



**CREDIT RISK MANAGEMENT AND LOAN PORTFOLIO PERFORMANCE AMONG DEPOSIT TAKING SAVINGS  
AND CREDIT CO-OPERATIVE SOCIETIES IN NAIROBI CITY, KENYA**

**Amunabi, E. K., & Koori, J.**

**CREDIT RISK MANAGEMENT AND LOAN PORTFOLIO PERFORMANCE AMONG DEPOSIT TAKING SAVINGS  
AND CREDIT CO-OPERATIVE SOCIETIES IN NAIROBI CITY, KENYA**

**Amunabi, E. K.,<sup>\*1</sup> & Koori, J.<sup>2</sup>**

<sup>\*1</sup> MBA Scholar, Kenyatta University [KU], Nairobi, Kenya

<sup>2</sup>Ph.D., Lecturer, Kenyatta University [KU], Nairobi, Kenya

**Accepted: June 19, 2018**

**ABSTRACT**

*The SACCO sector in Kenya has been of great importance since it help in growth of economy of the country and also realizing vision 2030. Kenya SACCO industry contributes towards growth of GDP of our Nation as well as creation of Job opportunities for the youth. There had been a tremendous decrease of total loans to total deposit in Kenya industry since 2014 to 2016 based on the recent SASRA report. The percentage of total loans to total deposit in 2014 was 110 percent, 2015 recorded 108 percent and 2016 indicated further decrease to 107 percent. The trend raised the question why such a decrease in the Kenya industry and what can be done to reverse the situation. Credit risk has been the dominating challenge across all sectors more so in the financial industry globally. The most underlying challenge across all SACCOs is loan repayment defaults. The purpose of this project was to examine how credit appraisal methods relate with loan portfolio performance among deposit taking SACCOs in Nairobi City County, Kenya. The general objective was broken down to specific objectives; To determine the effect of credit appraisal methods on loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya, to evaluate the effect of Credit risk identification practices on loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya, to determine the effect of credit policies on loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya and to examine credit risk mitigation measures on loan portfolio performance employed by deposit taking SACCOs in Nairobi City, Kenya. The study was of great to the management of SACCOs, Government in formulation of policies and other researchers. Descriptive research design was adopted with a target population of 51 registered SACCOs in Nairobi, Kenya according to the list of SACCO Societies which had been duly licensed to carry out deposit- taking SACCO business in Kenya. A sample size of 45 respondents was selected using the systematic random sampling technique. Research data was achieved by use of questionnaires which was summarized, edited accordingly and analyzed by use of SPSS. 86.7% of the respondents indicate that their SACCOs had adopted credit appraisal technique.*

**Key Words:** credit appraisal, Credit risk, credit policies, credit risk, SACCOs

## INTRODUCTION

A risk is generally referred as a situation that involves exposure to danger, harm or loss according to (Allen *et al*, 2005). According to Moles & Brown, 2008 high exposure of banks to credit risk leads to financial crisis being felt by most Banks. According to Kithinji (2010) credit risk arose long time ago in time when most banks were managed and majority shares belonged to non-residents. Steps for managing credit risk is a dynamic phenomenon and it is very complex in nature since it varies from time to time. The levels of losses that can be brought about by credit risk are of high magnitude and can bring about huge losses in terms of loans and institutional failure (Kimari, 2013).

Credit risk is captured by the asset quality (level of non-performing loans affected by the interest rate regime in the banking system). Credit risk factors include among others; capital structure and adequacy, liquidity and asset quality. Capital structure determines availability of funds to cover risk. Liquidity shows the ability of banks to avail cash to clients on demand while asset quality can be determined by the extent of non-performing loans. If credit risk is high, it makes banks vulnerable to instability because loans form relatively a larger portion of a bank's assets thus becoming a major source of its income. The instability brings about destabilization in the entire financial sector since banks play a major role in financial stability. Credit creation plays a major role in a banks' performance as a result emphasis is placed on the same. Interest rate risk affects credit risk in various ways; high interest rates keeps away potential borrowers who are risk averse, it attracts borrowers who are risk takers and therefore likely to default and when the default rate is high banks tend to pass high rates to good customers causing them to become defaulters. Hence upsurge in interest rate risk increases probability of default on loan. Increase in non-performing loans could affect banks negatively since they pose a potential credit risk hence

hampering banks' from attaining their goals. If banks manage their credit risk exposure appropriately, they not only increase their profitability but also the benefits trickle down to economic stability and efficient capital allocation in the economy.

The major sources of credit risks are among others; institutional incapacitation, poor loan policies, unstable interest rates, management malpractice, poor governing laws, inadequate capital base, unregulated bank licensing, inadequate supervision of central bank, poor credit assessment and political interference.

Loan portfolio relates to the sum total of monies loaned out through various lending products to different borrowers (Kurui & Kalio, 2014). Loan portfolio encompasses salary loans, group bonded loans, individual loans and company loans (Murugu, 2010). Loan portfolio refers to number of bank customers with loans and the total amount loaned out (Crabb & Keller, 2006). According to Kurui & Kalio (2014), continued existence of most financial firms rely on their pattern of issuing loans as well as abiding by the customers to the agreements and payment of loans on time. Therefore this calls for means that are restrictive to credit control policy to be adopted to act as a deterrent to unnecessary lending and in the process improve on profitability of the financial institutions (Kipchumba, 2015).

Credit risk has become a central concern for every other financial institution and this has greatly led to the need to come up with better processes and techniques for delivering performance. Credit risk management is a well-established technique of handling unfolding and unforeseen issues that is done through assessment of risks and them coming up with better ways of confronting such risks and to mitigate the same in future by use of the available resources. Among the few strategies include but not limited to the following transfer of risk to other party, legal risk avoidance, minimizing the effect of risk among others (Huizinga& Demirguc, 2010). In

order to have a successful credit management the following need to be effected; good policies and procedures, good risk management and good governance.

Improved Management practice of credit risk is very important since it is affecting all financial institutions globally and this will enhance better performance in future. Credit risk is a global disaster and every country is working hard to come up with a practical remedy to this problem.

According to (Nyamutowa, 2014) developed countries have consistence techniques of managing credit risks and they have developed good strategies of handling this unique risk. Developed Countries are now adopting modern credit risk management to improve on their loan portfolio performance. They are also adopting better legal framework to create enabling business environment for financial institutions. Developed countries have enacted a legal framework of addressing credit risk that comprise of rules of determining the capital that banks must set aside to compensate the potential losses and this called for modification of capital charges that will enhance responsiveness of financial institution and the actual credit exposure, Nyamutowa (2014).

Credit risk management has not yet been well embraced in most developing countries. Most financial institutions give their attention to other financial challenges yet forgetting that credit risk might be the cause root. According to Maiti *et al* (2015) most financial institutions in developed countries consider only interest rate risk, therefore majority of them have not yet understood how they can protect their organization against the potential losses that may be caused by exposure to credit risk. According to Nyamutowa (2014) Zimbabwe has acknowledged the fact that they have failed to fully adopt modern credit risk management practices or models. This is because Zimbabwe is still relying on traditional credit management practices and the massive collapse of banking sector is brought by inadequate credit practice.

The main objective of all SACCOs is to bring together all members savings available so that any member willing to borrow can get it from the pool (ICA, 2005). There are several accepted principles that guide the operations of SACCOs. The principles are so important in that they make the management accountable to the members and this is the reason as to why they strive on enhancing the economic welfare of its members. Ensuring the general welfare of members is attained through availing cheaper and affordable loan facilities to the members

Deposit taking SACCOs are required to disclose their by-laws, their location where there head office are located according to the cooperative societies Act. Nairobi City hosts 44 head offices of DT-SACCOs in Kenya as per the (SASRA report 2017). Growth of performance of deposit taking SACCO is measured by use of assets, amount of deposits, members' loans and number of members. (Wambugu ,2009). SASRA report 2017 indicated that there had been fluctuations of the Percentages of NPLs to total gross loans of SACCOs in the Kenya.

### **Statement of the Problem**

The SACCO sector has been of great importance since it help in growth of economy of the country and also realizing vision 2030. Kenya SACCO industry contributes towards growth of GDP of our Nation as well as creation of Job opportunities for the youth. According to Maiti (Susan, 2015) SACCOs experience increase in high default rate and high level of non-performing loans indicating poor credit management practices that will lead to record of poor SACCOs' performance. Recent SASRA report 2017 indicated that there had been fluctuations of percentage of NPLs to total gross loans of SACCOs in Kenya. There had also been decrease of total loans to total deposits from 2014 recording 110 percent, 108.7 percent in 2015 and 107 percent in 2016. According to Kimeu, 2008 and Esendi 2013 the process of managing risks of credit in banks' loan

that were not secured. Their studies did not however show how credit risk management techniques affect loan portfolio performance. It was against this background therefore, that this research study sought to assess credit risk management and loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya.

### **Objectives of the Study**

The general objective of the study was to establish the effect of credit risk management on loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya. The specific objectives were:-

- To determine the effect of credit appraisal methods on loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya.
- To evaluate the effect of Credit risk identification practices on loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya.
- To determine the effect of credit policies on loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya.
- To examine credit risk mitigation measures on loan portfolio performance among deposit taking SACCOs in Nairobi City, Kenya.

## **LITERATURE REVIEW**

### **Theoretical Review**

#### **Modern Portfolio Theory**

This is a hypothesis that was developed by Harry Markowitz under the title "portfolio selection" in 1992. According to him; investors that are risk averse in nature can come up with portfolios in order to spread their risks and increase the expected returns in line with the existing level of market risk. Markowitz suggest to the investors not direct all their investment in only one asset rather

they should diversify such that if one asset fails the other will be in operation. Markowitz argued that we tend to look at the expected return and risk of one particular assets which is very risk rather we should diversify so that we can reduce the risk associated. He argued that we should not put all our eggs in one basket. In SACCOs loans comprise of assets in the institution and the theory is of great importance since it will explain well on the importance of SACCOs to develop a portfolio that involve all different industry and businesses. Instead this portfolio should base on the purpose, time period and industry. SACCOs should therefore diversify the type of loans that they lend to clients. This above approach enhanced mitigation of credit risk which is done through diversification of assets.

#### **Tax Theory of Credit**

This theory was formulated by Alfred Mitchell-Innes. In order to make decision as to whether to accept credit or not purely depends on the available credit facilities available and the accessibility. The buyer has to do thorough comparison in order to establish the cheaper sources and convenience. In order to have the best source of financing, customers should do an evaluation on the affordability of other funds in order to make rational decision.

According to Brick and fung (1984) it is important to note that consumers and producers are operating in varying tax and this change the borrowing costs therefore tax impact must be considered. The assumption is that businesses in a high tax brackets give more credit facilities and the one in low tax brackets give less. Customers prefer credit in market with low tax bracket but businesses in low tax bracket do not prefer to issue out credit. It is clear according to Brick and Fung (1984) that a firm cannot offer trade credit and use the trade credit. In development of credit policies you need to consider whether you are operating in lower tax brackets or in high bracket otherwise failure to consider that may scare away borrowers.

## Asymmetry theory

The asymmetric information theory was developed by Akerlof in 1970. It is that buyers rely on market statistics to determine the value of goods. In the debt market, information asymmetry arises when the buyer has got information regarding the market based on the underlying risks and returns on investment projects. On the other hand doesn't have enough information regarding the customer. According to Derban et al (2005), when SACCOs are doing credit assessment proper analysis should be conducted in order to gather enough and reliable information regarding the customer either from CBK or other source. Both qualitative and quantitative techniques are critical in doing an assessment of the borrower although some few challenges can be uncounted especially in using qualitative approaches since it is subjective in nature. Borrowers' attitudes are examined by use of qualitative approach that is assigned numbers. This technique is important in that it reduces the processing costs and the subjective judgments which may lead to bias.

SACCOs should take advantage of the information supplied to the reference bureaus during credit appraisal so that borrowers with a high debt burden exposure and defaulters are appraised and only those clients with the ability to pay and meet the repayment obligations can access credit. In credit appraisal, risk mitigation and identification information is very key. When screening various borrowers to confirm their credit worthiness, the lender searches for the information regarding the borrowers. This theory is applicable in risk identification, risk mitigation and credit appraisal.

## Empirical Review

### Credit Appraisal methods and loan portfolio performance

The Bank officer entrusted with the responsibility of lending out money must be competent otherwise poor loan lending might occur which will lead to huge loan losses (Boldizzoni, 2008). The idea behind

credit appraisal is to make sure that borrowers are granted loans based on merit and their capability to repay back within the given timespan. Lenders do not just issue out credit simply because borrowers claim to be ready and willing to offer higher interest rates rather they ensure loans are restricted to the small size of loans. The idea brought forward is that credit should be made available based on the capability of repayment of individuals according to the present performance. In appraising term loan, SACCOs should pay attention toward evaluating the target client or customer to determine whether the customer has the requisite credit worthiness and the probable cash flow to be derived from the project not forgetting the risk associated. The parameters used to measure credit worthiness among them includes but not limited to the following; the ability and will power to repay. Important areas in which financial institution undertake appraisal are technical, market share and management. (Boldizzoni, 2008).

Proper and adequate techniques need to be relied on by SACCOs in order to reduce the likelihood of loan defaults. Bosek *et al* (2016) carried out a study on processes of credit risk evaluation and Non-performing loans on SACCOs in Bomet County, Kenya. The goal of the study was to examine how credit risk evaluation processes relate with non-performing loans. This study used a descriptive research design. Quantitative approach was relied in the study to examine the collected data and examine the impact of independent variables to the dependent variables. The results from the findings indicated that credit risk evaluation processes have significant effect on the profitability of SACCOs. Ntiamoah, *et al* (2014) researched on how credit management practices relate with loan performance using some selected microfinance in the Greater Accra region of Ghana. Data was collected from 400 Microfinance companies using administered questionnaires with the population consisting the management and non-management staff on Microfinance companies in Ghana. The final data was analyzed using

correlation and regression. The study found out that positive correlation existed between the credit terms and policy. The study however failed to establish whether there was significant impact on credit risk practices and portfolio performance of commercial banks.

### **Credit risk identification practices and loan portfolio performance**

The Risk Manager's responsibility involves among others; identifying probable circumstances or contingencies that could affect SACCOs' credit portfolio and its ability to withstand the changes. This is continuous process that needs to be revised every now and then since risk do change according to time and situation. Every step in credit evaluation must involve credit identification so that appropriate remedies can be taken where possible. In identification of credit risk enough information should be availed or should be available to help arrive at rational decision.

Kiage, *et al* (2015) carried out a research on the effect of positive credit information sharing determinants among commercial banks in Kenya. It examined how privacy protection of positive information sharing, cost of sharing positive information and technology affect financial performance of commercial banks in Kisii town, Kenya. The result indicated that competition influenced financial performance of Commercial Banks. This study however failed to show whether credit information sharing had significant impact on loan portfolio performance.

According to Kisala (2014) the effect of credit risk management on the loan performance of SACCOs for a period of 2007 to 2011 within Kenya. The study majored on the increase in loan performance result mostly from effective credit identification. This study however, showed that there was a relationship between loan performance and credit risk management. The result indicate that CRM negatively impact on return on equity. This study indicated some inconsistencies by focusing on

profitability model as a measure of loan performance.

### **Credit policies and loan portfolio performance**

Byusa and Nkusi (2012) examined the credit policy influence performance of Banks in commercial banks of Rwanda. They used methods like quantitative techniques and literature review. The study was doing an evaluation of performance of banking sector and found out that the performance is deteriorating over time. All the banks had reliable credit policies that are in line with the set objectives and goal. The results obtained indicated that the Rwanda's commercial banks increase their accounts and customer base, thereby maximizing their profits.

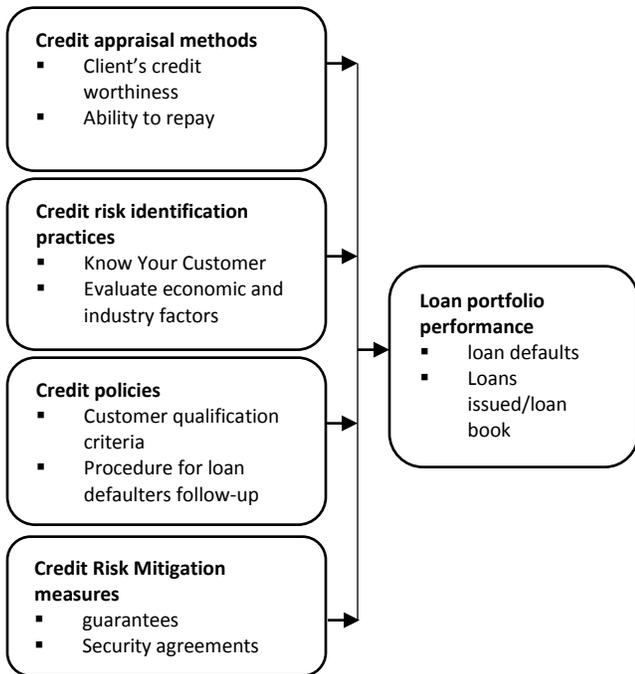
According to Maiti, Susan (2015) survey on how credit policy affect performance of SACCOs in Nairobi City. The study used correlation research design. The study population consisted of all 40 SASRA Regulated SACCOs registered under the Societies Act in Nairobi, Kenya. The study revealed that regulated SACCOs had adopted credit standards as a credit policy and credit term policy loan ratio in determination of how much a client would borrow. The study revealed that regulated SACCOs were also applying collection policy, considering non-performing loans and total loans, loan-loss provision coverage ratio and application of credit policy which increased Return on Assets (ROA) for the regulated SACCOs to a great extent. From the regression results, use of collection policy (Default Rate) led to significant increase in ROA of regulated SACCOs indicating that lowering non-performing loans to total loans would significantly lead to increase in profitability. The study concluded a significant relationship among Standards (BDC Ratio) and ROA as correlation co-efficient.

### **Credit risk mitigation measures and loan portfolio performance**

Financial institutions employ various measures to reduce credit risks. Essendi (2013) examines how

credit risk management affect loan portfolio of SACCOs licensed in Nairobi City. The study failed to indicate whether credit risk management had significance on loan portfolio. This study did not determine whether credit risk management practices influence performance of the Loan portfolio.

**Conceptual framework**



**Independed Variables                      Depended Variable**  
**Figure 1: Conceptual Framework**

**Source: Researcher (2017)**

**METHODOLOGY**

The study used a descriptive design. The target population comprised of all SACCOs licensed by

**Table 1: Adoption of credit appraisal technique**

		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	Yes	30	78.95	78.95	78.95
	No	2	5.26	5.26	84.21
	Not sure	6	15.79	15.79	100.0
	Total	38	100.0	100.0	

On Reliance on credit appraisal technique, the researcher wanted to establish the level to which the various credit techniques were being adopted by the SACCOs. Table 2 indicated that client’s credit

SASRA for the year ending 31st Dec 2016 in Nairobi City Kenya. The regression analysis was utilized in this study to determine if there was a relationship between the variables, as well as the strength of that relationship.

The regression equation was:

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

Where Y= Loan portfolio performance.

$\beta_0$  = regression intercept;

$B_1 - \beta_4$ = Coefficients of the model

$X_1$  = Credit appraisal methods

$X_2$  = Credit risk identification practices

$X_3$  = credit policies

$X_4$  =Credit risk mitigation measures

$\alpha$  = Random error

**FINDINGS AND DISCUSSION**

**Credit Appraisal methods and loan portfolio performance**

In order to understand how credit appraisal affect loan portfolio performance the study established whether the respondents’ SACCOs had credit appraisal technique in place and used a likert scale of 1 to 5 to rate the extent to which the various credit approaches are being adopted. The researcher wanted to establish whether all the target SACCOs had adopted any credit appraisal technique. Based on table 1 none of the respondents who indicated that there were no credit appraisal technique adopted except only 6 respondents who claimed to be not sure representing 15.79 % of the population.

worthiness earned the highest score with a mean of 2.2821 and a standard deviation of 1.33670 meaning that majority of respondents rated clients’ credit worthiness to great extent. Ability to repay

followed with a mean of 2.6154 and a variance of

2.032 and customers' loyalty at moderate extent.

**Table 2: Reliance on credit appraisal technique.**

	Mean	Variance	Standard deviation
Client's credit worthiness	2.2821	1.787	1.33670
Ability to repay	2.6154	2.032	1.42562
Customers' loyalty	3.3846	1.874	1.36912

### Credit Risk identification practices

Credit risk identification practices is a continuous process and the researcher wanted to establish the extent to which various credit risks practices have been adopted in the SACCOs. The SACCO analyses credit trustworthiness of loan applicants to determine whether a client is likely to default loan payment was highly rated at great extent of mean of 3.7436, variance of 1.143 and a standard deviation of 1.06914. The SACCO checks business proposal and plan to identify credit risks to great extent as depicted in table 3 with a mean of 3.3077

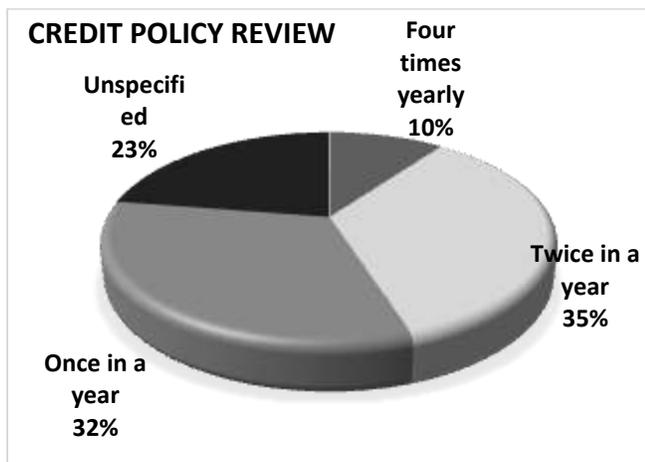
and standard deviation of 1.393838. The SACCO evaluates the net worth of the client's business was rated with a mean of 3.3333, variance of 2.333 and a standard deviation of 1.52753. The analysis of the capacity of loan applicant scored a mean of 2.9744, variance of 1.605 and a standard deviation of 1.26672. The SACCO conducts an assessment of the laid down plan of the customer on how to repay the loan attained a mean of 2.5641, variance of 1.937 and a standard deviation of 1.39161 and finally the SACCO analyses the character of the clients such as credit history of loan applicants scored a mean of 2.5385 and a standard deviation of 1.39258.

**Table 3: Credit Risk identification practices**

	Mean	Variance	Standard deviation
The SACCO checks business proposal and business plan to identify credit risks the SACCO is exposed to.	3.3077	1.955	1.39838
The SACCO evaluates the net worth of the client's business.	3.3333	2.333	1.52753
The SACCO analyses the character of the clients such as credit history of loan applicants.	2.5385	1.939	1.39258
The SACCO analyses the capacity of the loan applicants to assess their ability to repay the credit facility	2.9744	1.605	1.26672
The SACCO conducts an assessment of the laid down plan of the customer on how to repay the loan.	2.5641	1.937	1.39161
The SACCO analyses credit trustworthiness of loan applicants to determine whether a client is likely to default loan payment.	3.7436	1.143	1.06914

## Credit Policies

### Number of times of credit policy review



**Figure 2: Credit policy review**

The research wanted to establish the frequency of credit policy review and the findings indicated that majority 35% of SACCOs reviewed their credit policy

**Table 4: Extent of loan policy development**

	Mean	Variance	Standard deviation
Prevailing credit Policy	2.8974	1.989	1.41039
Global state of the economy	2.4359	2.673	1.63506
Relationship with customers	3.6667	2.386	1.54466
Government policies	2.8205	2.414	1.55380
Organizational objectives	1.8718	1.062	1.03057

## Credit Risk Mitigation Measures

Credit risk mitigation is very key towards enhancing loan portfolio. The researcher wanted to establish the various credit risk mitigation measure in place and the findings indicated that close to all SACCOs insure their loan portfolio in order to mitigate risk due to client defaults by scoring a mean of 4.4872 and a standard deviation of 0.55592. The SACCO assessed how the customer intended to use the

**Table 5: Credit Risk Mitigation Measures.**

twice in a year with 32% reviewing their credit policy only once per annum. 23% of respondents were not aware of whether their SACCOs review credit policy. 10% of SACCOs frequently reviewed their credit policies four times in a year.

On extent of loan policy development, the study aimed at establishing the extent to which loan policies were developed. Table 4 indicated that loan policies in line with relationship customers scored low with a mean of 3.6667 and a standard deviation of 1.54466, in fact majority claimed that the current policies didn't consider customer relationship. It was found that majority develop loan policies based on organizational objectives rated with a mean of 1.8718, variance of 1.062 and a standard deviation of 1.03057. Prevailing credit policies and Government policies were rated with a mean of 2.8974 and 2.8205 respectively.

loan and SACCO spreads out loan facilities to different sectors of economy were rated almost the same with a mean of 3.5385 and 3.5128 respectively. The SACCO considered the credit qualification of client loan portfolio rated at a mean of 3.3333, variance of 1.175 and a standard deviation of 1.08418 and finally majority disagreed that risk levels determined the price to be fixed by scoring a mean of 2.8718 and a standard deviation of 1.10452.

	Mean	Variance	Standard deviation
The SACCO insures the loan portfolio to mitigate risk due to client defaults.	4.4872	0.309	0.55592
The SACCO assesses how the customer intend to use the loan.	3.5385	1.308	1.14354
SACCO spreads out loan facilities to different sectors of economy.	3.5128	1.520	1.23271
The risk level determines the price to be fixed by the SACCOs.	2.8718	1.220	1.10452
The SACCO considers the credit qualification of client loan portfolio.	3.3333	1.175	1.08418

### Regression analysis

**Table 6: Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926 <sup>a</sup>	.857	.840	.54012

a. Predictors: (Constant), Credit appraisal, Credit risks identification, Credit policies, Credit risk mitigation

**Source: Research, 2018**

**Table 7: ANOVA**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.741	4	14.435	49.482	.000 <sup>a</sup>
	Residual	9.627	33	.292		
	Total	67.368	37			

a. Predictors: (Constant), Credit appraisal, Credit risks identification, Credit policies, Credit risk mitigation.

b. Dependent Variable: loan portfolio performance

**Source: Research, 2018**

The significance value of this study was 0.0000 which was lower than the significance value of 0.05 thus the model statistically significant in predicting credit appraisal, credit risk identification, credit policies and credit risk mitigation.

**Table 8: Coefficient of determination**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.348	.435		-.799	.430
	Credit appraisal	.153	.093	.148	1.643	.110

Credit risk identification	.298	.099	.337	3.006	.005
Credit policy	.080	.104	.061	.773	.445
Credit risk mitigation	.531	.104	.529	5.090	.000

a. Dependent Variable: Growth

**Source: Research, 2018**

The researcher used regression model to conduct multiple regression in order to determine how loan portfolio performance relate with its Independent variables. As per the SPSS generated table above, the equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ ) became:  $Y = -0.348 + 0.153X_1 + 0.298X_2 + 0.080X_3 + 0.531X_4 + \epsilon$

Where:

$Y$  = loan portfolio performance of SACCOs

$X_1$  = Credit appraisal

$X_2$  = Credit risk identification

$X_3$  = Credit policy

$X_4$  = Credit risk mitigation.

$\epsilon$  = the error

According to the regression equation established, taking all factors into account (Credit appraisal, Credit risk identification, Credit policy and Credit risk mitigation) constant at zero, loan portfolio performance of SACCOs will be -.348. The data findings analyzed also show that taking all other independent variables at zero, a unit increase in credit appraisal will lead to a 0.153 increase in loan portfolio performance; a unit increase in credit risk identification will lead to a 0.298 increase in loan portfolio performance, a unit increase in credit policies will lead to a 0.080 increase in loan portfolio performance and a unit increase in credit risk mitigation will lead to a 0.531 increase in loan portfolio performance on SACCOs in Kenya. This infers that credit risk identification contribute more to the loan portfolio performance of SACCOs followed by the credit risk mitigation. At 5% level of significance and 95% level of confidence, Credit Risk Identification had a 0.002 level of significance; credit appraisal showed a 0.005 level of significant,

credit policies showed a 0.013 level of significant, credit risk mitigation had a 0.032 level of significant, and hence the most significant factor is Credit risk identification.

**CONCLUSION AND RECOMMENDATIONS**

The study was in agreement with previous study that credit risk identification influence loan portfolio performance among SACCOs with few respondents in dispute of the opinion that credit risk identification impact loan portfolio performance among SACCOs. The study concluded that the credit risk Identification contributed greatly to loan portfolio performance in SACCOS. The study also concluded that majority of the respondents agreed to great extent that credit risk identification influenced loan portfolio performance among SACCOs. That study also indicated that credit appraisal techniques impact loan portfolio performance among SACCOs. The findings concluded that credit risk mitigation influenced loan portfolio among SACCOs with only few disputing.

**Recommendations.**

SACCOs should establish proper credit appraisal methods in order to mitigate credit risk. Proper customer credit worthiness system should be put in place based on their ability to repay back their credit and customer's loyalty.

SACCOs should establish sound Credit risk identification practices which is very core in mitigating credit risk otherwise unless you identify the risk you can't afford to fight it. This involves thorough analysis of business proposal for whatever the purpose the business is made for.

Government through regulating bodies should establish proper credit policies that regulate credit practices among financial institutions. Management should develop and keep on reviewing credit policies in line with general state of economy and according to Government policies.

### **Suggestions for Further Research**

This study established how credit risk management practices influenced loan portfolio performance in SACCOS in Kenya. This study was purely undertaken on SACCOS and therefore similar study should be carried out on commercial banks in order to establish whether similar result would be attained. The impact of moral hazard on credit risk administration in Kenyan commercial banks. Moral hazard in credit mainly arises from information

asymmetry. If information asymmetry is not checked, it will lead to obtaining of improper information that subsequently leads to wrong credit decisions.

The study can be improved by incorporating more variables in order to establish their effect on loan portfolio performance. The study should also make the sample big enough to give fair representation of the population. Government should come up with credit reference in Kenya in order to mitigate credit risk likely going to be encountered in the process of lending. The study indicated that 14.3% is not explained as a reason that influence loan portfolio performance in SACCOS in Kenya therefore further study need to be undertaken on other different variables.

### **REFERENCES**

Allen, *et al* (2005). Positive Behavioural Support: Definition, Current Status and Future Directions. Tizard Learning Disability Review, 10, 2, 4-11.

Ahmad and Ariff,(2007),Bank Loan Loss Provision: A Reexamination of Capital Management and Signaling Effects, Working Paper, Department of Accounting, Syracuse University, 1-37

Artzner and Delbaen (1995), Basic financial services of low income individuals comparative study in Canada. International journal of Bank Marketing, 17(2), 49-64.

ASEAN Secretariat. 1995. ASEAN Framework Agreement on Services. Jakarta: ASEAN Secretariat. Available at: <http://www.aseansec.org/6628.htm> (accessed 11 June 2012).

Brick, Ivan and William Fung (1984): "Taxes and the Theory of Trade Debt," Journal of Finance 39 (4), 1169-1176.

Brown and Moles (2012). Credit risk management. Eidnbergh Business School, Heriot-Watt University, UK.

Boldizzoni, (2008), Means and ends: the idea of capital in the West, 1500-1970.. New York: Palgrave Macmillan.

Creswell, (2007). Qualitative inquiry and research design: Choosing among five traditions (2nd ed.). Thousand Oaks, CA: Sage.

Chijoriga, (2007). *Application of Credit Scoring and Financial Distress Prediction Models to Commercial Banks Lending: The Case of Tanzania*. PhD Dissertation,

Edwards, (2010), in T. Colling and M. Terry (eds) Industrial Relations: Theory and Practice, Third Edition, Wiley, Chichester, UK.

Ntiamoah *et al*,(2014). Loan Default Rate and its Impact on Profitability in Financial Institutions. Research Journal of Finance and Accounting, 5(14).

Khan, (1991), Comparative Economics of Some Islamic Financing Techniques, Research Paper No. 12, Islamic Research and Training Institute, Islamic Development Bank, Jeddah.

Kimeu, (2008) and Esendi (2013), The Practices of Multinational Banking; Macro-Policy Issues and Key Concepts. Quorum Books Pub. 1996.

Kiage et al. Intake of trans fat and all-cause mortality in the reasons for geographical and racial differences in stroke (REGARDS) cohort. Am J Clin Nutr2013;97:1121-8.

Kothari, C.R., Quantitative Techniques, 2nd ed., New Delhi: Vikas Publishing House Pvt. Ltd., 1984.

Essendi.K (2013). Credit risk management on loan portfolio among SACCO's in Kenya. Unpublished MBA project

George A. Akerlof .The Quarterly Journal of Economics, Vol. 84, No. 3. (Aug., 1970), pp. 488-500.

Mishkin, Frederic S. (1983). A Rational Expectations Approach to Macroeconometrics: Testing Policy Ineffectiveness and Efficient Markets Models. Chicago: University of Chicago Press.

Markowitz H.M (1952), Portfolio Selection. Journal of Finance, Vol 7 no1.

Maiti, Susan (2015), Credit risk management practices by SACCOs in Nairobi. Unpublished MBA project.

Bosek *et al* (2016), Impacts Risk Management on Non-Performing loans and Profitability of Banks. Act press. Nairobi.

ICA (International Co-operative Alliance) (2015) Statement on the co-operative Identity. Available from the University of Wisconsin Center for Co-operatives at [Http://www.wisc.edu/uwcc/rin-html](http://www.wisc.edu/uwcc/rin-html) viewed may15th, 2014 International cooperative

ICA (2005). *World Declaration on Worker Cooperatives*: Approved by the ICA General Assembly in Cartagena, Columbia.

Iqbal, and Mirakhor, (2007) "An Introduction to Islamic Finance: Theory and Practice", John Wiley & Sons, Singapore

Kablan S. (2010), 'Banking Efficiency and Financial Development in Sub-Saharan Africa'. IMF workingpaper.

Rajhi (2013), Rural Finance Challenges in Tanzania – The case of Kibaigwa Financial Services and Credit Cooperative Society (KIFISACCOS) in Kongwa District. Business Minds Africa, Case series.

Kithinji (2010), Credit risk management techniques of unsecured banks loans of commercial banks in Kenya, Unpublished MBA thesis , University of Nairobi

Kimari, (2013).Effect of Credit Risk Management On Financial Performance Of Deposit Taking Savings And Credit Cooperative Societies In Kenya, Unpublished MBA Project, University of Nairobi

Kisala, (2014). The effect of credit risk management practices on loan performance in microfinance institutions in Nairobi, Kenya, unpublished MBA project, University of Nairobi.

Kothari (2011), Effect of Credit Risk Management Practices on Lending Portfolio Among Savings and Credit Cooperatives in Kenya. *International journal of Science Commerce and Humanities*, 1(5), 93-105.

Byusa and Nkusi (2012), The Impacts of Credits Risk Management on Profitability of Rural Savings and Credits Cooperative Societies (SACCOS): The Case Study of Tanzania. *International Journal of Management Sciences and Business Research*, 2(12).

Maina, (2016). Relationship between Credit Risk Management Practices and Financial Performance of Microfinance Institutions in Kenya. *Unpublished MBA Project*. University of Nairobi

Nyagah (2011). Microeconomic and finance soundness indicators: An empirical Investigation, IMF Working Paper, No 115.

Derban, et al (2005), Planet Rating East Africa 2007, Survey of Growth of Saving and Credit Society Report, *Mutara Development SACCO*, Uganda, February.

Porvali, (2011), 'The Development Of Cooperatives and Other Rural Organizations, Agriculture and Rural Development Series'. No.8 , The World Bank, Washington, D.C.

SASRA (2012) Summary of SASRA Required Reports: Retrieved from <http://www.sasra.go.ke>

Saunders and Cornett (2013) 'Financial Markets and Institutions: An Introduction to the Risk management Approach'. McGraw Hill Pub. 2001.

Sinkey, (1992). A Multivariate Statistical Analysis of the Characteristics of Problem banks, of *Journal* 30(1), 21-36.

SAID and TUMIN, 2011. Performance and financial ratios of commercial banks in Malaysia and China. *International Review of Business Research Papers* [online]. 7 (2), pp. 157–169. Available from: <http://www.irbrp.com/static/documents/March/2011/11.%20Rasidah-FINAL.pdf> [Accessed 30 Sep. 2015].

Mugenda. and Mugenda (2003); *Research methods: Quantitative and Qualitative approaches*.

Nyamutowa (2014), Monetary Policy Management in Nigeria in the Context of Uncertainty. Available at: <http://www.naijalowa.com/wp-content/uploads/2009/08/Monetary-Policy-Management-in-Nigeria-in-the-context-of-uncertainty.pdf> (Accessed 08 Oct 2012).

Wambugu, (2009). A Survey of Credit Risk Management Practices by Micro-Finance Institutions in Kenya. Unpublished MBA research project, University of Nairobi.

Maiti *et al* (2015) a survey of credit risk management practices by SACCOS in Nairobi (Masters Thesis). Unpublished MBA Dissertation, University of Nairobi.

World Council of Credit Unions (WOCCU) (2005) Statistical report, World Council of Credit Unions, Washington D.C.

Wang, *et al* , 2016. New Semiconducting Polymers Based on Benzobisthiadiazole Analogues.