

EFFECT OF LIQUIDITY MANAGEMENT ON LIQUIDITY OF SAVINGS AND CREDIT CO- OPERATIVE SOCIETIES IN KIRINYAGA COUNTY, KENYA

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ABSTRACT

Savings and Credit Co-operative Societies (SACCOs) are quasi financial institutions that mobilize savings, provide loans as well as other products to their members. Liquidity is considered as one of the serious concern and challenge for the modern era SACCOs. A SACCO having good asset quality, strong earnings and sufficient capital may fail if it is not maintaining adequate liquidity. The objective of the study was to assess the effect of liquidity management on liquidity of Savings and Credit Co-operatives Societies in Kirinyaga County, Kenya. Descriptive survey research design was used in this study. The target population consisted of all the 60 registered SACCOs in Kirinyaga County from which a sample size of 18 SACCOs was drawn. The study employed stratified random sampling technique. Primary data was collected by use of self-administered semi-structured questionnaires while secondary data was collected using audited financial statements of the SACCOs and regulator (SASRA). A pilot test was conducted to ascertain the validity and reliability of questionnaire. The Cronbach's alpha coefficient was used for reliability test while the content validity technique was used in validating the research instruments. The data was analyzed using SPSS with the help of descriptive statistics tools such as percentages, mean, standard deviation, mode and variances. Inferential

statistics was done by use of Pearson's product moment of correlation. Multiple regression analysis was performed to assess the relationship between study variables. R^2 was used to assess the contribution of independent variable on dependent variable. Data was presented using frequency tables, charts and graphs. The F-test was used to evaluate the significance of the obtained results. The study findings will be of great importance to the SACCO management, academicians and future scholars, regulator and the government. The study indicated that the effect of liquidity management, net cash flows, credit lending and investment in non-core business on liquidity of SACCOs was positive and significant. The study concluded that SACCOs in Kirinyaga County mostly capitalized on liquidity management and as such it affected the SACCOs' liquidity. In addition, the study concluded that it was critical for SACCOs to have adequate liquidity in order to ensure that they meet short term maturing obligations. The SACCO management must put in place financial strategies to ensure that liquidity is effectively managed on a regular and timely basis and that appropriate policies and procedures are established to limit and control material sources of liquidity risk.

Key Words: *liquidity, liquidity management, net cash flows, credit lending, non-core business, savings and credit co-operative societies (SACCOs)*

INTRODUCTION

Savings and Credit Co-operative Societies (SACCOs) are quasi financial institutions that mobilize savings, provide loans as well as other products to their members [Kenya Union of Savings and Credit Co-operatives (KUSCCO, 2009)]. SACCOs plays an important role in Kenya's financial sector in provision of affordable financial services to their members both urban and rural households (Co-operative Bank of Kenya, 2013). The co-operatives in Kenya

can be traced back in 1908 when European settlers formed the Lumbwa Co-operative Society near Kericho (Kiragu, 2014). Kenya Co-operative movement is currently ranked 1st in Africa and 7th internationally (SASRA, 2013). The SACCO business, like the banking business thrives on trust and confidence of the depositors and investors (Odhiambo, 2013).

Liquidity Management

Liquidity management means ensuring that the institution maintains sufficient cash and liquid assets to satisfy client demand for loans and savings withdrawals and to pay the institution's expenses. It involves a daily analysis and detailed estimation of the size and timing of cash inflows and outflows over the coming days and weeks to minimize the risk that savers will be unable to access their deposits in the moments they demand them. It describes the effort of investors or managers to reduce liquidity risk exposure (Brunnermeier & Pedersen, 2009).

Savings mobilization is not an end in itself; it plays an important role in sustaining growth and development (Odhiambo, 2013). A high saving economy accumulates assets faster, and thus grows faster, than does a low saving economy (Muriuki, 2013). Members' savings deposits forms the major source of funding for the SACCO Societies (Kiragu, 2014). These are deposits contributed on a monthly basis by members and are used for borrowing from the SACCO Society (SACCO Societies Act, 2008).

Liquidity of Savings and Credit Co-operative Societies

Liquidity is the ability of a business entity to honor all cash payment commitments as they fall due (Kimathi, 2014). Funding liquidity is the ability to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses (The Basel Committee on Banking Supervision, 2008). Effective liquidity risk management helps ensure a SACCO's ability to meet cash flow obligations, which are uncertain as they are affected by external events and other agent's behaviour (Song'e, 2015). Liquidity risk management is of paramount importance because a liquidity shortfall at a single institution can have system-wide repercussions (Muraguri, 2014).

Liquidity reflects a financial institution's ability to fund assets and meet financial obligations. Liquidity is essential in all SACCOs to meet customer withdrawals, compensate for balance sheet fluctuations, and provide funds for growth (Njeri, 2014). Liquidity is an important indicator of financial stability in a SACCO society as it shows the SACCO's ability to meet obligations as they fall due (Kimathi, 2014). As financial institution, SACCOS should manage the demand and supply of liquidity in an appropriate manner in order to safely run their business, maintain good relations with the stakeholders and avoid liquidity problem (Njeri, 2014).

Liquidity Management versus Liquidity of Savings and Credit Co-operative Societies

The SACCO business, like the banking business thrives on trust and confidence of the depositors and investors (Odhiambo, 2012). The growth of SACCOs shows how important they are in providing affordable financial services to Kenyans. The importance of the SACCO sub-sector in Kenya led the Government to enact the SACCO Act 2008 and the

SACCO Societies Regulations 2010 (Kiragu, 2014). The SACCO Societies Act 2008 and its attendant regulations 2010, are risk oriented providing minimum operational regulations and prudential standards required of deposit-taking SACCO Societies to ensure financial stability of the SACCO subsector (SACCO Societies Act, 2008; Regulations, 2010).

The policy objective of establishing prudential regulation of deposit taking SACCOs is to enhance transparency and accountability in the SACCO subsector (Kimathi, 2014). This is consistent with the ongoing reforms in the financial sector whose ultimate aim is to expand financial access, encourage efficiency and enhance financial stability of financial service providers in Kenya (Kiragu, 2014). These areas include the availability of capital funds to face any potential unexpected losses arising from poorly performing loans or investments and the quality of the loan portfolio as the main income-generating asset in SACCO Societies. Other areas are the continuing availability of liquid funds to finance loan portfolio growth and to respond to depositors' and creditors' needs and the overall asset structure in terms of non-earning assets, fixed assets and investments in private sector securities (SACCO supervision Annual report, 2012).

Liquidity is an important indicator of financial stability in a SACCO society as it shows the SACCO's ability to meet obligations as they fall due (Kimathi, 2014). As at December 31st 2012, average liquidity (net liquid assets divided by savings deposits and short term liabilities) for the licensed deposit taking SACCOS stood at 36% against a statutory minimum of 15%. However, the demand for loans continues to put pressure on liquidity with the industry ratio of loans to deposits exceeding 100% (SACCO supervision Annual report, 2012). As financial institution, SACCOS should manage the demand and supply of liquidity in an appropriate manner in order to safely run their business, maintain good relations with the stakeholders and avoid liquidity problem (Njeri, 2014).

Savings and Credit Co-operative Societies in Kirinyaga County

In Kirinyaga County, the first Savings and Credit Co-operative Societies were started in the seventies and they have grown tremendously (Kamonjo, 2014). There are over 60 registered co-operatives with over 10 deposit taking SACCOs (Kamonjo, 2014). The movement is estimated to have over Ksh. 10 billion in savings and over Ksh. 2.5 billion in share capital while employing about 500 directly and another 1,000 indirectly (SASRA, 2013). SACCOs in Kirinyaga County has led to growth of many small scale businesses but the loans has been defaulted to a large extent such that it has become a concern of the all the stakeholders within the county (Kamonjo, 2014).

STATEMENT OF THE PROBLEM

SACCOs have been providing financial products to their members without any competition from other financial service providers (Song'e, 2015). SACCOs convert immediately available savings deposits into loans with longer maturities (Muriuki, 2013). However, individual savings deposits are typically much smaller than an average loan, requiring multiple deposits to fund a single loan (Obbuyi, 2014). These predispose them to liquidity risks (Kimathi, 2014). More so, liberalization has also resulted in a lot of competition from

other financial service providers leading to liquidity problems (Kimathi, 2014). The liquidity challenges seem to impair the SACCOs' ability to offer timely services. Low liquidity make the SACCO not to be able to meet share and savings withdrawals, external borrowing repayments, member loan demand and operating expenses (Maina, 2011). It can also lead to low income generation as disbursements are low and membership withdrawals (Kimathi, 2014). This has been a major cause of failure of many SACCOs low economic development, loss of investors' confidence and unemployment in the country (Godfrey, 2015).

OBJECTIVE OF THE STUDY

To investigate the effect of liquidity management on liquidity of SACCOs in Kirinyaga County.

THEORETICAL REVIEW

A theory is a reasoned statement or group of statements, which are supported evidence meant to explain some phenomena (Keitany, 2013). The study was guides by commercial loan theory of liquidity.

Commercial Loan Theory of Liquidity

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

Conceptual Framework

Conceptual framework is a concise description of the phenomenon under study accompanied by a graphical or visual depiction of the major variables of the study (Mugenda, 2008). In this study, liquidity of SACCOs is hypothesized to be affected by liquidity management.

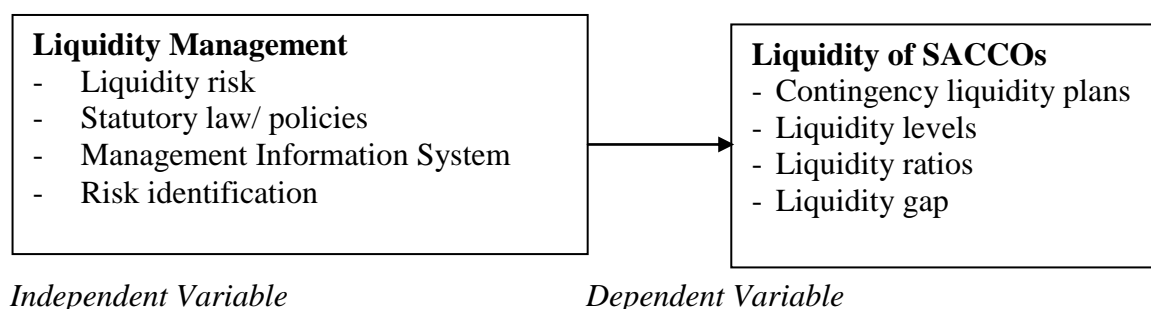


Figure 1: Conceptual framework on the effect of liquidity management on liquidity of SACCOs.

Research Gaps

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

RESEARCH METHODOLOGY

Research Design

A cross sectional survey research design was employed in this study. Descriptive research design was been chosen because it will enable the researcher to generalize the findings to a larger population.

Study Population

The targeted population in the study was the 60 registered SACCOs in Kirinyaga County. However, accessible population was 18 registered SACCOs in Kirinyaga County.

Sampling Technique and Sample Size

The study employed stratified random sampling technique. Kirinyaga County is administratively divided into four sub-counties. From each sub-county 30% of the SACCOs was selected randomly so as to make the sample that was be studied. Although Zikmund recommends a sample size of 20%, a sample size of 30% was preferred so as to make the sample reasonable, economic and reliable. Purposive sampling technique was used to identify three management staff in each SACCO. Therefore, 3 management staff from each of the 18 SACCOs was selected for the study giving a sample size of 54 respondents.

Data Collection Instruments

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

RESEARCH RESULTS

Response Rate

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

response rate was good, representative and acceptable as it had surpassed the 70% response rate threshold.

Position of the Respondents

The study aimed at ascertaining the respondents' designation with the SACCOs in Kirinyaga County. The findings are illustrated by Figure 4.2. The designation was categorized into three main groups that is, the accountant, the manager and the credit officer. The Manager category (44%) comprised of the chief executive officers, Back office services and activities (BOSA) managers, front office services and activities (FOSA) managers, operations managers, finance managers, human resource manager, and the secretary managers. The Accountant category (38%) comprised of the accountants, accounts clerk, cashiers, chief cashiers and the savings clerks. The Credit officer category (18%) comprised of the credit officers, loan officers and the loans clerks. This implied that most of the study respondents were serving in high profile positions. This shows that most of the data was collected from senior managers and therefore the data collected gave reliable information (Kamonjo, 2014).

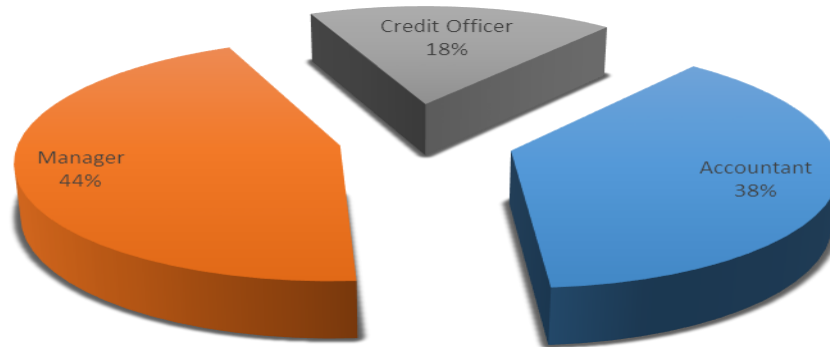


Figure 2: Position of the Respondents

Average Monthly Members' Contributions

The study sought to ascertain the average monthly members' contribution to the SACCO. This is illustrated by Figure 3. Majority (33.3%) of the respondents concurred that average monthly members' contribution in SACCOs stood at between Ksh. 500-Ksh. 1,000. The findings also shows that 28.9% of the respondents indicated that the average monthly contributions by members was between Ksh. 1,000-Ksh. 2,000 while 15.6% of the respondents were indifferent on whether the average monthly members' contribution was below Ksh. 500 or between Ksh. 3,000-Ksh. 4,000. A little number of respondents (6.7%) indicated that the average monthly contribution by members of a SACCO was above Ksh. 4,000. The study found out that the monthly contribution by the members of SACCOs in Kirinyaga County was between Ksh. 500-Ksh. 1,000. This implies that the SACCO members are able to make their contributions without straining much. This means that the services of SACCOs are affordable to its members (Muraguri, 2014).

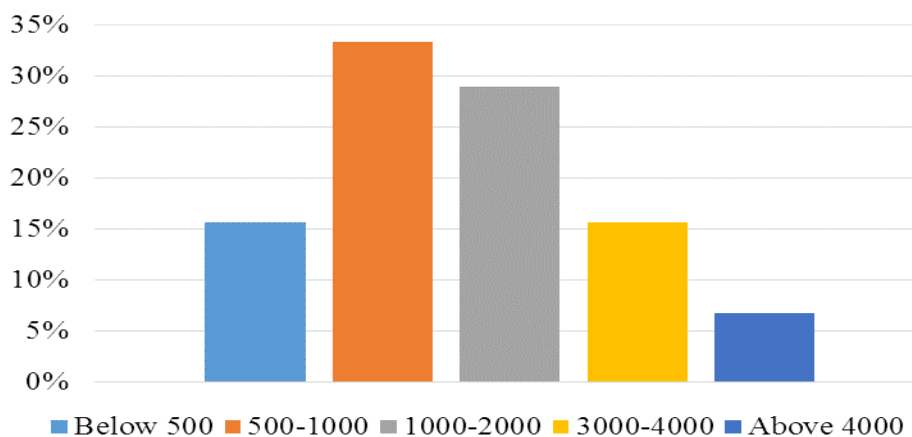


Figure 3: Average Monthly Members' Contribution

Average Yearly Members' Withdrawal Rate

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

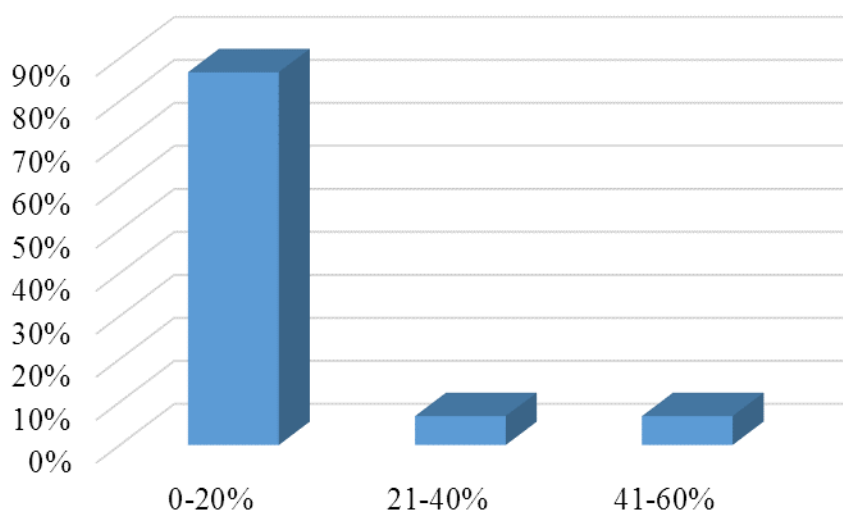


Figure 4: Average Yearly Members' Withdrawal Rate

Average Monthly Loan Repayment

The study was conducted to ascertain the average loan repayment by members of SACCOs. This was grouped into different ranges namely; 0-20%, 21-40%, 41-60%, 61-80% and 81-100%. The results were as illustrated in Figure 5. The study found out that majority (33%) of the respondents concurred that between 41-60% of the total loan portfolio of the SACCOs

was repaid in time as per their schedules. Only 81-100% of the gross loans are repaid by the loan applicants as per the agreement according to 29% of the respondents. The study also noted that 25% of the respondent argued that 61-80% of the SACCO loan are repaid by the borrowers while 13% of the respondents agreed that 0-20% of the loans are repaid. This implies that SACCO members paid their loans instalments as scheduled and therefore the cases of loan delinquencies were very minimal.

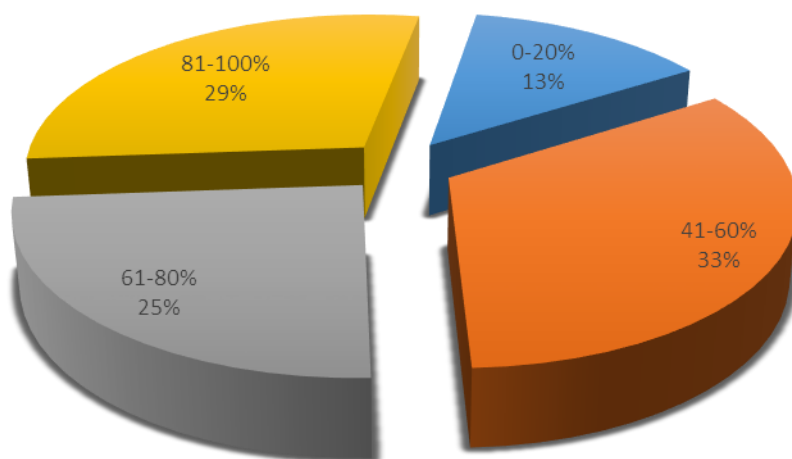


Figure 5: Average Monthly Loan Repayment

Performing Loans

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

Watch Loans

The study intended to ascertain the proportion of the SACCOs' loan portfolio which was classified as watch. The SACCOs' watch loans were categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100%. The study established that majority (46.7%) of the respondents concurred that the loans between 21-40% of the total loan portfolio of their SACCOs were classified as watch. The study also noted that 37.8% of the respondents argued that only between 0-20% of the loan portfolio of their SACCOs was classified as watch while 15.6% of the respondents indicated that only between 41-60% of the total loan portfolio was classified as watch. There were no responses from the respondents for the categories of 61-80% and 81-100%. This implies that in most SACCOs, a very little portion of the loans

whose principal instalment or interest remained unpaid for 1-30 days or one instalment for either principal or interest was outstanding (SACCO Societies Act, 2008).

Doubtful Loans

The study intended to ascertain the proportion of the SACCOs' loan portfolio which was classified as doubtful. The SACCOs' doubtful loans were categorized into five sub-groups; 0-20%, 21-40%, 41-60%, 61-80% and 81-100%. The study noted that 60% of the respondents concurred that only between 21-40% of the total loans for the SACCOs were doubtful. Only 31.1% of the respondents agreed that the doubtful loans were between 0-20% while 8.9% of the respondents argued that only between 41-60% of the total loans were classified as doubtful. There were no responses from the respondents for the categories 61-80% and 81-100%. This implies that a small proportion of the SACCOs loans were not adequately protected by the current repayment capacity and the principal instalment or interest remained unpaid between 91-180 days or 4-6 instalments remained outstanding. Njiru (2006) carried a study on a list of non-performing loans including all relevant details and found that loan delinquency arises when there are no strategies for loan recoveries and security collaterals.

Loans Loss

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

SACCOs' New Investments

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

DESCRIPTIVE STATISTICS

The study requested respondents to give opinions in regard to liquidity management and SACCOs' liquidity. The findings are presented in form of means and standard deviations.

Liquidity Management and Liquidity of SACCOs

The study assessed the views of the respondents concerning liquidity management and liquidity of SACCOs. The pertinent findings of the study are illustrated in Table 1. The study noted that respondents agreed (Mean = 4.93; Std Dev = 0.252) that proper liquidity management is vital to SACCO solvency. They also argued (Mean = 4.40; Std Dev = 0.618) that automation of SACCOs' operations has enhanced proper liquidity management. In addition, the respondents also concurred (Mean = 4.16; Std Dev = 1.043) that the statutory laws and provisions do affect SACCO's liquidity. Respondents disagreed (Mean = 2.88; Std Dev = 1.031) that proper identification of risk ensures optimal liquidity is maintained. It therefore implies that SACCOs in Kirinyaga County uses proper liquidity management practices so as to remain liquid. It was also noted that the SACCOs had automated their operations and have adhered with the provisions of law. Liquidity risk management practices are important to the day to day operations of an entity (Ogol, 2011).

Table 1: Descriptive Statistics for Liquidity Management

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

Liquidity of SACCOs

The respondents were asked to indicate their level of agreement or disagreement regarding propositions floated to them regarding the liquidity of SACCOs. Table 2 illustrates the findings. Respondents concurred (Mean = 4.40; Std Dev = 0.618) that proper liquidity contingency plans enable SACCO to uphold liquidity position. In addition, it was also agreed (Mean = 4.40; Std Dev = 0.495) that adhering to liquidity level ensure optimal liquidity is maintained. The respondents were also in agreement (Mean = 4.22; Std Dev = 0.560) that liquidity gap helps in maintaining SACCO liquidity level. It was agreed (Mean = 4.20; Std Dev = 0.405) that liquidity ratios help in tracking the SACCO liquidity position. This implies that SACCOs hold and maintain minimum liquidity, develop and implement contingency liquidity plans so as to effectively serve their members.

Table 2: Descriptive Statistics for Liquidity of SACCOs

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

INFERENCE FINDINGS

The study established the relationship between liquidity management and liquidity of the SACCOs. The study established the relationship between liquidity management, net cash flows, credit lending, investment in non-core business and, liquidity of the SACCOs.

Relationship between Liquidity Management and Liquidity of SACCOs

The relationship between liquidity management and liquidity of SACCOs was determined. Table 3 shows the results of correlation analysis. From the study, it was noted that there was a moderate statistically significant correlation between liquidity management and liquidity of SACCOs ($r = 0.546$; $p < 0.05$). This means that increased liquidity management significantly relate to increased liquidity of SACCOs. Therefore, SACCOs in Kirinyaga County were liquid hence able to honour short-term and long-term obligations and furthermore fund the ongoing operations.

Table 3: Correlation between Liquidity Management and Liquidity of SACCOs

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

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

REGRESSION ANALYSIS

The study evaluated the effect of liquidity management on liquidity of SACCOs in Kirinyaga County. Using multiple regression analysis and Analysis of Variance (ANOVA), the combined effect of liquidity management on liquidity of SACCOs was established.

Table 4 shows the relationship between liquidity management and liquidity of SACCOs. The findings indicate that the relationship was positive and strong ($R = 0.637$). The coefficient of determination ($r^2 = 0.405$) shows that 40.5% of the liquidity could be attributed to liquidity management as investigated. The 59.5% of the liquidity of SACCOs resulted from other factors such as industry specific factors, economic factors among others not investigated by the current study.

Table 4: Regression Analysis Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.637 ^a	.405	.346	.88415

- a. Predictor: (Constant), Liquidity management
- b. Dependent Variable: Liquidity

Analysis of Variance

F statistics was used to test whether the overall model was statistically predicting that independent variable (Liquidity management) has effect on liquidity of SACCOs in Kirinyaga County. According to the ANOVA results the association between liquidity management and liquidity of SACCOs was positive and significant as indicated by the F calculated (F = 6.815; P < 0.05). This implies that there is strong evidence that the regression model developed is statistically significant and the variation in the results is insignificant.

Table 5: Analysis of Variance (ANOVA)

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

- a. Dependent Variable: Liquidity
- b. Predictors: (Constant), Liquidity management

Overall Regression Model

Table 11 shows the overall significant test results for the hypothesized research model. The interpretations of the findings indicated follow the following regression model.

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

Therefore;

$$Y = 5.270 + 0.485X_1$$

From the model, it is clear that, the variable is positively related to the dependent variable as the coefficient is positive. From the equation, it was noted that holding the liquidity management constant, the liquidity of the SACCOs would be 5.270. Further, the results show that, liquidity management has a positive relationship with liquidity of SACCOs where an unit increase in liquidity management, a 0.485 unit increase in liquidity is predicted, holding all other variables constant. The regression test results indicated that the liquidity management in SACCOs and their liquidity has a positive relationship where an increase in liquidity management would result to 0.485 times increase in liquidity of the SACCOs. This illustrates that efforts of creating a unit change in liquidity management would see the SACCOs experiencing significant growth in terms of liquidity.

Table 6: Regression Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	5.270	2.598		2.028	.049
	Liquidity Management	.285	.120	.357	2.371	.023

a. Dependent Variable: Liquidity

CONCLUSIONS

The study concluded that SACCOs in Kirinyaga County mostly capitalized on liquidity management and as such it affected the SACCOs' liquidity. In addition, the study concluded that it was critical for SACCOs to have adequate liquidity in order to ensure that they meet short term maturing obligations. At any date, a positive gap between assets and liabilities is equivalent to a deficit. Liquidity ratios are various balance sheet ratios which should identify main liquidity trends. These ratios reflect the fact that firm should be sure that appropriate, low cost funding is available in a short time. This might involve holding a portfolio of assets than can be easily sold cash reserves, minimum required reserves or government securities.

RECOMMENDATIONS

The contribution of SACCOs in Kenyan economy cannot be ignored. However, this contribution has been affected in the recent past by some financial factors. To address this, SACCOs should have a management structure in place to effectively execute their financial strategies to enhance liquidity. They must ensure that liquidity is effectively managed on a regular and timely basis and that appropriate policies and procedures are established to limit and control material sources of liquidity risk.

REFERENCES

- ACCOSCA (African Confederation of Co-operative Savings and Credit Associations). (2011). Using Co-operative Model to Tackle Challenges in Africa. *Monthly Newsletter*, 3(11), 2-3.
- Ademba, C. (2010). Challenges Facing Sacco Regulatory Framework in Africa. *SACCO Supervision Annual Report*. 1(2), 6-7.
- Basel Committee on Banking Supervision. (2008). *Principles for Sound Liquidity Risk Management and Supervision*. Available at: www.bis.org/publ/bcbs138.htm.
- Brunnermeier, M. & Pedersen, L. H. (2009). Market Liquidity and Funding Liquidity. *Review of Financial Studies*, 22(6), 201-238.
- Co-operative Bank of Kenya. (2013). *The History of Co-operative Bank of Kenya*. Retrieved from <http://co-opbank.co.ke/index.php/about-us/history>.
- Cooper, D. R., Schindler, P. S. (2007). *Business Research Methods*. Berkshire: McGrawHill Education.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Los Angeles: CA, Sage Publications.

- Crowe, K. (2009). Liquidity Risk Management – more important than ever. *Harland Financial Solutions*, 5(2), 3.
- Dawson, C. (2009). *Introduction to Research Methods*. A practical Guide for Anyone Undertaking a Research Project. London: Newtec.
- Essendi, L. K. (2013). *Effect of Credit Risk Management on Loans Portfolio among SACCOs in Kenya*. Nairobi: University of Nairobi.
- Godfrey, M. (2015). Liquidity and Bank Performance. *International Business & Economics Research Journal*, 04(3), 12-29.
- Goodhart, C. (2008). Liquidity Risk Management. *Financial Stability Review*, 11(6).
- Huseyin, Y. (2011). Another Perspective to Corporate Cash Management: A New Model and Definition. *International Journal of Humanities and Social Science*, 1(11), 302-313.
- ICA (International Co-operative Alliance). (2007). *Statement on the Co-operative Identity*. Available from the University of Wisconsin Center for Co-operatives at [Http://www.wisc.edu/uwcc/rin-html](http://www.wisc.edu/uwcc/rin-html).
- Kamonjo, K. L. (2014). *Corporate Governance Practice and its Effect on Financial Performance in SACCOs. A Case Study of Urban SACCOs in Kirinyaga County-Kenya*. Nairobi: Kenyatta University.
- Karagu, J. M., & Okibo, B. (2014). Financial Factors Influencing Performance of Savings and Credit Co-operative Organization in Kenya. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(2), 295-306.
- Keitany, N. J. (2013). *Relationship between Loan Default and the Financial Performance of SACCOs in Kenya*. Nairobi: University of Nairobi.
- Kilonzi, B. K. (2012). *Assessments of Impacts of SASRA Regulations on Financial Performance of SACCOs in Kenya, Case Study of 30 SACCO's in Nairobi County*. Nairobi: Kenyatta University.
- Kimathi, P. M. (2014). *The Effect of Financing Strategies on the Liquidity of Savings and Credit Co-operatives Societies Licensed by SACCO Societies Regulatory Authority operating in Nairobi County*. Nairobi: University of Nairobi.
- Kinyua, J. (2013). *Role of Financial Management Practices in the Performance of Public Service Vehicle Savings and Credit Co-operative Societies in Kenya*. Nairobi: University of Nairobi.
- Kipngetch, S., & Muturi, W. (2015). Effect of Credit Risk Management on Financial Performance of Savings and Credit Co-operative Society. *The Strategic Journal of Business & Change Management*, 2(44), 900-915.
- Kiragu, D. N. (2014). *The Effect of SACCO Societies Regulatory Authority's Regulations on Financial Performance of SACCOs in Nairobi County*. Nairobi: University of Nairobi.
- Kithunzi, M. (2009). *Effectiveness of Guarantorship in Loan Recovery in Co-operative Societies in Kenya: Case study of Mwalimu SACCO*. Nairobi: University of Nairobi.
- KUSCCO. (2009). *SACCO Star Magazine*. 1(54), 9-13. Nairobi, Kenya.

- Lagat, F. K., Mugo, R., & Otuya, R. (2013). Effect of Credit Risk Management Practices on Lending Portfolio among Savings and Credit Co-operatives in Kenya. *European Journal of Business and Management*, 5(19).
- Maina, H. (2011). *Relationship between the Liquidity and Profitability of Oil Companies in Kenya*. Nairobi: University of Nairobi.
- Maina, J. N., Kinyariro, D. K., & Muturi, H. M. (2016). Influence of Credit Risk Management Practices on Loan Delinquency in Savings and Credit Co-operative Societies in Meru County, Kenya. *International Journal of Economics, Commerce and Management. United Kingdom*, 4(2), 763-773.
- Miriti, J. M. (2014). *Factors Influencing Financial Performance of Savings and Credit Co-operatives. A case of Capital SACCO, Meru County, Kenya*. Nairobi: University of Nairobi.
- Mugenda, M., & Mugenda, G. A. (2011). *Research Methods; Quantitative and Qualitative Approaches*. Nairobi: Laba Graphics Services.
- Muraguri, J. K. (2014). *The Effect of Liquidity on the Return on Investments for SACCOs in Nairobi*. Nairobi: University of Nairobi.
- Muriuki, (2013). *Investigation into the Cash Balance Management Approaches in Saving and Credit Co-operative Societies (SACCOS) in Nakuru County, Kenya*. Nakuru: Egerton University.
- Murugu, H. M. (2012). *Effect of Credit Risk Management Practices on the Performance of SACCOs in Kenya. A case of Nairobi Based SACCOs*. Nairobi: University of Nairobi.
- Mwithiga, R. W. (2012). *Strategic Responses Adopted by SACCOs to the Changing Operation Environment in the Kenyan Financial Sector. A case of Nairobi Based SACCOs with Front Office Service Activity*. Nairobi: Kenyatta University.
- Ng'ang'a, S. I., Kosgei, Z. K., & Gathuthi, E. W. (2008). *Management Research Methods. A Learner's Guide*. Nairobi: African Center for Technology Studies (ACTS) Press.
- Njeru, M. D., Agnes, M., Florence, M., & Ondabu, I. T. (2015a). Effect of Cash Management on Financial Performance of Deposit Taking SACCOs in Mt. Kenya Region. *International Journal of Scientific and Research Publications*, 5(2), 124-133.
- Njeru, M. D., Agnes, M., Florence, M., & Ondabu, I. T. (2015b). Effect of Loan Repayment on Financial Performance of Deposit Taking SACCOs in Mt. Kenya Region. *International Journal of Innovation and Applied Studies*, 10(4), 238-244.
- Njeri, M. M. (2014). *The Effect of Liquidity on Financial Performance of Deposit Taking Microfinance Institutions in Kenya*. Nairobi: University of Nairobi.
- Obbuyi, P. I. (2014). *The Effect of Credit Rating Policies on the Loan Uptake in Savings and Credit Co-operatives (SACCOs) in Nairobi County*. Nairobi: University of Nairobi.
- Odhiambo, J. (2013). *The Relationship between Working Capital Management and Financial Performance of Deposit Taking Savings and Credit Co-operative Societies Licensed by SACCO Societies Regulatory Authority in Nairobi County*. Nairobi: University of Nairobi.

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