

Credit Risk Management and Loan Performance: A Case of Umurenge Saccos in Kigali City, Rwanda

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Abstract: The study was conducted in SACCOs of Kigali city. The problem pertaining Financial/microfinance or saving and credit cooperatives in Rwanda is the non-performing loans, is that are found in those institutions. The objective of this study is to assess if there is a significant relationship between credits risk management and financial performance. Researcher assumes that there is a significant relationship between credits risk management and financial performance.

The study adopted cross-sectional design employing quantitative and qualitative approach with descriptive and analytical approach. The population of the study was 35 Umurenge SACCOs and a census was used for all SACCOs. The study findings suggest that the level of credit management practices was high since the grand mean was 4.10 and Standard deviation of 0.60. Again, the finding suggest that he level of loan performance is very high since a half of the SACCOs scored 95% and above in term of loan repayment rate. The study findings show that there is a strong positive relationship between credit risk management and loan performance of Umurenge SACCOs ($r=0.704$, $p=0.000$). The study also reveal that credit risk management influences loan performance ($R^2=0.548$). Credit terms and collection policy are statistically significant whereas client appraisal is statistically insignificant. SACCOs should maintain high level of performance by applying all credit risk management practices.

Keywords: Credit Risk Management, Loan Performance.

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Introduction

The concept of credit can be traced back in history and it was not appreciated until and after the Second World War when it was largely appreciated in Europe and later to Africa (Kiiru, 2004). Microfinance banks in USA gave credit to customers with high interest rates, which sometimes discouraged borrowers hence the concept of credit did not become popular until the economic boom in USA in 1885 when the banks had excess liquidity and wanted to lend the excess cash (Ditcher, 2003).

Navajas *et al.*, (2003) competition in the Bolivian microfinance market focus on two major MFIs which collectively have around 40 percent market share. The results suggest that outcome of competition is ambiguous since competition leads to innovation there by expanding outreach. However, it reduces the ability of lenders to cross-subsidize less profitable smaller loans.

In Vietnam Ayayi (2012) low credit risk is a direct consequence of sound implementation of good credit risk management and sustainable loan performance through sound qualitative and quantitative credit risk management tools. In Ghana Kwaku (2015) found out that a major factor considered in credit management is the ability of the borrower to repay the loan, However, to mitigate the risk of default, microfinance's ensure that loans are well secured, though advances are granted on the basis of the borrower's ability to pay back the advance and not on the basis to pledge sufficient assets to cover the advance in case of default, it is highly desirable for all advances made to customers and staff to be well secured. This means that in the event of default the bank fall on the collateral used in securing the facility to mitigate the effect of loss of principal and interest.

In Nigeria, According to Oguntoyinbo (2011), it reveals that multidimensional factors contribute to low credit recovering by the MFIs. These factors can be summarized under borrowers' wrong attitude to credit repayment, MFIs' staff weak skill and corrupt tendency, and poor infrastructural provision by the government. In Ethiopia Wale (2009) found that poor gross loan profit, allocating a lower proportion of their total assets in to loans. Poor usage of their debt capacity leads to poor loan performance. The large and small MFIs are allocating more loan loss provision expense than the industry average and the related PAR is high for these MFIs. All these indicate distorted credit management practices.

In Uganda, microfinance institutions faced hardships in loan recovery, portfolio at risk shifted from 0.38% to 0.51% in 2010 despite all the efforts of attaching assets to secure loans, building up equality loan portfolios and keeping the rate of deficit under control (Kwizera, 2011). In Rwanda, Umurenge SACCO's non-performing loans increased to 12.5 percent in 2015-2016 from 8.2 percent in the year 2014-2015 (BNR, 2016). SACCOs in Rwanda are tied and regulated by National bank of Rwanda, Rwanda Cooperative agency and Association of Microfinance in Rwanda. In December 2008, the government of Rwanda recommended the creation of at least one SACCO at the level of each administrative sector (Umurenge). Accordingly, a task force was established to propose a strategy to implement this directive. The task force proposed a strategy in line with the national microfinance policy implementation strategy and the national savings mobilization strategy.

The concept of Umurenge SACCO in Kigali City was initiated on the understanding that banks and other financial institutions are more concentrated on rich people and do not serve the poor. As such, establishing Umurenge SACCO at every administrative sector would bridge this gap. Umurenge SACCO in Kigali City is a financial institution under the cooperative form. According to the National Bank of Rwanda (2016), the minimum required non-performing loans ratio is 5 percent and the report presented on 22nd December, 2016 in Kigali called for tough measures to tackle the problem of bad debts showed that bad loans had gone up, with 13 per cent and others represented a ratio above 20 per cent of non-performing loans in Kigali City whereas in other districts the non-performing loans stood at 12.5 percent. Despite all the measures and controls including Seminars, Trainings, and Supervision and employing qualified workers to tackle the problem of non-performing loan, still non-performing loan is very high exceeding the benchmark of 5% set by National Bank of Rwanda. This drew the researcher's intention to carry out research on credit management practices and loan recovery in Kigali city in Umurenge SACCO.

Statement of the Problem

According to the National Bank of Rwanda the minimum required non-performing loan ratio is 5 percent and the report presented on 22nd December, 2016 in Kigali called for tough

measures to tackle the problem of bad debts showed that bad loans had gone up, with 13 per cent and others represented a ratio above 20 per cent of non-performing loans in Kigali City yet in other districts the non-performing loans stood at 12.5 percent.

The bad loans are greatly affecting the sector's goal of increasing access to finance, as well as strengthening its competitiveness (AMIR, 2016). Despite tough measures used by the government including hiring qualified workers, firing unqualified ones, adding more supervision, trainings, and conducting seminars on how to tackle the problem of non-performing loans still non-performing loans are very high not reaching the minimum expected rate of performance of 95%. In such cases, there is an interest to carry out a research on credit management practices and loan recovery of microfinance institution in saving and credit cooperatives in Kigali City.

Objective of the study

The general objective of this study was to assess the relationship between credit risk management and loan performance of Umurenge SACCOs in Kigali City. Specifically the research seeks:

1. To determine the level of credit risk management of Umurenge SACCO in Kigali City.
2. To determine the current level of loan performance of Umurenge SACCO in Kigali City.
3. To assess the relationship between credit risk management and loan performance of Umurenge SACCOs in Kigali City. Researchers that there is a significant relationship between credit risk management and loan performance of saving and credit cooperatives.

Significance of the Study

The study shall help the management of Umurenge SACCO to realize the importance of credit management. Since the role of banks, commercial banks, microfinances and even saving and credit cooperatives is to borrow money to members, it is very crucial to set up all strategies to either giving out a loan or collecting it. The empirical study between credit risk management and loan performance of microfinance institutions will help stakeholders who are the customers of SACCO to know the effect of late payment and therefore they will comply with credit policies, as they will be able to pay in time. Once, the findings are presented to the executive members from Rwanda cooperative agency, National Bank of Rwanda and other financial institutions and then they will use them as benchmark to fight against late payment.

Scope of the Study

The study was confined to credit risk management and loan performance of microfinance institution, the study focused on the credit risk management variables namely: credit terms, collection policy, client appraisal, and with recovery rate and repayment rate in Umurenge SACCO which is located in Kigali City. The study examined credit risk management and loan performance of microfinance institutions in Kigali City because there was a problem to investigate; the study also examined the credit risk management for the last four years from 2014-2017 because of the availability of data.

Limitation of the Study

The study used all 35 SACCOs in Kigali city and targeted staff and beneficiaries. The study was also limited by sampling procedures in a way that it used purposive sampling rather than

random sampling, which gives equal chance to all respondents. The study used the cross-sectional approach, thus all Umurenge SACCO in Kigali City were used. Therefore, the study did not capture the loan performance for all SACCOs in Rwanda. The study was also limited on self-administered questionnaire on five Likert scale.

Theoretical Framework

The study was underpinned by adverse selection theory and 5Cs model of client appraisal. In the adverse selection model theory developed by Pagano and Jappelli (1993), information sharing improves the pool of borrowers, decreases defaults and reduces interest rates. It can also lead to an expansion of lending. When banks are local monopolists, however, in some cases lending diminishes, because the exchange of information increases the banks' possibility of price discrimination between safe and risky borrowers and the increase in lending to safe borrowers does not fully compensate for the reduction in lending to the risky types. When credit markets are contestable, lending activity is more likely to increase: competition limits the banks' ability to extract rents from their customers, and information sharing increases banking competition (Jappelli and Pagano, 2002). This model further implies that that information sharing should reduce default rates and interest rates and increase lending, either because credit bureaus foster competition by reducing informational rents or because they discipline borrowers.

The 5 C's Model of Client Appraisal Microfinance Institutions uses the 5Cs model of credit to evaluate a customer as a potential borrower (Abedi, 2000). The 5Cs help MFIs to increase loan performance, as they get to know their customers better. These 5Cs are: character, capacity, collateral, capital and condition.

Conceptual Framework

A conceptual framework is defined as an element of the scientific research process in which a specific concept is defined as a measurable occurrence or in measurable terms, that basically gives a clear meaning of the concept. According to Mugenda (2003), a conceptual framework is a diagrammatic presentation of the relationship between dependent and independent variable.

The conceptual framework of this study was drawn from the study of Ahmed and Malik (2015) on Credit Risk Management Loan Performance: Empirical Investigation of microfinance banks in Pakistan and a study of Addae-Korankye (2014) on causes and control of loan default/delinquency in microfinance Institutions in Ghana.

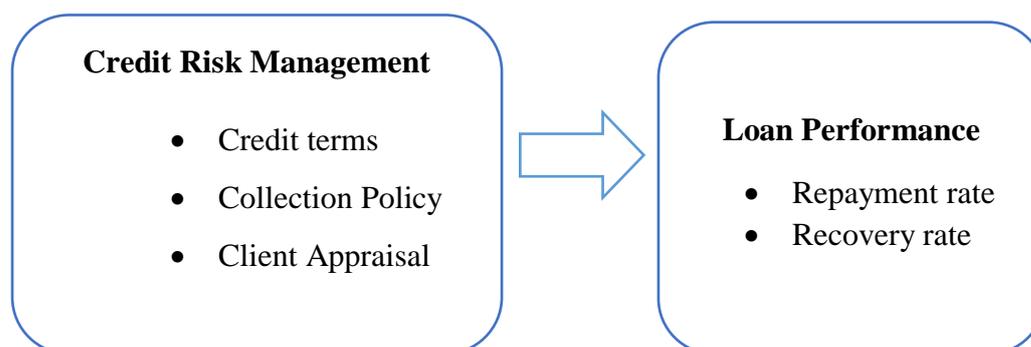


Figure 1. Conceptual Framework
Source: Extracted from Ahmed and Malik (2015)

The conceptual framework indicates the relationship between the independent variables and dependent variable.

Operational Definition of Terms

Credit Risk Management: Credit risk management is defined as identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments. Credit risk management in this study was measured looking at Credit Terms, Collection policy, Client Appraisal.

Credit Terms: Credit terms are defined as specific time period, rate of interest and penalties imposed to borrowers for late payment under which credit is advanced by financial institutions. This was measured using mean and standard deviation on a 5 Likert scale. Strongly agree = 5 (very high mean) with mean range of 4.20-5.00, agree = 4 (high mean) with mean range of 3.40-4.19, Not sure = 3 (average mean) with a mean range of 2.60-3.39, disagree = 2 (low mean) with a mean range of 1.80-2.59 and strongly disagree =1 (very low mean) with mean range of 1.00-1.79.

Collection Policy: The steps that a company follows in ensuring timely payment of its accounts receivable. Collection policies vary by company. An example of the steps a company can take involves a friendly phone call to make sure payment is made on time, followed by a firm phone call when a payment is late, followed by a threatening letter, and finally turning the client over to a collection agency. This was measured using mean and standard deviation on a 5 Likert scale. Strongly agree = 5 (very high mean) with mean range of 4.20-5.00, agree = 4 (high mean) with a mean range of 3.40-4.19, Not sure = 3 (average mean) with mean range of 2.60-3.39, disagree = 2 (low mean) with a mean range of 1.80-2.59 and strongly disagree = 1 (very low mean) with mean range of 1.00-1.79.

Client Appraisal: an assessment or estimation of the worth, value, or quality of a person or thing. This was measured using mean and standard deviation on 5 Likert scale. Strongly agree = 5 (very high mean) with mean range of 4.20-5.00, agree = 4 (high mean) with mean range of 3.40-4.19, Not sure = 3 (average mean) with mean range of 2.60-3.39, disagree = 2 (low mean) with mean range of 1.80-2.59 and strongly disagree = 1 (very low mean) with mean range of 1.00-1.79 and standard deviation less than 0.5 is homogeneous and standard deviation of greater than 0.5 is heterogeneous.

Loan Performance: Loan performance is seen as indicator of microfinance to make repayment in due time. This is measured under repayment rate and recovery rate. Repayment Rate: Repayment rate is the act of paying back money previously borrowed from a lender. This is measured using percentage and from 95-100 percent means repayment is very high.

Recovery Rate: The recovery rate is the extent to which principal and accrued interest on a debt instrument that is in default can be recovered, expressed as a percentage of the instrument's face value. The recovery rate can also be defined as the value of a security when it emerges from default. This was measured using percentages whereby from 80-94 percent was high; 70-79 percent was moderate, 69-50 low and less than 50 was very low.

Materials and Methods

The study used cross sectional and descriptive research design was also used employing quantitative and qualitative research methods. Descriptive research design was used to describe the credit management practices and loan recovery of microfinance institutions. The

study adopted analytical research approach to establish the relationship between credit risk management and loan performance of SACCOs in Kigali City.

Population of the Study

Grinnell and Williams (1990:62) defined the population as the totality of persons or objects with which the study is concerned. The population of this study was 35 Umurenge SACCOs in Kigali City.

Table 1. Population of the Study

CITY	Number of SACCOs	Employees in each SACCO	Population	Sample Size	Sampling method
Kigali	35 SACCOs	5	175	105	Purposive sampling

(BNR, 2016)

Sample Size

The study used a census of 35 Umurenge SACCO in Kigali city. SACCOs were represented by 105 staff including 35 loan officers, 35 managers and 35 accountants. Among 105 staff, 103 of them were available and this was translated into a response rate of 98%. According to Mugenda and Mugenda (2003), and also Kothari (2004) a response rate of above 50% is adequate for a descriptive study. Babbie (2004) also asserted that return rates of above 50% are acceptable to analyze and publish, 60% is good and 70% and above is excellent.

Sampling Procedures

Sampling Procedures is a process or technique of choosing a sub-group from a population to participate in the study; it is the process of selecting a number of individuals for a study in such a way that the individuals selected represent the large group from which they were selected (Ogula, 2005). The study used purposive sampling method of sampling techniques to select loan officers in each SACCO in Kigali city.

On reaching SACCOs, the researcher looked for the list of SACCOs and looked for the manager, loan officer and accountant in each SACCO in Kigali City, the research also identified respondents by reading on the doors. On each door there was written a manager, loan officer and accountant. Also reaching at a SACCO the researcher waited for the beneficiaries or customers who came to look for services and interviewed them. The researcher asked individual by distributing questionnaires to the staff of each selected Umurenge SACCO in Kigali City.

Research Instrument

Research instruments are measurement tools (for example, questionnaires or scales) designed to obtain data on a topic of interest from research subjects (Kothari, 2004). The purpose of using questionnaires in the research is because of the direct response and feedback from the respondents that can be collected in short period of time and in an easier manner.

Questionnaires were designed according to Likert Scale: “Strongly disagree (1), Disagree (2), not sure (3) Agree (4) and Strongly agree (5)” to explore the key variables of credit management practices and loan recovery. The questionnaire had close ended questions and it comprised of three sections. Section A entails the Bio-data; Section B entails credit risk management and Section C entails the loan performance.

Table 2. Interpretation of scale of mean

Weight Scale	Range	Interpretation of the scale
5	4.20-5.00	Strongly Agree (SA)
4	3.40-4.19	Agree
3	2.60-3.39	Not sure
2	1.80-2.59	Disagree (D)
1	1.00-1.79	Strongly Disagree (SD)

(Abiola and Asiweh, 2012)

Interview with Key Informants

The study conducted the interview with beneficiaries of SACCOs in Kigali city. The study selected beneficiaries who have a loan in a SACCO in Kigali city. The study believed that beneficiaries who acquired loans in SACCOs had needed information for the study. Therefore, the study used 35 beneficiaries for interview. One beneficiary from each SACCO in Kigali City was interviewed.

Validity of the Study

According to Creswell (2014), validity measures the degree to which the research or study achieves what it sets out to do. To test the validity of the research instruments, content validity index formula was used to ascertain the validity.

Research experts and advisors helped as they ascertain the validity of the instruments. i.e.

$$CVI = \frac{\text{Total number of relevant items in the questionnaire}}{\text{Total number of items in the questionnaire}}$$

If CVI is Greater than 0.7 then the questionnaire is valid. Therefore, $CVI = 11/14 = 0.78$

The CVI obtained was 0.78 which is above 0.7 as the minimum according to Bugema University Research standards hence the questionnaire was valid.

Reliability of the Study

According to Kothari (2011) reliability establishes the consistency of a research instrument in that the results it achieves should be similar in similar circumstances and so the same research respondents using the same instrument should generate the same results under identical conditions.

To pre-test the research questionnaire, 12 questionnaires were taken to Musanze district in Abamuhoza Umurenge SACCO, Umutuzo SACCO, Irengere SACCO and Inyange SACCO. The reason behind using Musanze district SACCOs in the reliability of the study that Musanze district has the same characteristics as Kigali city, Musanze is urbanized City. The instrument in Musanze was adjusted and the findings of the pre-test were not included in the main finding of the study.

Table 3. Reliability of the Study

Cronbach's Alpha	N of Items
0.733	14

The Alpha Cronbach obtained was 0.733 therefore, the questionnaire was reliable

Data Collection Procedure

An introductory letter was obtained from Bugema University, School of Business and it was taken to the association of microfinance institutions in Rwanda in Kigali City, where this study was conducted. All 35 SACCOs in Kigali City were visited and met managers, loan officers and accountants. The researcher collected quantitative data using self-administered questionnaires addressing loan officer, manager and accountant. Qualitative data was collected using interview with beneficiaries of SACCOs in Kigali City.

Given that, the research encroached so much on people's privacy, the researcher ensured confidentiality of the respondents by not putting their names on the questionnaire. In addition, the researcher also approached them in their convenience. The researcher made sure that no participant was injured, insulted or abused.

Data Analysis

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The questionnaires were coded to enable the responses to be grouped into various categories. The researcher used mainly descriptive statistics and inferential statistics to analyze data. The information was display using tables. The statistical package for social sciences (SPSS) was also used as tool to analyze data. Both objective one and two were analyzed using descriptive statistics and objective three was analyzed using Pearson correlation. The Null Hypothesis (H₀) was rejected since p-value (statistical test) was less than the significance level and accepted the alternative since p-value was greater than the significance level (Baingana, 2011).

Results and Discussion

This chapter presents the findings, analysis, interpretation and discussions of the research based on the research instruments used. Tables were used to present the findings. The analysis was done by entering 103 questionnaires in SPSS. The study aimed at establishing the relationship between credit risk management and loan performance of microfinance institutions a case of saving and crediting cooperatives in Kigali City.

Response Rate

The targeted population size was thirty-five (35) SACCOs in Kigali City. The study used a census study whereby the entire population was studied as opposed to selecting a sample thereby making a response rate of 100%. The study had a sample of the 105 who were loans officers, Accountants and managers working in SACCOs in Kigali City. Out of the 105 responses 103 were obtained from them. This translated to a response rate of 98%.

According to Mugenda and Mugenda (2008) the statistically significant response rate for statistical analysis should be at least 50%. A response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and above is excellent. This means that the response rate for this study was excellent and therefore enough for data analysis and interpretation. This high response rate can be attributed to the data collection procedures, where the researcher pre-notified the potential participants and applied the census method.

Credit Risk Management among SACCOs in the Study

Objective one of the study was to assess the level of credit risk management. It was measured using credit terms, collection policy, and client appraisal. This objective was analyzed using the mean and standard deviation. The mean shows the occurrences of a response while

standard deviation portrays the extent to which the scores deviate from the mean. The details of the findings are as shown in Table 4.

Table 4. Level of Credit Risk Management

	Aggregate Mean	Aggregate SD	Interpretation
Credit terms	3.90	0.76	High
Collection policy	4.15	0.69	High
Client appraisal	4.19	0.54	High
Grand Mean and Standard Deviation	4.08	0.66	High

N = 103; Legend:1.00 – 1.79 Very low, 1.80 – 2.59 Low, 2.60 - 3.39 Moderate, 3.40 – 4.19 High, 4.20 – 5.00 Very High.

Credit Terms

The results in Table 5 indicate that the level of credit terms was highly practiced (agg. mean = 3.90 and SD = of 0.76).The findings imply that SACCOs practice the credit terms, they offer loan at fixed interest, and interest is paid at regularly intervals. From the interview with beneficiaries, most of the respondents said that.

“Here we should comply with the credit terms because if you don’t do that then they can sell the security. “Even the interest is high compared to other microfinance institutions like Umwalimu SACCO where the annual interest is 11 percent whereas in Umurenge SACCOs the annual interest is 18 percent” (Beneficiaries of SACCOs in Kigali City, 2017).

In line with Sindani (2012) in her study on effectiveness of credit management system on loan recovery in Nairobi, Kenya. Based on empirical review established that credit terms formulated by microfinance institutions affected loan recovery. The study recommended that both credit officers and customers should be involved in formulating credit terms.

Collection Policy

Collection policy shows that the level of collection policies are highly implemented (agg. mean 4.15and SD 0.69). The findings implies that the SACCOs call borrowers two days before and the SACCOs sell collateral when customers fail to pay, the SACCOs oblige Deposit of borrowers’ payments to be done at the SACCO’s location and when payment is late, the SACCOs send a letter to the customers to remind them regarding their loan payments.

From the interview with beneficiaries, they said that:

“The SACCOs call their customers reminding them when to pay and this is done before the day of payment” (Beneficiaries of SACCOs in Kigali City, 2017)

In line with Ssewagudde (2000) he pointed out that if policies are carefully formulated, administered from top and well understood at all levels of the institution, proper credit standards and elimination of excess risk can be achieved.

Client Appraisal

The level of client appraisal reveals that client appraisal using 5Cs are highly practiced (Agg. Mean = 4.19 and SD = 0.54). From the findings, the SACCOs reveal that they apply the 5Cs

to customers to get potential borrowers. From interview with beneficiaries when asked what do you think helped to get a loan in this SACCO? They said:

“The SACCOs do not grant loans to customers when they are not offered a collateral, they visit and ask you whether you have the documents of that security” (Beneficiaries of SACCOs in Kigali City, 2017).

In line with a study by Murray (2011), found out that through loan appraisal; management can gauge its ability to generate earnings from the bank’s total pool of assets. The thorough loan appraisal of the loan applicant before loan advancing with an aim of assessing the study recommended that there was need for microfinance banks to enhance their client loan appraisal policy so as to influence positively on loan recovery.

Loan Performance

Objective 2 was to determine the level of loan recovery. This objective was measured using recovery rate expressed in percentage. This objective was analyzed using frequency and percentages. The details of the findings are as shown in Table 5 below.

Table 5. Level of Loan performance

	Rates	N ^o SACCOs	Frequency	Percent	Interpretation
Valid	95% and above	18	54	53	Very high
	(94-80)%	14	42	39.8	High
	(79-70)%	2	5	4.8	Low
	(69-50 %)	1	2	2.4	Very Low
	Total	35	103	100	

N=103; Legend: 95% and above: Very high, (94-80) percentage: high, (79-70) Percentage: Moderate, 69-50 percent: low. Less than 50: Very low

The results in Table 5 show that more than a half of SACCO complies with the regulations to repay the minimum of 95%. According to national bank of Rwanda, the minimum required loan repayment rate is 95%. Therefore, 18 SACCOs in Kigali city meet the requirements. This implies that in this SACCOs credit risk management practices are being practiced well.

The results shows that 14 SACCOs recovered (94-80) %. This in not in the requirements of National Bank of Rwanda. Therefore, these SACCOs are not practicing well the credit risk management practices accordingly. But however, scoring (94-80) % is not also a small task meaning that practices are being applied but to the extent that they cannot meet the requirements.

The results show that two SACCOs were scoring (79-70) %. This implies that credit management practices are not followed up. Practices are in place but applying them are needed it’s not being done.

The results reveal that one SACCO scored between (69-50) %. This implies that in this SACCO credit risk management practices are not functioning as expected. Having scored less than 70% means that there is lack of policies regarding collection policies. Either way, policies might be there but their applicability is low.

This is in line with Hippolyte (2005) who argues that Successful MFIs have managed to maintain high levels of loan recovery rates. These remarkably high loan recovery ratios

triggered the initial wave of funds from funding agencies and the subsequent inflow from a variety of social investors which they could use to expand their operations. While many successful MFIs continue to contain credit risks within desired levels, they face greater challenges than before as indicated by the increased volatility of their portfolio at-risk (PAR) ratios.

Relationship between Credit Risk Management and Loan Performance

Objective 3 of the study was to establish relationship between credit risk management and loan performance of Umurenge SACCO in Kigali city. This objective was measured using Pearson correlation coefficient. Table 6 provided the summary of the findings.

Table 6. Relationship between Credit Risk Management and Loan Performance

		Credit Risk Management	Loan Performance
Credit Risk Management	Pearson Correlation	1	.704**
	Sig. (2-tailed)		.000
	N	103	103
Loan Recovery	Pearson Correlation	.704**	1
	Sig. (2-tailed)	.000	
	N	103	103
**. Correlation is significant at the 0.01 level (2-tailed).			

The Table 6 shows the relationship between credit risk management and loan performance. The correlation coefficient indicates a strong positive relationship between credit risk management and loan performance of saving and credit cooperatives in Kigali City ($r=0.704$, $p=0.000$). The P-value 0.000 and Alpha value 0.01 obtained, indicate that the null hypothesis was rejected and accepted the alternative hypothesis since the P-value was less than Alpha. The study suggests that when credit risk management is well practiced, the number of defaulters' decreases, the non-performing loans decreases and the recovery rate increases. Strong relationship is due to credit risk management, which are applied to meet the desired loan performance. Therefore, the study suggests that when credit risk management is applied and followed, the loan performance also improves.

In line with Ssewagudde (2000) pointed out that if policies are carefully formulated, administered from top and well understood at all levels of the institution, proper credit standards and elimination of excess risk will be achieved. More efforts towards favorable credit policies, the better it will be in as regards loan performance is concerned.

Regression Analysis

Regression analysis was used to determine determinant of coefficients (Model summary), and regression coefficients. Determinant of coefficient (R square) is important in indicating the percentage of the proportion of the total variation in loan recovery of SACCOs that is attributed to the changes in credit management practices and. Regression coefficient indicates the significance of coefficient estimates for each independent variable.

Table 7. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.740 ^a	.548	.530	.46711

The coefficient of determination which is R square is used to determine the model fit. It is the percentage of the variance in the dependent explained uniquely or jointly by the independent variables. From the findings, R square is 0.548. This means that 54.8% of the loan performance is explained by the factor variables (credit terms, collection policy and Client Appraisal). A study should therefore be conducted to determine what influences the other 45.2 of the loan performance.

Regression Coefficients

Multiple regression analysis was used to determine the significance of each credit management practice towards loan recovery. The results are given in the Table of regression coefficients.

Table 8. Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.116	1.123		-2.774	.007
	Credit Terms	.989	.156	.512	6.319	.000
	Collection Policy	.510	.147	.270	3.467	.001
	Client Appraisal	.066	.208	.022	.320	.750

a. Dependent Variable: Loan Performance

The regression coefficients above establish that taking all factors into account credit terms, collection policy, client appraisal and credit risk control constant at zero the recovery of SACCOs will be -3.116. This implies that when there is ignorance of credit risk management Practices in SACCOs, then SACCOs will fall into losses.

Credit terms are positively related with the loan recovery as indicated with a positive coefficient. Credit terms are statistically significant ($p=0.000 < 0.01$) The findings presented also show that a unit increase in credit terms will lead to 0.512 unit increases in loan performance of SACCOs.

Collection Policy is positively related with the loan recovery as indicated with a positive coefficient. Collection policy is statistically significant ($p = 0.001 < 0.01$). A unit increase in collection policy will lead to 0.270 unit increase in loan performance.

Client Appraisal is positively related with the loan recovery as indicated with a positive coefficient. Client appraisal is not statistically significant but have a positive coefficient ($p = 0.750 > 0.01$). A unit increase in Client appraisal leads to 0.022 unit increase in loan performance.

In line with a study by Sufi Ahmed and Qaisser Ali Malik titled “Credit risk management and loan performance: Empirical Investigation of Micro Finance Banks of Pakistan, Empirical Investigation of Micro Finance Banks of Pakistan” examined Credit management and loan performance with credit terms, client appraisal, collection policy and credit risk control. The results of the analysis showed that the credit terms and client appraisal have positive and significant impact on the loan performance, while the Collection Policy and Credit risk control have positive but insignificant impact on loan performance.

Hypothesis Thesis

As shown in the Table above, the finding of the P-value of 0.000 which was less than the significance (α) level 0.01 implying that there is a significant relationship between credit risk management and loan recovery of saving and crediting cooperatives in Kigali City.

Therefore, the null hypothesis was rejected which was saying that there is no significant relationship between credit risk management and loan performance of microfinance institutions in Kigali City and accepted the alternative hypothesis which was saying that there is a significant relationship between credit risk management and loan performance of microfinance institutions in Kigali city since the P-value was less than Alpha.

Summary, Conclusion and Recommendations

This chapter refers to the organized, presented and analyzed data in the preceding chapters. The summary and conclusions are drawn from the discussed findings, in line with the objectives of the study.

Summary

The study was entitled credit risk management and loan performance in 35 SACCOs in Kigali City under four objectives namely: To determine the level of credit risk management of Umurenge SACCO in Kigali City. To determine the current level of loan performance of Umurenge SACCO in Kigali city. To establish relationship between credit risk management and loan performance of Umurenge SACCOs in Kigali City. The study findings suggest that the level of credit risk management was high since the grand mean was 4.10 and Standard deviation of 0.60. Again, the finding suggest that he level of loan performance was very high since a half of the SACCOs scored 95% and above. This study showed that before lending money SACCOs use 5Cs which is the system that analyzes five properties of the borrower to minimizing the level of bad debts and non-performing loan to increase the loan performance. The study findings show that there is a strong relationship between credit risk management and loan performance of Umurenge SACCOs ($r = 0.704$, $p = 0.000$). The study also reveal that credit management influences loan performance ($R^2 = 0.548$). The more the credit management increases, the more the loan performance increases. An increase in credit terms leads to an increase in loan performance.

Conclusion

The study concluded that most of the SACCO have been repaid loan disbursement above 95 % in the period in Kigali city. The study again concluded that the level of credit risk management is very high. The study shows that there is a strong positive relationship between credit risk management and loan performance of microfinance institutions. Credit risk management when are improved, the loan performance also improves. SACCOs are relying on credit terms and their collection policies because these were found to be significant. Client appraisal is insignificant and SACCOs are not using them appropriately. Credit risk management influences loan performance of credit and saving cooperatives.

This paper adds knowledge on credit risk management in SACCOS by analysing the relationship between loan performance with loan repayment and loan recovery. The findings suggest that despite the available credit risk management tools used in SACCOS to manage loan risks, there is a higher level of credit risk problem in SACCOS. In addition, the findings suggest that focusing on client appraisal and maintaining available credit terms of SACCOS are a valuable tool to fight reduced loan repayments by member-borrowers.

However, the results show that focusing on credit terms increase loan performance in SACCOS. The reason is that when SACCOS are focusing on the maximizing profit they tend to stretch their activities beyond their managerial and institutional abilities. SACCOS maintain collection policies so that they collect money in time to avoid bad debts. Finally, the study revealed that the use of credit risk management influenced the loan recovery where the loan granted considering the five c's credit influence the loan performance.

Recommendations

Based on the findings, recommendations were made as follows.

1. The study recommended that SACCOS should continue to maintain their collection policies and follow their credit terms so that to increase the loan performance. SACCOS should revise their client appraisal strategies and improve on credit risk safeguards.
2. SACCOS should maintain high level of loan performance by applying all credit risk management practices.
3. To increase loan performance SACCOS are responsible to practice, explain and understand the credit policies.
4. All factors of loan performance should be taken into account order to have desired loan performance.
5. The results of the study are helpful for the management to focus on these explanatory variables used in the study so that the performance of the loan may be enhanced. Furthermore, the study is helpful to scrutinize the present credit practices of the SACCOS situated in Kigali City.

Area of further studies

1. A similar study should be done on the effect of manual processing and financial performance in SACCOS in Rwanda.
2. Another study should be done on risk control and saving in microfinance institutions in Rwanda.
3. The study may be replicated by adding more dimensions of the credit management and by increasing the sample size and by taking more SACCOS to the investigation to further test the impact of studied variables on the performance of loan to add generalizability to the current findings. It is further suggested that the secondary data may also be incorporated in such studies to better explore the influence of credit risk management on loan performance from in that specific dimension.

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