

Influence of Credit Information System on Loan Default Rate In Deposit Taking Saccos In Kericho County, Kenya

Peter Kipkoech Sang,¹ Mr. David Nduru Kimani Jkuat,²

^{1,2}*Department of Business Administration*

Abstract: *The Savings and Credit Cooperative Societies are part of the financial sectors in Kenya, which have positively influenced the lives of many disadvantaged Kenyans over the years. However, like other deposit taking SACCOs several factors have contributed to loan default rate in SACCOs. The general objective of the study was to determine the influence of credit information system on loan default rate in deposit taking SACCOs in Kericho County. The specific objectives of the study were to determine the influence of credit risk assessment, credit information sharing and credit worthiness on loan default rate in deposit taking SACCOs in Kericho County. The target population of the study was 196 senior, middle and junior management level employees from six deposit taking SACCOs, in Kericho County, Kenya. Stratified random sampling was used to select a study sample of 66 respondents. Data was collected using questionnaires. Descriptive and inferential statistics were used in data analysis. Descriptive statistics included frequencies and percentages. Inferential statistics used included correlation analysis. Data analysis was done with the aid of the statistical Package for Social Sciences (SPSS) version 23. The study concluded that 18.1% of the loan default rate of deposit taking SACCOs in deposit taking SACCOs in Kericho County was explained by credit risk assessment while 14.7% of SACCOs' loan default rate was explained by credit worthiness.*

I. Introduction

SACCOs are associations of people who pool together their financial and human resources for the purpose of providing loans for members and using the pool of ideas for the betterment of the lives of the members (Lewis, 2004). SACCOs have been developed to meet the fundamental needs of members by saving and borrowing. However, the effectiveness of SACCOs depends on strong regulations. This need has been met by introducing Public Credit Registries (PCRs). PCRs contain information on the performance of borrowers in financial systems. The region with the highest coverage of public credit registries is Latin America, where 17 countries have established PCRs, including all the largest economies. The first country to establish public credit registries was Western Germany in 1934 followed by France in 1946. By the mid-1960s, three other European countries-Italy, Spain and Belgium-had also established PCRs.

According to Brealey (2003) credit information systems are methods and strategies adopted by a firm to ensure that they maintain an optimal level of credit and its effective management. It is an aspect of financial management involving credit analysis, credit rating, credit classification and credit reporting. The failure or success of any financial institution is influenced to a large extent by the quality of credit decisions. Therefore, credit management provides a leading indicator of the quality of credit portfolio.

A research study by Armstrong (2009) revealed that credit registries increased lending volume, growth of consumer lending and improved access to financing. In addition, Hansen (2004) highlighted that many borrowers make a lot of effort to repay their loans, but do not get rewarded for it because their good repayment history is not available to the lenders. Whenever borrowers fail to repay their loans, the lender passes on the cost of defaults to other customers through increased interest rates and other fees. Therefore, credit information system engages credit providers with credit information about potential borrowers.

In SACCOs, members guarantee each other with the possibility of covering each other up in case of default. Although increased engagement with credit information system can improve SACCOs, lending capacity, some SACCOs are hesitant to deal with the bureaus for data sharing. According to Hansen (2004) guarantorship appears to be hurting the growth of SACCOs with increased loan defaults. This implies that whenever there is any case of non-repayment, the SACCO will contact the guarantors to pressure the borrowers to repay. In case of any failure to recover the debt, the SACCO will then attach the guarantors' deposits to recover the outstanding amount. This is usually a tricky balance for SACCOs.

According to Armstrong (2009) expanding access to financial services is the key strategy to reducing poverty in Africa. Due to the introduction of credit information systems, there have been reduced loan losses in Tanzania. In Ethiopia, SACCOs have reported some progress in loan recovery that had been expected. In Nigeria, the rate of over all loan default rate is projected to stand at 15% while in Malawi the annual growth in loan default rate from commercial SACCOs is projected to reach 7.9 per cent in 2016 (UN/DESA, 2012). While some credit information system has been introduced in the financial sector in African countries, if these

strategies are to mitigate the impact of the rate of loan default in deposit taking SACCOs, its effective administration and timely implementation needs to be emphasized. In Kenya, the stability of SACCOs is a prerequisite for economic development and resilience (Chambo, Mwangi & Oloo, 2013). The SACCOs account for three quarters (75%) of the financial subsector's assets, deposits and membership. The Deposit Taking SACCOs also provide basic banking services. To safeguard Deposit Taking SACCOs in Kenya, credit information sharing has been introduced by the Central Bank of Kenya requiring all Deposit Taking SACCOs to share data on the credit history of their customers (Sigei, 2010). Information is shared through credit information system when the Deposit Taking SACCOs want to establish the credit worthiness of a customer seeking a loan.

In Kericho County, there are six Deposit Taking SACCOs. Although the emergence of credit information system has significantly revolutionized lending and contributed to reduced credit risk in many SACCOs, in deposit taking SACCOs in deposit taking SACCOs in Kericho County SACCOs are facing an enormous risk as larger loans have greater risk exposure. Coupled with the fear of losing customers, the SACCOs have not completely embraced credit information system to determine the credit worthiness of their borrowers (Michael, 2013).

Recent studies have attempted to investigate the influence of credit information system on SACCOs' loan default rate in Kenya. For example, Gisemba (2010) studied the relationship between credit information system and Loan Default Rate of SACCOs in Kenya and established that the management of the SACCOs was involved in credit risk assessment through standardization of loan portfolios. Gaitho (2010) carried out a survey of credit risk assessment practices adopted by SACCOs in Nairobi and reported that the major problems hindering good Loan Default Rate in SACCOs were lack of proper investment decisions, delayed cash flow from members and improper risk management. Sambu (2013) studied the effect of credit information system on Loan Default Rate of SACCOs offering front office service activity (FOSA) and reported reduced amount of loan applications which was attributed to credit information system. However, these studies did not directly address the influence of credit information system on loan default rate in Deposit Taking SACCOs in Kericho County.

1.2 Objectives of the Study

1. To determine the influence of credit risk assessment on loan default rate in Deposit Taking SACCOs in Kericho County
2. To determine the influence of credit worthiness on loan default rate in Deposit Taking SACCOs in Kericho County

1.4 Research Hypotheses

1. There is no relationship between credit risk assessment and loan default rate in Deposit Taking SACCOs in Kericho County.
2. There is no relationship between credit worthiness and loan default rate in Deposit Taking SACCOs in Kericho County.

II. Literature Review

2.1 Theoretical Review

This section discusses the theories that are relevant in understanding the influence of credit information system on loan default rate in deposit taking SACCOs.

2.1.1 The Moral Hazard Theory

The theory of moral hazards was popularized by Holmstrom (1979). Moral hazard refers to the risk in which a party to a transaction provides misleading information about its assets, liabilities or credit capacity, or has an incentive to take unusual risks in a desperate attempt to earn a profit before the contract settles (Kargi, 2011). Usually, a party to a transaction may not enter into the contract in good faith, thus providing misleading information about its assets, liabilities or credit capacity. Problems of moral hazard in SACCOs are evident at many stages of the recent financial crises (Kargi, 2011). Theory is considered relevant in this study since borrowers and lenders tend to conceal crucial information pertaining to the lending and borrowing agreement. Yet in modern macroeconomic theory economic growth rate depends, crucially, on the efficiency of deposit taking SACCOs. The financial systems depend on accurate information about borrowers and the project the funds are used for.

2.1.2 Credit Rationing Theory

This theory was comprehensively applied in economics by Stiglitz and Weiss in 1954. According to Stiglitz and Weiss (1954), asymmetric information leads to credit rationing, as lenders cannot distinguish between high quality and low quality borrowers. However, De-Meza and Webb (1987) showed that asymmetric information in credit markets can lead to the inverse result, which is an excess of credit or over lending. In the context of this study for deposit taking SACCOs to exist they have to screen and monitor borrowers efficiently (Allen & Santomero, 1998). They are specialized in gathering private information about potential loan

applicants (Freixas & Rochet, 2009). In managing deposit accounts, deposits taking SACCOs rely on highly strategic information on firms' receipts and expenditures (Diamond & Rajan, 2011). Nevertheless, the SACCOs may suffer from informational asymmetries (Freixas & Rochet, 2009) such that evolution of prices cannot clear the credit market. Stiglitz and Weiss (1954) proved that credit rationing occurs if Deposit Taking SACCOs charge the same interest rate to all borrowers, because they cannot distinguish between borrowers and screening borrowers perfectly is too expensive. Deposit Taking SACCOs are usually able to distinguish their borrowers up to a certain degree. However, they usually charge more than just one interest rate to all customers. High-risk borrowers pay a higher interest rate and credit rationing is less likely. Since deposit-taking SACCOs cannot distinguish borrowers perfectly and screening them perfectly is impossible, credit rationing may occur.

2.2 Conceptual Framework

The conceptual framework shows the interaction of the study variables. The credit information system is reflected by credit risk assessment and credit worthiness as the independent variable while loan default rate in SACCOs was the dependent variable.

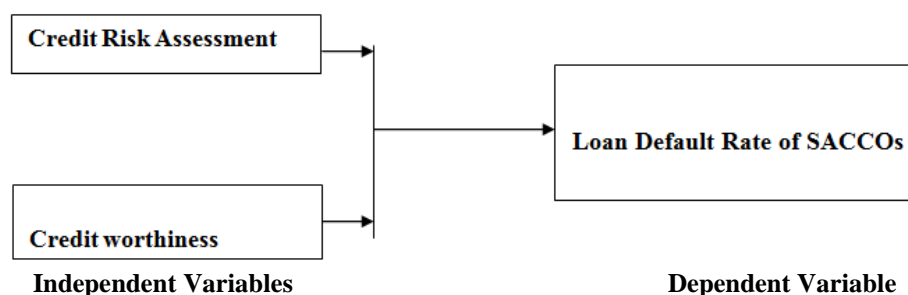


Figure 1: Conceptual Framework

2.2.1 Credit Risk Assessment

Credit risk arises from a borrower's failure to meet the terms of any financial contracts as agreed (Shao & Yeager, 2007; Sigei, 2010). In SACCOs, the largest source of credit risk is loans. An effective credit risk assessment is critical to the stability of any financial institution. The most common techniques of mitigating credit risk are collateral, guarantees and netting off of loans against deposits of the same counter-party. While the use of these techniques will reduce or transfer credit risk, other risks may arise which include legal, operational, liquidity and market risks. Therefore, there was need for Deposit Taking SACCOs to have stringent procedures and processes to control these risks.

According to Chen and Pan (2012) credit information system can be used to control losses from the inability of customers to pay what is owed in full and on time. In this way, credit information system maximizes risk adjusted rate of return by maintaining credit risk exposure within acceptable limit (Kargi, 2011). According to Kithinji (2010) credit information system may insure SACCOs against limited institutional capacity, inappropriate credit policies, volatile interest rates, poor management, inappropriate laws, low capital and liquidity levels, direct lending, massive licensing of SACCOs, poor loan underwriting, laxity in credit assessment, poor lending practices, government interference and inadequate supervision by the central bank. Kasiva (2012) argues that risk assessment is one area that deserves significant reliance on internal audit work. In this light, it is reasoned that due to the fact that internal auditors are more privy with the operations of the firm they work for than external auditors, are particularly suited to carry out risk assessment. Kibaara (2007) observes that most SACCOs in Kenya were in the process of drafting the ERM process and strategies in line with risk assessment.

2.2.2 Credit Worthiness

The high financial cost of borrowing generally reduces the borrowers' repayment capacity which results in credit risk. The borrowers' creditworthiness can be improved through increased credit information sharing. Maintaining credit worthiness is crucial to accessing credit. The prerequisite requirements of credit worthiness include an efficient systems and procedures for credit risk assessment. Generally, SACCOs may encounter difficulty in meeting obligations from its financial liabilities if they do not maintain appropriate liquidity levels. The key measure used by deposit taking SACCOs for managing liquidity risk is the ratio of net liquid assets to deposits from customers. Other researchers have recently reviewed the influence of credit information system on credit worthiness. For instance, Sigei (2010) investigated the effectiveness of credit information system in Kenya. His study revealed that credit information system plays an important role in preventing serial loan defaulters from accessing credits from other SACCOs thus cushioning SACCOs against unforeseen credit risks.

2.2.3 Loan Default Rate in SACCOs

Loan default refers to the total amount of money given out in different loan products to different types of borrowers but are not received. This may be comprised of salary loans, group guaranteed loans, individual loans and corporate loans (Shao & Yeager, 2007). Loan default occurs if customers with loans do not repay those loans as per the stipulated time. Loan default in SACCOs is a serious financial stressor since the risk of loan determines future revenues and ability to increase outreach and serve existing customers.

The credit information system establishes a set of procedures used to collect accounts receivables which are getting overdue (Van Horne, 1989). Methods used could include letters, telephone calls, visits by the firm's officials for face to face reminders to pay and legal enforcements. Nganga (2011) asserts that credit information system is a guide that ensures prompt payment and regular collections. The rationale is that not all clients meet their obligations, some just take it for granted, others simply forget while others do not have a culture of paying until persuaded to do so.

Therefore, emphasizing strict collection procedures keeps debtors alert, reduces portfolio at risk and consequently reduces losses due to bad debts, hence greater profitability. Krestlow (2013) emphasizes the need for using various methods in the collection efforts on due accounts. In agreement with other scholars, Kreslow (2013) has noted that in the determination of the method to apply, the cost and funds available for the purpose must be considered. The benefits of additional collection efforts are likely to decrease with increasing expenditure levels. Kargi (1996) states that collection efforts are directed at accelerating recovery from slow payers and decreases bad debts losses. This therefore calls for vigorous collection efforts. According to Kargi (2011) deposit taking SACCOs' profitability is inversely influenced by the levels of loan advanced. Therefore, non-performing loans can expose them to great risk of illiquidity and distress. Therefore, the extent to which credit information system may influence loan default rate in deposit taking SACCOs need to be carefully investigated.

III. Methodology

3.1 Research Design

The study adopted a descriptive survey research design. The descriptive research design allows simultaneous description of views, perceptions and beliefs of the respondents at a given point in time. This technique was also considered appropriate for obtaining respondents' opinions on study topic. Kerlinger (1986) points out that descriptive studies are not only restricted to fact findings but may often result in the formulation of important principles of knowledge or solutions to significant problems. The researcher found this design more appropriate because the problem area was defined and sought to establish facts in the study.

3.2 Target Population

The population of the study involved the staff of deposit taking SACCOs in Kericho County. There are six deposit taking SACCOs in Kericho with a total of 196 employees ranging from administrators, credit officers, auditors and information technology officers all of whom was involved in the study. The target population was 196 employees of the six deposit taking SACCOs in Kericho County. The target population was considered appropriate because they had adequate knowledge on the role of credit information system.

3.3 Sampling Technique and Sample Size

The sample size was drawn from the employees of the six deposit taking SACCOs in Kericho County. Stratified random sampling was employed in the selection of the sample size. The target population was categorized into different strata on the basis of different management levels and simple random sampling used to select the actual study samples. From each category (stratum), an equal number of respondents were selected to constitute 65 respondents.

3.4 Data Collection Instrument

The study obtained primary data by the use of self-administered structured questionnaires. The questionnaire was used because it was a valuable tool of collecting a wide range of information from a large number of respondents and was usually straightforward and easy to analyze. The questionnaires were mainly closed ended for ease of analysis.

3.5 Data Processing and Analysis

The returned instruments were scrutinized to determine correctness and accuracy of responses. The data collected was coded based on the variables studied. The data was analyzed using both descriptive and inferential statistical. Descriptive statistics involved the use of percentages, frequency, correlation analysis and regression analysis.

IV. Results

4.1 Respondents' perceptions on Credit Risk Assessment

The study sought to ascertain the influence of the different indicators of credit risk assessment in deposit taking SACCOs in Kericho County. The results are presented in Table 1.

Table 1: Influence of Credit Risk Assessment on Loan Default Rate

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)
Credit information system is used as a credit risk assessment in my SACCO	5	4	28	24	39
Credit risk assessment influences profitability in my SACCO	20	37	16	24	2
I use of customers' credit history when processing loans	40	39	2	17	2
Credit information system has a positive impact on the net interest margin	9	17	57	15	2
Credit information system influences non-performing loans	9	13	57	20	0

As shown in table 1, 9% of the respondents agreed that credit information system was used as a credit risk assessment in their SACCOs as compared to 28% of the respondents who were undecided and 64% who disagreed. Concerning whether credit risk assessment influenced profitability in their SACCO, 57% of the respondents agreed compared to 17% who were undecided and 26% who disagreed. This is in agreement with a previous study by Kargi (1996) which recommended that credit risk assessment should be directed at accelerating assessment of creditworthiness of borrowers and recovery from slow payers and bad debt losses. Further results show that 80% of the respondents agreed that they always used customers' credit history when processing loans compared to 2% who were undecided and 19% who disagreed with the statement. These findings agree with Nganga (2011) who asserted that credit risk assessment could be used as a guide that ensures prompt repayment of loans. Nganga's (2011) study also found out that strict credit risk assessment procedures can keep debtors alert, reduce portfolio risk and consequently reduce losses due to bad debts. Similarly, 26% of the respondents agreed that credit information system had a positive impact on the net interest margin. This is in comparison to only 57% who were undecided and 17% who disagreed. It is also evident that 23% of the respondents agreed that credit information system influenced non-performing loans as compared to 57% who were undecided and 20% who disagreed. These findings are in agreement with Kreslow (2013) and Kariuki (2010) who noted that credit risk assessment aims at accelerating credit risk evaluation of potential borrowers.

4.2. Influence of Credit Worthiness

The second objective of the study sought to establish the influence of credit worthiness on loan default rate in deposit taking SACCOs in Kericho County. The findings obtained are presented in table 2.

Table 2: The Influence of Credit worthiness in SACCOs

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)
Maintaining credit worthiness is crucial to the achievement of profitability of my SACCO	63	30	2	0	6
SACCOs encounter difficulty in meeting obligations if they do not maintain appropriate liquidity levels	48	52	0	0	0
Managing liquidity ensures that SACCOs have sufficient liquidity to extend credit	24	72	4	0	0
The ratio of net liquid assets to deposits from customers helps to manage liquidity risk	2	69	17	13	0
Focusing on credit worthiness prevents loan defaulters from accessing credits from other SACCOs	15	45	41	0	0

As shown in table 2, 93% of the respondents agreed that maintaining credit worthiness was crucial to the achievement of profitability of their SACCO as compared to 2% who were undecided and 6% who disagreed. Concerning whether SACCOs encountered difficulty in meeting obligations if they did not maintain appropriate liquidity levels, all the respondents agreed. Further results show that 96% of the respondents agreed that managing liquidity ensured that SACCOs had sufficient liquidity to extend credit while only 3.7% were undecided. These findings agree with a study by Nganga (2011) which asserted that sufficient liquidity ensures health financial operations of the SACCOs. Nganga's (2011) study also found out that managing liquidity can keep debtors alert and reduce portfolio risk in the SACCOs. Similarly, 70% of the respondents agreed that the ratio of net liquid assets to deposits from customers helped to manage liquidity risk in deposit taking SACCOs in Kericho County. This is in comparison to 17% who were undecided and 13% who disagreed. It is also evident that 59% of the respondents agreed that focusing on credit worthiness prevented loan defaulters from accessing credits from other SACCOs while 41% were undecided. These findings are in agreement with Kreslow (2013)

and Kariuki (2010) who noted that credit information system aims at encouraging only those with credit rating to access credit with the eventual result that bad debt would be minimized.

4.3 Loan Default Rate in SACCOs in Kericho County

The study sought to ascertain the influence of different indicators of loan default rate in deposit taking SACCOs in Kericho County based on the extent to which the respondents agreed or disagreed with them. The findings obtained are presented in table 3.

Table 3: Loan Default Rate in deposit taking SACCOs in Kericho County

Statements	SA (%)	A (%)	N (%)	D (%)	SD (%)
It is easy for customers to get loans in my SACCOs	6	57	0	39	0
My SACCO incurs a lot of costs in recovering loans given to customers	15	63	11	7	4
In case of failure to pay loan my SACCOs takes measures to recover it	44	48	7	0	0
Loan products have increased my SACCO's level of profit	50	41	9	0	0
The degree of risks associated with loans in my SACCOs is high	9	22	41	26	2

From the findings, 61% of the respondents agreed that it was easy for customers to get loans in deposit taking SACCOs in deposit taking SACCOs in Kericho County compared to 39% who disagreed. Concerning whether SACCOs incurred costs in recovering loans given to customers 78% of the respondents agreed compared to 11% who were undecided and 11.1% who disagreed. Similarly higher percentages were reported in regard to whether in cases of failure to pay the loan the SACCO takes measures to recover it. For instance 93% of the respondents agreed that in cases of failure to pay the loan the SACCO took measures to recover it as compared to 7% who were undecided. Also 91% of the respondents noted that loan products had increased the SACCOs' profitability levels as compared to 9% who were undecided. In regard to whether the degree of risks associated with loans in their SACCO was high, 32% of the respondents agreed compared to 41% who were undecided and 2% who disagreed. These findings concur with Felix and Claudine (2008) who concluded that credit risk assessment enhanced loan default rate in SACCOs and recommended enhanced effectiveness of credit risk assessment in promoting loan default rate in the deposit taking SACCOs.

4.3 Correlation Analysis

This section presents results on the correlation analysis of the relationship between the independent variables and the dependent variable.

4.3.1 Credit Risk Assessment and Loan Default Rate

The researcher established the relationship between credit risk assessment and loan default rate in Kericho County. The scores for credit risk assessment were correlated with those of loan default rate. Pearson correlation coefficient was used to establish the relationship between the two variables. The findings from the analysis were as presented in table 4.

Table 4: Relationship between Credit risk assessment and Loan default rate

		Credit risk assessment
Loan default rate	Pearson Correlation	.294
	Sig. (2-tailed)	.082
	N	54

The findings indicated the presence of a weak positive relationship ($r=.294$, $p=.082$) between credit risk assessment and the loan default rate of the NGOs. However, the relationship was found to be statistically insignificant at $p<.01$ level of significance. Therefore, the researcher observed that credit risk assessment was a determinant of loan default rate. As such, the first hypothesis H_{01} that there was no statistically significant influence of credit risk assessment on loan default rate in deposit taking SACCOs in Kericho County was accepted.

4.3.2 Creditworthiness and Loan Default Rate

The study second objective was to establish the effect of creditworthiness on loan default rate in Kericho County. Using Pearson correlation coefficient the researcher established the relationship between creditworthiness and loan default rate. The findings from the analysis were as presented in table 5.

Table 5: Relationship between Creditworthiness and Loan Default Rate

		Creditworthiness
Loan default rate	Pearson Correlation	.360
	Sig. (2-tailed)	.007

	N	54	
**. Correlation is significant at the 0.01 level (2-tailed).			

The researcher found out that there was a positive relationship ($r=.360$, $p=.007$) between creditworthiness and the Loan default rate. The relationship was statistically significant at $p<.01$ level of significance. Therefore, the null hypothesis H_{02} that there was no statistically significant influence of creditworthiness on loan default rate in deposit taking SACCOS in Kericho County was rejected. The researcher concluded that the loan default rate in deposit taking SACCOS in Kericho County depended on credit worthiness.

4.4 Regression Analysis

The linear regression analysis for all the variables was done and the results obtained are presented in table 6.

Table 6: Linear Regressions for the independent Variables

Model 1		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	4.249	.24	.27	1.13	.049
	Credit Risk Assessment	.211	.26	.30	1.11	.039
	Credit Worthiness	.173	.37	.47	1.27	.042

In summary, in the order of relative influence of independent variables on dependent variable, the model is expressed as: SACCOS' Loan Default Rate = 4.249+ 0.211 (Credit Risk Assessment) + 0.173 (Credit worthiness) + error.

V. Conclusion And Recommendations

5.1 Conclusion

The purpose of this study was to determine the influence of credit information system on loan default rate in deposit taking SACCOS in Kericho County. The study concludes that the use of credit information system influenced loan default rate in deposit taking SACCOS in Kericho County. 18.1% of the loan default rate in deposit taking SACCOS in Kericho County was explained by credit risk assessment.

The study also concludes that credit worthiness influenced loan default rate in deposit taking SACCOS in Kericho County. 14.7% of loan default rate in deposit taking SACCOS in Kericho County was explained by credit worthiness.

5.2 Recommendations

Based on the conclusions drawn from the study, several recommendations are made for policy makers, practice and theory. The study recommends that deposit-taking SACCOS in Kericho County should expand their credit risk assessment strategies in order to minimize loan default rate. It is also recommended that credit risk assessment should be enhanced in order to minimize loan default in SACCOS in Kericho County. There is also need for members of SACCOS to embrace loan repayment as this may help maximize and improve the financial status of the SACCOS in Kericho County. The SACCOS management should continuously review the effectiveness of credit information system as a credit risk assessment strategy with a view to enhancing credit information system compliance by the deposit taking SACCOS in Kericho County. The study recommends that deposit-taking SACCOS in Kericho County should enhance their credit risk assessment strategies by adapting more stringent policies for effective debt recovery as this may help decrease default levels and non performing loans. By use of credit information system deposit taking SACCOS should prevent loan defaulters from accessing credits from other SACCOS. The study also recommends that deposit-taking SACCOS should closely monitor the repayment behavior of borrowers in order to grant credit only to those with good repayment history. The cost of recovering loans advanced to customers who have defaulted should be passed to the defaulters in order to lessen the burden on the deposit taking SACCOS.

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