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# Assessment of Credit Risk Identification on Loan Repayment Performance of Saccos in Imenti South Sub-county, Meru, Kenya

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

With the emergence of COVID-19 pandemic the economic status in the country has drastically changed due to the loss of livelihood of many citizens. Repayment of loans has been affected and thus there is need to assess the effect of credit risk identification on the loan repayment performance of SACCOs in Imenti South Sub-county, Meru. The study adopted a correlation research design to establish the relationship between independent and dependent variables. The target population for this study was 36 employees employed by SACCOs in Imenti South Sub County. The sample size was 36 respondents since census study was carried out to get information on the study variables. Data were collected by use of questionnaire from the respondents. The regression analysis model was applied by the researcher to determine the association between the study variables. Results have been presented using frequency tables, graphs and pie charts. To ensure that ethical consideration was taken into account, the researcher obtained informed consent from the participants so that only the participants who agreed participated voluntarily. The researcher was also honest so that the information obtained from the study was used for this research study only. The research found that identifying credit risk has an impact on how well loans are repaid. This is shown by the significance threshold for credit risk identification, which was 0.0174–0.05, showing a substantial link between credit risk identification and loan payback

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performance. Identification of risk is important in order to improve risk management and control the hazards SACCOs may face. SACCOs should establish proper credit risk identification practices such as having a clearly defined process of risk reporting and training all staff on risk identification to avoid loss and defaults.

*Keywords: Credit risk identification; loan repayment; performance and saccos.*

## 1. INTRODUCTION

Credit risk management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources. The strategies include transferring the risk to another party, avoiding the risk, reducing the negative effects of the risk, and accepting some or all of the consequences of a particular risk [1].

The world over, credit risk has proved to be the most critical of all risks faced by a banking institution [2]. Developed and developing countries' economies have had significant crises relating to non-performing loans [3]. According to Greuning and Bratanovic [1] the basis of sound credit risk management practices include guidelines that clearly outline the scope and allocation of bank credit facilities and the manner in which the credit portfolio is managed, that is, how loans are originated, appraised, supervised and collected. Derban, Binner and Mullineux [4] posited that borrowers should be screened especially by banking institutions in form of the credit assessment. The collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening as indicated by symmetric information theory.

Credit risk management practices is an issue of concern in SACCOs today and there is a need to develop improved processes and systems to deliver better visibility into the future performance of credit unions. Improved credit risk management in SACCOs will undoubtedly require a clear understanding of the challenges they face. This will in turn assist in developing strategies to overcome the credit risk management process [5]. It is important to have a study on the effects of credit risk management practices to be established due to the role of enhancing shareholder value and improving financial performance. Various researches have analysed the linkage between credit risk management and financial performance, and how effective credit risk management

contributes to reduction of defaults by counterparty as well as restricting uncertainty of achieving the required financial performance [6,7,8]. Otieno, Nyagol and Onditi [9] evaluated the relationship between credit risk management and financial performance of microfinance banks in Kenya using Pearson correlation coefficient.

Based on this evaluation, there is a gap in the literature that motivates research to be conducted on establishing the relationship between credit risk management practices and the financial performance of SACCOs. To assess the effect of credit risk identification on loan repayment performance of SACCOs in Imenti South Sub-county, Meru.

### 1.1 Statement of the Problem

Credit risk identification practices will help SACCOs reduce exposure to the various risks and risky situations that they may encounter. SACCOs need to have credit risk identification policies and procedures in place, which requires the knowledge of risk management, essential in business enterprises [10]. For Fadun, [10] risk management is an integral part of the decision-making process and effective risk management (ERM) can improve business performance, minimizing the possibilities of business failures risk.

A number of studies have been done on credit risk identification in SACCOs, but most of them if not all concentrate on a single aspect of risk while risk management involves a combination various risk situation as a portfolio. In their study Lagat, Mugo, and Otuya, [11] found that credit risk management was a very important aspect in the management of SACCOs lending portfolio. The study also found that, effective credit risk management practices involved procedures of understanding risk and risk management and this contributed to SACCO's sustainability and financial viability. In a study to find out factors that influenced SACCO members seek financial services from other organization other than SACCOs, Auka and Mwangi [12] found that

SACCO members took loans offered by SACCOs despite the competition from the various financial institutions. However the study noted that SACCOs are not competitive in terms of service delivery, processing and the products offered by those organizations.

According to Odera [13] governance in SACCOs lacks a clear separation between management and decision making and inadequate managerial competitiveness. SACCO By-Laws should have clear rules on who is responsible for what in the SACCO. While the researcher's studies discussed above provide insight on risk management, they don't mention in detail as to what contributes to the risks. There is need for the industry and the stakeholders of these very important economic business enterprises to have the knowledge of the other risks they are exposed to and how to minimize or manage them. This study sought to assess the effect of credit risk identification on loan repayment performance of SACCOs in Imenti South Sub-county, Meru.

## **1.2 Purpose of the Study**

This study sought to assess the effect of credit risk identification on loan repayment performance of SACCOs in Imenti South Sub-county, Meru.

## **1.3 Significance of the Study**

The study findings might be resourceful to management team of SACCOS as it will give an overview of the credit risk identification practices. Further the management team might also get insight on how credit risk identification can be enhanced to improve loan repayment by the members. The study might provide a reference to academicians and researchers in terms of literature and areas that they can do more research work in the field of credit risk identification towards loan repayment.

The results in this study might be helpful to the government and policy makers as it will give strategies on how to carry out credit risk identification by financial institutions to enhance loan repayment.

## **1.4 Scope of the Study**

The study was only carried out in Imenti South-sub County, Meru County. It targeted SACCOs which had been registered with SASRA. Since

there are various theories connected to credit risk identification this study only discussed risk management theory. Only those participants who gave consent participated in this study. The researcher took eight months to carry out this study in order to come up with comprehensive and reliable conclusions.

## **2. THEORETICAL FRAMEWORK**

Risk management theory will form the basis for discussion of theoretical framework.

### **2.1 Risk Management Theory**

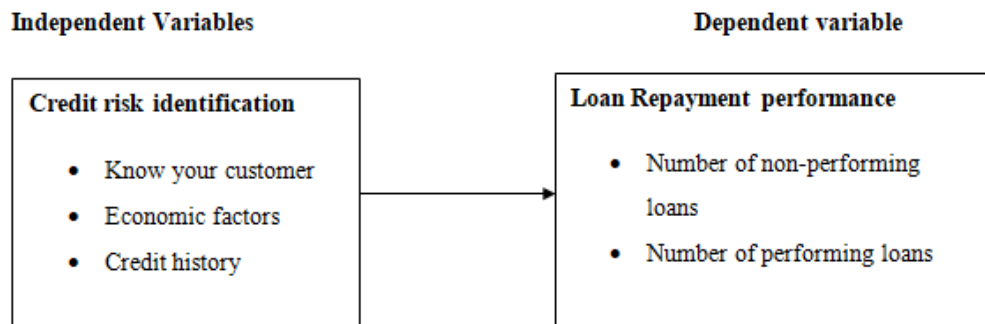
The risk management approach, according to Wenk [14], involves credit identification, credit assessment, and risk prioritization, as well as the planned and efficient use of resources to reduce, monitor, and manage the chances of bad events or improvements in obtaining opportunities.

According to the theory, risk management is the process by which managers meet needs by identifying critical threats, obtaining consistent, understandable, effective risk actions, indicating which threats should be mitigated and which should be amplified, and detailing how they will go about doing so. Managers must adjust their internal and external conceptions of what constitutes an acceptable market risk indicator. A sizeable one, a business risk management system that runs well.

Numerous risk identification strategies have been analyzed through the lens of this idea. Risks were well explained by the hypothesis, as stated by Jarrow [15]. In this idea, risks are first identified, assessed, and prioritized; next, resources are coordinated economically to reduce, monitor, and manage the occurrence of those risks, as described by Brustbauer [16].

This research relates to our theory since the company failures that have happened are a result of poor risk assessment. Financial markets, project failures, legal challenges, credit risk, accidents, natural disasters, or root-cause events may all be causes of risk that cannot be predicted or assessed ahead of time [17]. This theory is related to this study since even with SACCOs, risks may have a negative impact on the image of the firm, which means that appropriate risk management is directly connected to the success of a financial institution by the ability to make loan repayments.

## 2.2 Conceptual Framework



**Fig. 1. Conceptual framework**

This conceptual framework gives an overview of association between the independent and the dependent variables. This relationship of all the study variables was ascertained when the study was carried out.

## 3. RESEARCH METHODOLOGY

This study utilized mixed method approach where both qualitative and quantitative data was collected and thereafter analyzed and interpreted.

### 3.1 Research Design

Descriptive research design was adopted. Mugenda and Mugenda [18], opines that descriptive design does allow the researcher to give a description, record, analyze and state existing conditions without altering the variables. The fact that studies of this kind have not been done before was a major factor in the researcher deciding where to conduct their investigation since they wanted to develop new information on this specific topic. In addition, the researcher chose to conduct the study using the quantitative paradigm since this research strategy comprehensively investigates phenomena and is able to provide observable and demonstrable results that are supported by statistical evidence, as opposed to themes and narrations [19]. Choosing descriptive research design assisted describes status of credit risk identification on loan repayment performance of SACCOs at Imenti South Sub County.

### 3.2 Target Population

The target population was 6 registered SACCOs in Imenti South sub-county. A branch manager,

credit manager, credit officer, auditor, risk manager and accountant from each of the SACCO were targeted.

### 3.3 Sampling Procedures and Techniques

A sample is a subset of a population that is meant to be representative of the whole [18]. It's possible to extrapolate the characteristics of the sample to the complete population thereafter. To accomplish the primary aim of the study, the researcher used a comprehensive census survey. The sample consisted all the 36 SACCO staff and census study was carried out for the entire population since the population was small.

### 3.4 Construction of Research Instruments

Data was collected through a questionnaire that was developed by the researcher. The questionnaires had both open ended as well as closed questions. The responses in the questionnaires helped in getting information on the influence of credit risk identification towards loan repayment performance. The questionnaires were designed based on the research objectives and it had two sections; with the first section sought to get personal information of respondents and the second part had details concerning the study variables.

### 3.5 Proposed Data Analysis Techniques and Procedures

Before embarking on analysis of the data collected, the researcher organized it by ensuring that data that was not important data was discarded. Any data which was ambiguous was interpreted accordingly and where there was

contradictory data it was verified and any wrong responses was discarded. The researcher then came up with a coding system whereby codes were appropriately assigned to the responses. After coding the data it was stored in the computer for analyses.

The approach used in this study was quantitative in nature since it helped establish the association between both independent and dependent variables. Thus, quantitative data was entered and processed using Statistical Package for Social Science (SPSS) Version 25. Descriptive statistics was used to present summary of the results. Quantitative data was presented in frequency and percentage distribution tables.

Regression Analysis model was applied by the researcher to estimate relationship between the study variables. The reason for using regression analysis was that it helped understand how much dependent variable changed when independent variables were changed.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where: Y=Loan repayment performance,  
 $\beta_0$  = constant or the intercept of the regression line,

$\beta_i$  = Coefficients of regression for the independent variables

$X_1$ = credit risk identification,

$X_2$  = Know your customer,

$X_3$  = Economic factors,

$X_4$  = credit history and

$\epsilon$ = Error term

### 3.6 Response Rate of the Questionnaire

The research sought responses from a total of 36 participants, all of whom completed and submitted their questionnaires, resulting in a response rate of one hundred percent.

### 3.7 Credit Risk Identification

The objective of the study was to assess the effect of credit risk identification on loan repayment performance of SACCOs in Imenti South Sub-county, Meru. Statements intended to gauge the respondents' understanding of credit risk were given to them. On a scale of 1 to 5, Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, and Strongly Disagree = 1, this was evaluated in terms of how they felt about the claims. The findings are shown in Table 2. The mean was used to illustrate how each respondent agreed with each statement.

The respondents stated "Agree" (M=4) on four statements presented. They stated that they agreed "risk identification is well coordinated in the SACCO, there are regular inspections by the branch manager to improve the level of risk identification, the SACCO engages internal auditors in the identification of risks and the SACCO has a clearly defined process of risk taking". However, on one statement they stated undecided (M=3) that "all employees in the SACCO has been trained on risk identification".

### 3.8 Relationship between Credit Risk Identification on Loan Repayment Performance

In order to establish the relationship between credit risk identification on loan repayment performance, regression analysis was carried out and the results are shown in Tables 3, 4 and 5.

Data from the model summary table reveals a very moderate level of correlation (R= 0.422) between the dependent variable (loan repayment performance) and the independent variables (credit risk identification, Know your customer, Economic factors, and credit history). The chart also shows that independent factors accounted for 17.8% of the variance in loan repayment performance.

As shown in Analysis of Variance table there was statistically significant differences between group means of dependent and independent variables since ( $F(4,31) = 1.352, p = 0.0279 < 0.05$ ).

Relationship of the dependent and independent variables was determined using regression model given as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where: Y is loan repayment performance,  $\beta_0$  is the constant or the intercept of the regression line;  $\beta_1, \beta_2, \beta_3$  and  $\beta_4$  are regression coefficients for predictor variables;  $X_1$  is credit risk identification,  $X_2$  is Know your customer,  $X_3$  is Economic factors and  $X_4$  is credit history.

$$Y = 6.764 + 0.133X_1 + 0.635X_2 - 0.492X_3 - 0.136X_4 + \epsilon$$

An improvement in loan repayment performance of 0.133 units may be expected for every 1 unit improvement in either credit risk detection or Know your customer. In addition, a decline in loan repayment performance of 0.492 units is associated with an increase of 0.136 units in Economic factors and credit history.

**Table 1. Population of the study**

<b>Name</b>	<b>Branch Manager</b>	<b>Credit Manager</b>	<b>Credit Officer</b>	<b>Auditor</b>	<b>Risk Manager</b>	<b>Accountant</b>	<b>Total</b>
Capital SACCO LTD	1	1	1	1	1	1	<b>6</b>
Yetu SACCO LTD	1	1	1	1	1	1	<b>6</b>
Times U SACCO LTD	1	1	1	1	1	1	<b>6</b>
Chai SACCO LTD	1	1	1	1	1	1	<b>6</b>
Transnational SACCO LTD	1	1	1	1	1	1	<b>6</b>
Solution SACCO LTD	1	1	1	1	1	1	<b>6</b>
<b>Total</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>36</b>

Source: SASRA (2022)

**Table 2. Credit risk identification**

<b>Descriptive Statistics</b>							
<b>(f)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. Dev.</b>
Risk identification is well coordinated in the SACCO	0	3	11	19	3	3.61	0.993
All employees in the SACCO has been trained on risk identification	1	1	19	10	5	3.47	0.853
There are regular inspections by the branch manager to improve the level of risk identification	0	2	3	21	10	4.08	0.772
The SACCO engages internal auditors in the identification of risks	0	1	7	20	8	3.97	0.954
The SACCO has a clearly defined process of risk taking	1	2	14	16	3	3.5	0.853
N=36							

**Table 3. Model summary**

<b>Model Summary</b>				
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.422 <sup>a</sup>	.178	.046	2.45180

a. Predictors: (Constant), credit risk identification, Know your customer, Economic factors, credit history.

**Table 4. Analysis of variance table**

		ANOVA <sup>a</sup>				
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.517	4	8.129	1.352	.0279 <sup>b</sup>
	Residual	150.283	31	6.011		
	Total	182.800	35			

a. Dependent Variable: Loan repayment performance; b. Predictors: (Constant), credit risk identification, Know your customer, Economic factors, credit history

**Table 5. Regression coefficients table**

		Co-efficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	6.764	5.097		1.327	.196	-3.733	17.261
	Credit risk identification	.133	.313	.081	.425	.0174	-.511	.777
	Know your customer	.635	.626	.217	1.014	.0320	-.655	1.925
	Economic factors	-.492	.252	-.359	-1.952	.0462	-1.011	.027
	Credit history	-.136	.429	-.069	-.316	.0355	-1.020	.748

a. Dependent Variable: loan repayment performance

Table 5 shows that a significance level of 0.0174 0.05 is appropriate for identifying credit risks. This indicates that there is a strong connection between credit risk detection and loan repayment results. In addition, the comparable significance threshold for Know your customer is 0.0320 0.05, indicating a substantial correlation between know your customer and timely loan payback. With a significance level of 0.0462 0.05, Economic factors is significantly related to successful loan payback. Further analysis of the study data shows that there is a statistically significant correlation between credit risk minimization and loan repayment performance, with a significance level of 0.03550.05.

#### 4. SUMMARY OF FINDINGS

The research found that identifying credit risk has an impact on how well loans are repaid. This is shown by the significance threshold for credit risk identification, which was 0.0174–0.05, showing a substantial link between credit risk identification and loan payback performance. This therefore implies that coordination of risk identification, training all employees on risk identification, carrying out regular inspections by the branch manager to improve the level of risk identification, engaging internal auditors on risk identification and SACCOs having a clearly defined process of risk reporting contributes to loan repayment performance by SACCOS in Imenti South Sub County, Meru.

#### 5. CONCLUSIONS

Identification of risk is important in order to improve risk management and control the hazards SACCOs may face. This study has established that credit risk identification affect loan repayment performance which concurs with a study done by Iqbal et al., (2017) who found that financial growth in the Pakistani banking sector is positively affected by credit risk detection and concluded that credit risk identification is very important, since accurate identification of risk is the core to every subsequent step in credit risk management.

#### 6. RECOMMENDATIONS

SACCOs should establish proper credit risk identification practices such as having a clearly defined process of risk reporting and training of all staff on risk identification to avoid loss and defaults.

#### CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

#### FURTHER RESEARCH

A study on influence of credit risk management practices adopted by mobile phone lending app towards loan repayment.

Further study should be done on influence of COVID-19 pandemic towards loan repayment performance in financial institutions.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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