in Republic of Kenya (2008), provides how loans will be disbursed by the SACCO societies and places emphasis on policies and limitations on loans disbursements. The regulation 41(3) further directs SACCOs to do provisions as follows:
   i.   Performing loans-1%-well documented and performing
   ii.   Watch-5%-One installment outstanding
   iii. Substandard- 25%-2-6 installments unpaid
   iv.   Doubtful-50%-7-12 installments unpaid
   v.   Loss-100%, >12 installments unpaid
The international standard for Woccu is 35% for delinquency loans to the total loan portfolio while the charge off collections should be strengthened as a standard practice. The recommended international best practice is a proportion greater than >75 % as demonstrated hereunder:-

Recoveries of Charge offs = <u>Accumulated charge offs recovered ></u> or = 75 %

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Therefore provision for loan losses, may appear to reduce surplus for a short period but because of the pressure it puts on management on loan recoveries, the   SACCOs eventually improves on liquidity and profitability, Leventis et al (2012).

2.4.3 Credit Risk and Allowance for Loan loss.

McKillop and Wilson (2011) defined credit risk as the inability to repay loans in accordance with the contractual agreement due to unsafe lending practices. The Concept was similarly defined by Levintis; Dimitropoulos &Anandarajan (2012) who further added that the true value of loans as an asset can be computed by establishing the total loans and deducting allowance for loan losses.

Allowance for loan loss is a provision or reserve estimated showing the amount of loans made past due and likely to continue in default. The weaknesses in loans repayment led to the financial turmoil of 2007 and 2009. Brunnermiar (2009), Berger, Herring and Szego (1995) noted that inability to make loan losses lead to depletion of capital and hence losses in U.S banks in 1980's and similar findings were made by Peek & Rosengren (1995 a). Therefore, to avoid the capital depletion, the U.S regulators tightened examination criteria and loan reserve policies Bizer (1993) and accepted other voluntary measures to reduce risks by bank managers as stated by Hancock and Wilcox , (1993,1994 b).   However, Berger et al., (1995) evidence appear to suggest that the risk based capital does not lead to reduction in lending but leverage capital was responsible for the significant portfolio change.

2.2.4 Allowance for loan Loss and Financial Disclosures.

Deegan and Rankin (1997) noted that financial disclosures are very important to the different stakeholders in various industries and particularly for transparency and accountability. Gordon (2004) further strengthened the transparency by showing relevancy of related party transactions and insider lending. Republic of Kenya (2008), establishes the disclosure on insider lending. The Strength of any financial institution is to a large extent determined by the integrity and capacity of board members (Kimani, 2007). To sustain integrity, the proportion of insider lending is disclosed by the board members on monthly basis which should not be on more favorable terms than the rest of the membership. As a gauge, it should not be in excess of 10% of core capital. Similar disclosure views were shared by Rizk; Dixon and Woodhead (2008) in a survey of disclosure practices in Egypt.
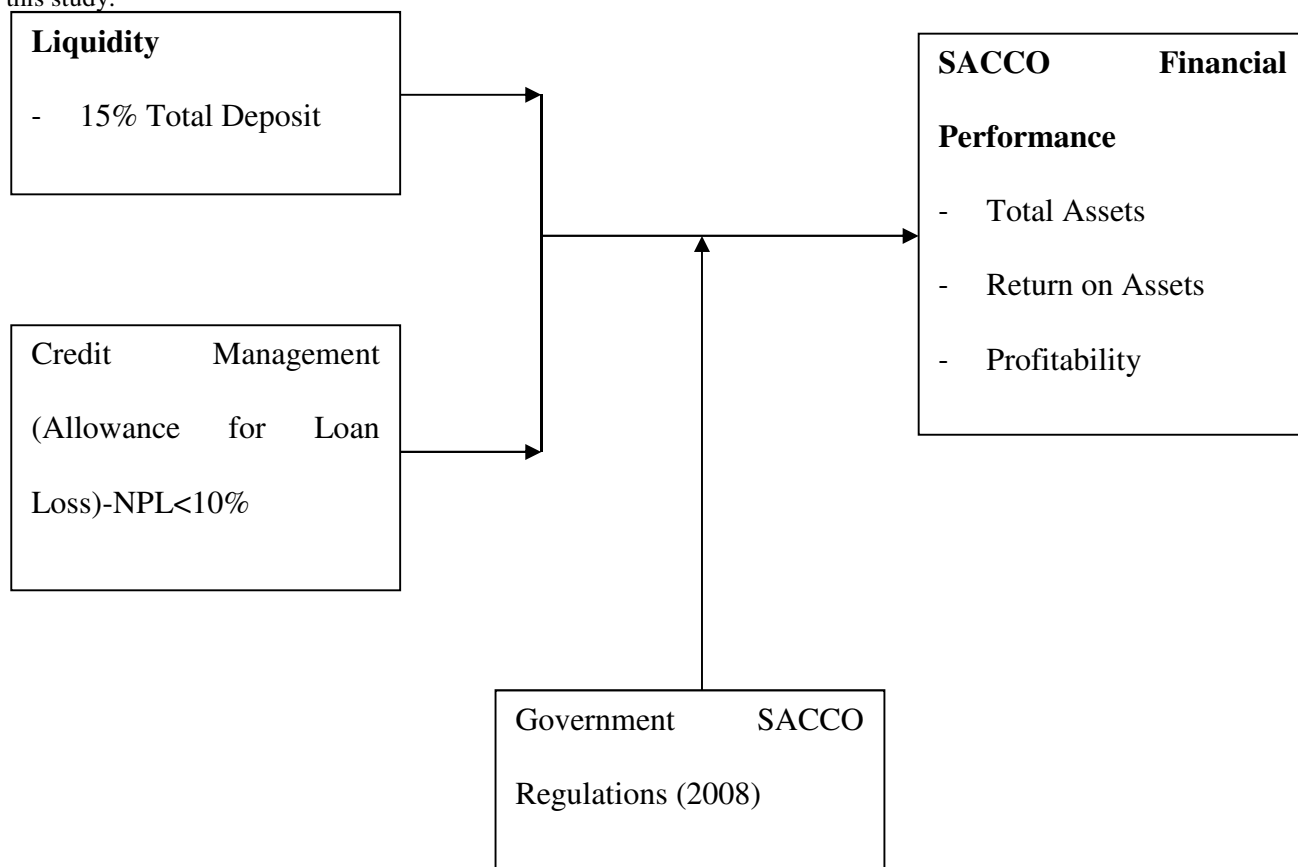
2.2.5 Liability and Liquidity Management theory

Republic of Kenya (2008) defines liquid assets as those assets which can be readily converted into cash due to the nature of asset or the condition of the market that supports easy convertibility. Saunders & Cornett (2011), advocate for the prudential planning of cash flows by matching maturities of assets against maturities of liabilities. For an organization to operate in a positive cash flow the maturity of asset must be earlier than the maturity of liabilities. Republic of Kenya (2008) advocates for 15% Liquidity to short term deposits and short term liabilities ratio as a means of sustaining deposit taking business. The ratio encourages SACCOs to be liquid always to enable them meet daily cash requirements for the members and a similar view was shared by Ruth (2001). Thus matching different maturities of assets (loans to members) and maturities of liabilities is critical to both profitability and liquidity. This requires measurement of sensitivity to different interest rates of both assets and liabilities through income Gap analysis commonly known as Gap analysis, Mishkin and Eakins (2011). Thus calculation of Gap can be rewritten as:

GAP = RSA – RSL where RSA is a rate sensitive assets and RSL is the rate sensitive liabilities. If liability loans like cooperative bank loans to SACCOs are maturing faster than repayment of loans by members, then the SACCO concerned will continue with loan dependence. Thus SACCOs are expected to compute changes in income as: Change in income = Gap × Net change in interest rates. As a result, SACCOs are expected to submit liquidity position on monthly basis.

2.3 Conceptual Framework

The conceptual framework explained the connection between the variables and answered the why question of this study.

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┌─────────────────────────┐                    ┌─────────────────────────┐
│ Liquidity               │                    │ SACCO      Financial    │
│                         │                    │                         │
│ -  15% Total Deposit    │─────────┐          │ Performance             │
│                         │         │          │                         │
└─────────────────────────┘         │          │ -  Total Assets         │
                                     └─────────▶│                         │
                                               │ -  Return on Assets     │
┌─────────────────────────┐         ┌─────────▶│                         │
│ Credit     Management   │         │          │ -  Profitability        │
│                         │         │          │                         │
│ (Allowance   for   Loan │─────────┘          └─────────────────────────┘
│                         │              ▲
│ Loss)-NPL<10%           │              │
└─────────────────────────┘              │
                              ┌──────────┴──────────┐
                              │ Government    SACCO │
                              │                     │
                              │ Regulations (2008)  │
                              └─────────────────────┘
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Independent Variables   **Moderating Variable**   **Dependent Variable**

Figure 2.1 The Conceptual Framework

Source: Researcher (2013)

2.4 Core Capital and Liquidity Requirements.

Barrios and Blanco (2002) justified the presence of core capital regulation on avoidance of bankruptcies and the negative externalities on the financial system. Negative externalities emanates from the likely panic withdrawals from other solvent but illiquid banks due the collapse of a known financial institution, Bergie et al (1995). Thus core capital which was mainly lacking in SACCOs before legislation is a cushion to retain cash in the business as a way of improving liquidity (Ochoki, 2007). Barrios and Blanco (2002) showed that eventually where market is mature, all the market ratios will be more than the regulators ratios and hence do not need regulatory regime but in most cases regulatory model is required.

2.5 Empirical Literature Review

The study greatly relies on the work done by Hyndman et al., (2004) on credit unions in Ireland, Spiegel and Yamouri (2004) and credit associations in Japan, McGrath (2008). Ross, Westerfield and Jordon (1995) defined liquidity as the ability to settle liabilities when they fall due. Therefore any entity must be concerned with cash inflows and cash outflows. Ross et al., model for the cashflow as follows:

Net cash inflow = Cash inflows from debtors – (cash outflows for paying creditors + cash outflows for paying stockholders). Therefore, entities including SACCOs must prepare cash budgets which were defined as estimated cash inflows and outflows over the planning horizon, Leung (2009). Miller and Orr (1966) developed a mathematical model with minimum and maximum cash balances to assist the entity meet its cash requirements with minimum costs by ascertaining the desired cash level. Desired cash level (z), can be computed as:

$$z = (\sqrt{3}F\sigma^2/4r)^{1/3} + L$$

Where z = desired cash level

F = fixed transaction cost of buying and selling marketable securities

σ^2 = variance of daily cashflows (which indicates randomness)

r = daily interest rates on marketable securities

L = minimum cash balance

The upper limit = 3z-2l.

The computation of upper limit is important because firms will always invest the idle cash in profitable enterprises until the cash is needed by the firm, Davidson et al, (1999) and Pandey (2007). The excess cash is usually invested in marketable securities to earn incomes. The practice is possible due to the ease of conversion back to cash or cash equivalents when cash is needed back by the enterprise, Hampton (2001).

Studies by Mckillop and Wilson (2011) stated specifically, that banks were expected to maintain a capital ratio of 10% on its risk-weighted assets. Basis of computation for core capital Weights were given under the relevant Basel accord while the SACCO capital ratios are given expressly in SACCO societies regulations as core capital to total Assets (CCA) of 10% and Core capital to total Deposits (CCD) of 8%. Cournett (2011) proposed that credit Unions in United States were allowed to set their own standards. Macharia (2013) did a study on effect of licensing requirements on the performance of savings and credit cooperatives in Nakuru County. Most SACCOs according to the study, reported improvements in their performance both in membership, portfolio and efficiency. Mbui (2010) carried out a study on the business opportunities for stima SACCO society limited in a new regulatory environment. The study concludes that the new regulatory environment provided more structured and clear guidelines on the operations of stima SACCO. Musumbi (2012) carried out a research on performance management in the SACCO societies regulatory Authority (Sasra). The researcher adopted a case study and the data collected was qualitative in nature from only one organization.

The researcher's findings indicated that government policies and resistance to change were the greatest challenges to strategy formulation and implementation. Other challenges faced were lack of financial resources and absence of good management to drive competitive strategies in the right direction. For further research it recommends that a study be carried out to determine the influence of Sasra on the SACCO movement. Ademba (2012) reported on cash management and insisted that cash management must be the most important item for financial institutions to avoid panic withdrawals and hence the SACCOs must maintain cash and cash equivalents of 15% ratio to short term deposits and short term liabilities.

Research Methodology
3.1 Research Design
The research design used is descriptive Survey using SACCOs quantitative and qualitative data. It is a comparative study between period prior to licencing and post licensing period.

3.2 Population
The target population of the study comprised of 124 licensed SACCOs in Kenya as at 31st December 2012

3.3 Research Instruments
The research instruments used were questionnaires and data mining templates to extract information from Sasra data base and perception from knowledgeable experts. The questionnaires were distributed to all the targeted population of licensed SACCOs as at 31st December 2012.

3.4 Data Collection Procedures

Data was obtained from both the primary and secondary sources. Data collection from primary sources was done through questionnaires while the secondary Data was obtained from Sasra's database. The data was analyzed, manipulated and logical conclusions made on the basis of findings.

3.5 Data Validity and reliability

Pilot study was conducted when 22 questionnaires were administered to 22 SACCO Ceos with an intention of pre-testing the questions. Pilot testing was done to determine the flaws, limitations or other weaknesses within the interview design and made corrections of the errors possible. To test for reliability, the study used the internal consistency technique which assessed using cronbach coefficient Alpha. Internal consistency of data was determined by correlating the scores obtained from one time with the scores obtained at other times using the same research tool. The coefficient obtained was 0.8 and the rule is that the absolute value greater than 0.7 is acceptable as adequate for the data being examined.

3.6 Data Processing and Analysis

The data collected was validated, analyzed and interpreted to establish the impact of liquidity and allowance for loan loss had on SACCOs financial performance. Descriptive statistics such as mode, median, mean, standard deviation were used to perform data analysis. Data was processed using Statistical Data Processing for Social Sciences software (SPSS) to obtain results using linear regression model.

The use of classic linear regression model was preferred due to its ability to show relationships between the independent and the dependent variables, Castillo (2009). Multiple regression results for the period before regulation 2006 – 2010 and after regulation 2010 – 2013 were compared using the following models:

$Y = \beta o + \beta_1 X_1 + E$ ....before regulation of 2010 and after regulation 2013

$Y = \beta o + \beta_2 X_2 + E$ ....before regulation of 2010 and after regulation 2013

Moderating Effect

$Y = \beta o + \beta_1 X_1 + \beta_2 X_2 + E$ ....for period 2006 - 2013 before moderating effect of SACCO societies Act.

$Y = \beta o + \beta_1 X_1 * X_3 + \beta_2 X_2 * X_3 + E$ .... for period 2006 - 2013 after moderating effect of SACCO societies Act.

Where the dependent variable Y = Financial Income levels,

βo = intercept (represented by entrance fee and minimum capital),

β_1 = coefficient of liquidity,

β_2 = coefficient of allowance for loan loss.

$X_1 =$ liquidity

X_2 = allowance for loan loss

NB:

β is the symbol for Beta and beta represents the coefficients of independent variables.

To test for hypothesis, the two simultaneous equations were used. Thus, the research was a comparative study for the financial performances for the periods before and after introduction of legal liquidity and allowance for loan loss parameters of 2010. The differences between the coefficients of the two equations showed the influence of the various independent variables and hence either led to non rejection of the null hypothesis or rejection of null hypothesis.

Description of Data

4.1 Introduction

This chapter presents the findings of the study. Data collected was in both in qualitative and quantitative aspects with analysis of both items being reported on. Both categories of data were analyzed using descriptive statistics such as mode, mean and standard deviations and inferential statistics such as classical linear regression coefficients. Data reporting was done using graphs, tables, charts and equations.

4.2 Response Rate

From the data collected, out of 124 questionnaires administered, 108 were filled and returned which represents 87% response rate. The response rate is considered adequate to make conclusions for the study as observed by Mugenda and Mugenda, (2003),that 50% response rate is sufficient, 60% good and any rating above 70% is considered very good.

4.3 Demographic Characteristics of Respondents.

The study sought to establish the demographic pattern of the respondent's data by examining the gender, professional and academic experience of the respondents. The study targeted 124 participants in regard to prudential management in SACCOs and 87% of the targeted primary information was obtained from the respondents themselves while the secondary data was obtained from SACCO societies Authority's registry.

4.3.1 Gender Distribution

The demographic characteristics of the statistics indicated that ninety six (96) of the respondents were men represented by (77%) seventy seven percent, while twenty eight were women signifying (23%) twenty three percent as indicated in the table 4.1

Table 4.1 Gender Distribution

	FREQUENCY	PERCENTAGE (%)
MALE	96	77
FEMALE	28	23
TOTAL	**124**	**100**

4.3.3 Liquidity.

The study sought to investigate the impact of liquidity on financial performance of deposit taking SACCOs. The study demonstrates the impact of liquidity on financial performance by comparing the coefficients of liquidity before the statutory reforms in years 2006- 2009 and after the statutory reforms regulations in years 2010 – 2013.

The regressed results for the four years before reforms show a consolidated balance sheet (statement of financial position) from 2006 to 2009 and the results were compared with consolidated Balance sheet for the period 2010 to 2013. The independent variable is measured by the ratio of liquidity to the summation of short term deposits and short term liabilities. Liquidity in absolute terms is represented by cash and a cash equivalent contained in statement of financial performance and includes the balances held in other secondary Credit Unions like Kussco, while the independent variable is measured by return on assets (ROA) ratio which is specifically computed by earnings before interest and taxes divided by the total assets. The study uses regression analysis and correlation analysis between variables as regression shows the relationship while correlation quantifies the extent of the existing relationships between variables.

4.3.4 Liquidity and Financial Income (2006 – 2009)

During the pre – reform period cash management level was haphazardly set by respective SACCOs and the study seeks to establish if setting of specific ratio at 15% of liquidity to deposits had any impact on SACCOs financial income.

Table 4.2 indicates that the correlation coefficient between Liquidity and ROA is 0.003 with p-value of 0.979 > 0.05. The individual regression coefficient is not significant. Thus, the haphazard maintenance of cash and cash equivalents in the period of 2006 - 2009 before reforms posed a significant risk in depositors' funds and hence the need for legal guide on minimum cash balances as guided by the legislative framework and associated regulations.

Table 4.2 Coefficient of Determination for Liquidity, 2006 -2009 Data.

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.003	.000	-.010	.098

The value of R is 0.003 and R^2 is 0.000 implying liquidity as measured by Liquidity to deposits (LOD) ratio has no significance on a firm's Return on assets (Roa). However, prior to post legislation period of 2010 – 2013 including period 2006-2009, the SACCOs were not having a distinct legal requirement to maintain liquidity of 15% and hence kept cash haphazardly. Strict cash management is required in a deposit taking SACCOs to avoid depletion of cash when customers require immediate cash for use. However the results for post reform period of 2010 – 2013 show that liquidity is significant as demonstrated by table 4.3 with R of 0.701 and R^2 of 0.526. Normally, the R^2 of 0.5 signifies strong relationships between variables.

Findings are similar to Miller & Orr (1966) who stated that certain desired level of cash is essential for running business and businesses must avoid a cash balance which cannot meet customers' needs. The balance also must not be too high to avoid keeping idle cash that would generate further income through lending or investments instead of remaining in the cash tills. Thus a maximum cash holding should be set to avoid tying funds needed for lending or other investment purposes in idle capacity.

4.3.5 Liquidity and Return on assets in post Reform Period (2010 - 2013)

The study sought to show relationship between liquidity and return on assets with a view of establishing if there was any impact of liquidity ratio on the profitability of business or not. The comparative analysis of coefficients between pre- reform period data of 2006 – 2009 and post reform period data 2010 – 2013 was compared.

Table 4.3 indicates that the correlation coefficient between Liquidity and Roa is .701 with p-value of $0.013 < 0.05$. There is a positive relationship between liquidity and ROA. The individual regression results show that for an increase in liquidity by one unit, ROA increases by 0.24 units.

Table 4.3 Coefficient of Determination

R	R Square	Adjusted R Square	Std. Error of the Estimate
.701	.526	.501	.019

The independent variable is liquidity.

The R and R squared is 0.701 and 0.526 respectively implying a strong relationship between liquidity and Roa. In comparison with the pre – reform period, where the coefficient of determination (R^2) is 0.003 and R^2 is 0.000 implying non existence of any relationship, the post reform period shows a strong relationship.

Table 4.4 Anova

	Sum of Squares	df	Mean Square	F	Sig.
Regression	.002	1	.002	6.387	.013
Residual	.033	92	.000		
Total	**.036**	**93**			

The independent variable is LIQUIDITY.

Table 4.4 shows the results of Anova test which reveal that the liquidity has significant impact on financial income. The inference is derived from the fact that p- value is 0.013 which is lower than 5% level of significance. Therefore the linear regressions line that $Y = B0 + B_2 X_2 + E$ where X_2 is the liquidity and Y represents return on assets is significant. Thus the improved liquidity levels from haphazard practice to organized maintenance of 15% liquidity ratio improved the significance level from 0.979 to .013 as depicted by the table 4.4 and table 4.5.

Table 4.5 Coefficients

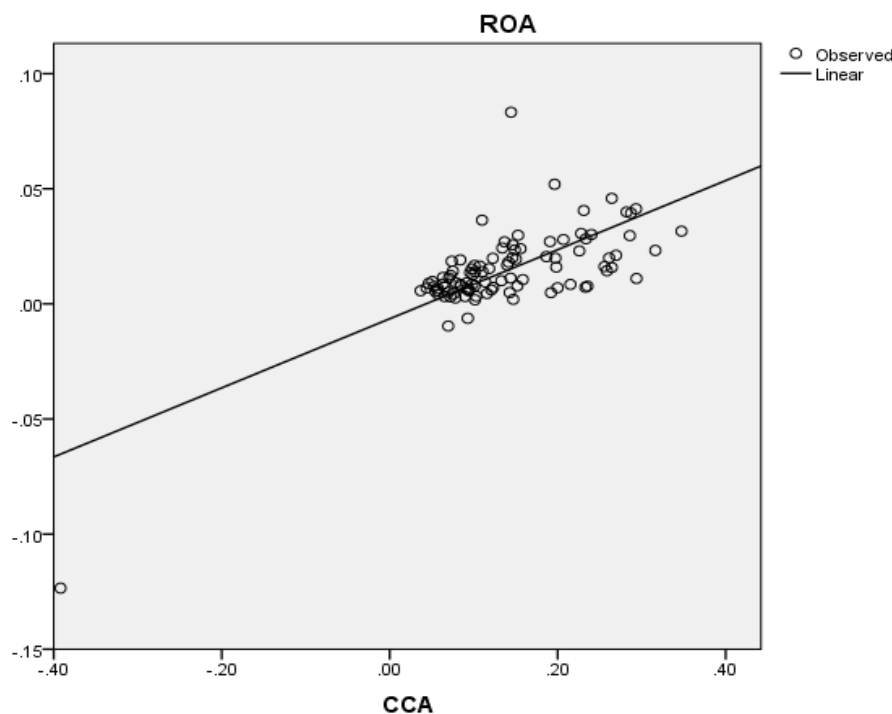|	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
LIQUIDITY	0.24	.010	.701	9.178	.013
(Constant)	.019	.003		-2.652	.000

Figure 4.1 Scatter Diagram on Liquidity's effect On Financial income (2010 – 2013).

Thus, liquidity and financial income have a positive relationship as illustrated by the scatter diagram figure 4.1. Ideally, deposit taking SACCOs should manage cash well and hence tendency to increase incomes.

4.4 Allowance for loan loss

Allowance for loan loss is a contra asset account on the balance sheet used for offsetting losses on loan assets. In other words, it is reduction in the loan asset by a provision estimated based on loan installments unpaid on due dates (Harvey, 2012).

4.4.1 Allowance for Loan Losses

The study sought to investigate the impact of allowance for loan loss on financial performance of deposit taking SACCOs. The study demonstrates the impact of allowance for loan loss on financial performance by comparing the coefficients of allowance for loan loss before the statutory reforms in year 2010 and after the implementation of prudential requirements as contained in SACCO Societies Act and the accompanying regulations.

The regressed results for the four years before reforms show a consolidated balance sheet (statement of financial position) from 2006 to 2009 and the results were compared with consolidated Balance sheet for the period 2010 to 2013. The independent variable is measured by the ratio of allowance for loan loss to the total assets. Allowance for loan loss in absolute terms is the difference between gross loans and net loans as contained in statement of financial performance. The ratio is that difference divided by total assets while the independent

variable is measured by return on assets (ROA) ratio which is specifically computed by earnings before interest and taxes divided by the total assets. The study uses regression analysis and correlation analysis between variables as regression shows the relationship while correlation quantifies the extent of the existing relationships between variables.

4.4.3 Allowance for loan losses (AFLL) and Roa (Period 2006 – 2009)

Table 4.6 indicates that correlation coefficient between Allowance for loan loss to total assets (AFLL) and financial income (ROA) is -0.014 with p-value of 0.910 > 0.01.

Table 4.6 Model Summary for 2006 – 2009

Data			
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
.014	.000	-.015	.113

The independent variable is AFLL.

The value of R is 0.014 and R^2 is 0.000 implying that allowance for loan loss as measured by allowance for loan loss to total assets had no significance on a firm's Return on assets (Roa) initially before 2010. However, prior to post legislation period of 2010 – 2013 including period 2006-2009, the SACCOS were not having a distinct legal requirement to ascertain the allowance for loan loss or any measure to ascertain the loan quality and hence kept on depleting capital without any knowledge or awareness.

4.4.4 Allowance for loan losses (AFLL) and Return On Assets (Roa) - Period 2010 – 2013.

The study sought to establish whether there was a relationship between allowance for loan loss (Afll) and financial income as measured by Return on assets (Roa). On establishing relationship, the results were compared between pre-licensing period and post licensing period. Table 4.7 indicates that the correlation coefficient between Liquidity and Roa is .612 and R^2 of 0.474 which shows that there is a positive relationship between liquidity and ROA.

Table 4.7 Model Summary

R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
.612	.474	.369	.242

The independent variable is AFLL.

The results of the linear regression $Y=\beta_0+\beta_2X_2+E$ indicate that R^2=474 and R= .612, an indication that there is a linear relationship between AFLL and ROA. Table 4.8 shows the results of Anova test which reveal that allowance for loan loss has a significant impact on financial income. The inference is derived from the fact that F value is 69.385 and a p- value of 0.000 which is lower than 5% level of significance.

Table 4.8 ANOVA

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	4.056	1	4.056	69.385	.000
Residual	6.781	116	.058		
Total	**10.837**	**117**			

The independent variable is AFLL.

The table 4.9 shows the results of ANOVA test which reveals that AFLL has a significant effect on ROA .Since the P value is actual 0.000 which is less than 5% level of significance. The rule is that if significance is lower than 5% then the variable is significant.

Table 4.9 Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
AFLL	.181	.022	.612	8.330	.000
(Constant)	-.146	.022		-6.552	.000

The results in table 4.9 indicate that allowance for loan loss (AFLL) has a significant positive influence on ROA. This is shown by the regression weight of 0.181 with a t-value (8.330) which is greater than 1.96 and P Value of 0.00 at 95% level of significance that is less than 5%.
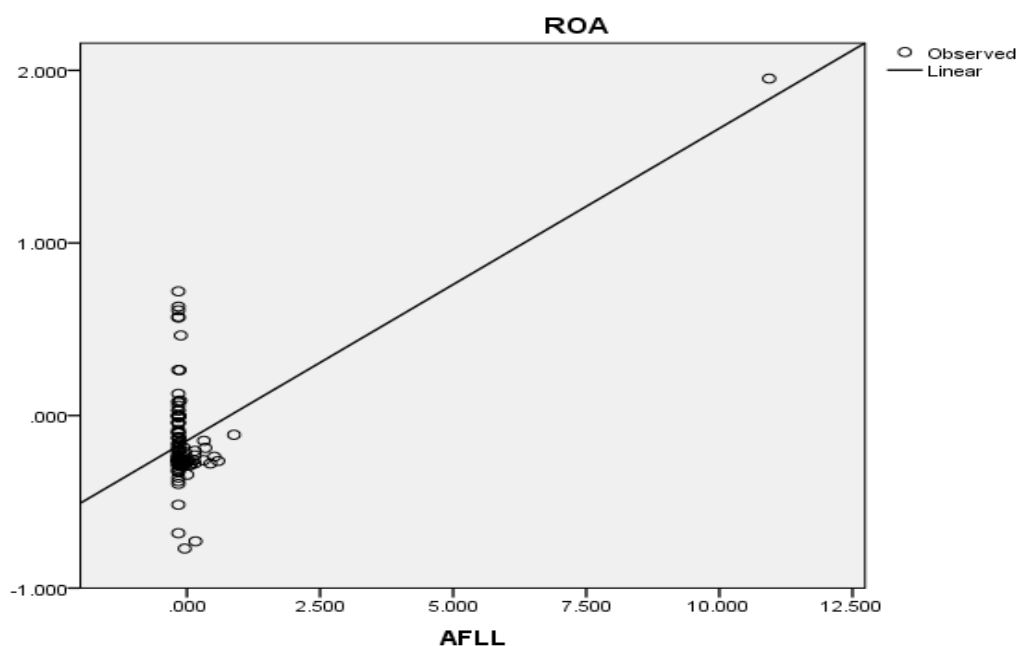
Figure 4.2 Scatter Diagram on Allowance for loan loss effect On Financial income (2010 – 2013)

Figure 4.2 shows the results of AFLL on ROA in a scatter diagram. The scatter diagram indicates a positive gradient which is an indication that AFLL influences the ROA.

Empirical Findings and Discussion
5.1 Introduction
This chapter summarizes the findings of the study with reference to specific objectives and research hypothesis. The study design was an empirical survey that compared the financial performance of deposit taking SACCOs in Kenya before the statutory reforms of 2010 and after enactment of law and the associated regulations. Data was interpreted and the results of the findings were correlated with both empirical and theoretical literature available. The conclusion relates directly to specific objectives and research hypothesis.

5.2 Summary of Findings
The study sought to investigate the impact of liquidity and credit management on the financial performance of deposit taking SACCOs in Kenya. Specifically, the study investigated liquidity and Allowance for loan loss impact on SACCOs financial position.

5.2.2 Association of liquidity and the financial performance of deposit taking SACCOs in Kenya
The study found out that liquidity as a practice of prudential standard has an important impact on the performance of SACCOs financial income. An optimal level should be maintained to avoid holding too much

cash which should otherwise earn income from members' interest on loans and avoid zero cash levels as that would discourage clients mainly the depositors.

5.2.3 Association of allowance for loan loss and the financial performance of deposit taking SACCOs in Kenya.

The F value is 12.189, with a P value of 0.910 which is greater than 0.05, implied that the model is significant. The beta of 0.0168 implied a positive situation which shows that allowance for loan loss is a significant variable.

5.3 The overall effects of the variables

The study findings showed a great influence of the two variables (liquidity and allowance for loan loss) on the financial performance of deposit taking SACCOs.

5.4 Recommendations

The study has established that liquidity and allowance for loan loss were important components in sustaining and increasing financial incomes of deposit taking SACCOs in Kenya. Specifically, the study recommends;

1) The members should realize the importance of liquidity and credit management and support adherence to the related laws to enable SACCOs realize more revenue than they would otherwise have earned.
2) The implementation of prudential practices of liquidity and credit management should be encouraged by all stakeholders in the subsector as it leads to savings culture among communities. The increased confidence and loyalty normally leads to accumulated savings which should be invested wisely to bring prosperity to members.
3) The SACCOs should strive to identify customers' financial needs and design to create loan products which will lead to members' loyalty and patronage. If policies properly formulated, the granted loans would be repaid in accordance with the loans contractual terms and hence minimal allowance for loan loss.
4) From the study findings, the SACCOs should develop polices on all key areas as a standard guide to employees on performance. Therefore SACCOs should always strive to recruit competent staff on the basis of professionalism.

5.5 Recommendations for further research

Similar studies should be done on non-deposit taking SACCOs to enable legislation for the non deposit taking SACCOs to reduce likelihood of capital depletion and risk of insolvency.

Studies should also be done on effect of legislation on total asset growth of SACCOs and the associated divided payout policy. Since compliance required increased revenue retention to sustain capital adequacy, the SACCOs have to increase revenue retention which would be in direct conflict with members who always pressurize for increased dividends. Hence carry out a research on agency problem associated with appropriation of increased revenue.

5.6 Contribution to Knowledge

The study contributes to the existing knowledge in the following ways:-

(1) By offering solution to the survival of SACCOs whose going concerns were being threatened on daily bases. Without adequate provisioning the SACCO insolvency risk increases and the SACCOs financial base continuously weakens. The study also offers a special insight on importance of proper policies on all key areas to guide staff on prudential credit practices and its benefits.

(2) The study is also a relief to other stakeholders who rely on quality of assets to lend SACCOs financial credit. The provisions for loan loss enables SACCOs appreciate the quality of the earning asset which is the loans to members. By generating more revenue, SACCOs are encouraged to concentrate on the earning assets only.

5.7 Conclusion

The critical point was to explore the impact of liquidity and credit management on the financial performance of deposit taking SACCOs in Kenya. Thus, the findings indicated that credit and liquidity management is important for increasing financial incomes and protection of deposits within the financial markets.

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