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The Effects of Credit Risk Management Practices on Growth of Saccos' Wealth in Nakuru Town

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ABSTRACT
Credit risk simply as the potential that a bank borrower or counterpart will fail to meet its obligations in accordance with agrees terms. Credit risk or default risk involves inability or unwillingness of a customer or counterparty to meet commitments in relation to lending, trading, hedging, settlement and other financial transactions. Increasing profitability is a priority for all managers in financial institutions. For Sacco managers, credit risk management is equally very important. On the one hand Sacco managers need to reduce the risk of loan default because the institutions financial viability is weakened by the loss of principal and interest, yet on the other hand SACCO's operate under objectives of maximizing benefits to members which include the social role of providing loans to help members achieve their standard of living goals . The main objective of the study will be to investigate the effect of credit risk management practices on growth of SACCOs' wealth. A descriptive survey was used and the target population was all savings and credit cooperative societies licensed by Sasra in Nakuru as at January 2015. Primary data was collected using questionnaires and analyzed by correlation and regression. The study concluded that collectively, credit risk identification, credit risk analysis and credit risk monitoring do not have significant effect on growth of SACCOs. It was evident that credit risk management is not key determinant of wealth of SACCOs and therefore SACCOs can not invest in such practices in attempt to achieve improved growth in wealth.
Keywords: Credit Risk ,Management Practices, Saccos' Wealth

Introduction

Donald et al. (2006) defines Credit risk simply as the potential that a bank borrower or counterpart will fail to meet its obligations in accordance with agrees terms. Credit risk or default risk involves inability or unwillingness of a customer or counterparty to meet commitments in relation to lending, trading, hedging, settlement and other financial transactions. The goal of credit risk management is to maximize a Savings and Credit Co-operative Societies (SACCO)'s risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. SACCOs need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Sacco should also consider the relationships between credit risk and other risks (Olando et al., 2012). The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any SACCOs (Nelson & Schwedt, 2006)
According to Munyiri (2006), SACCOs, which are started locally, are more attractive to customers thus deeply entrenching themselves in the financial sectors of many countries. In fact, they have solid bases of small saving accounts constituting a stable and relatively low-cost source of funding and low administrative costs (Branch, 2005). SACCOs are able to advance loans at interest rates lower than those charged by other financial providers. In addition, SACCOs have the ability and opportunity to reach clients in areas that are unattractive to banks such as rural or poor areas. The core objective of SACCOs is to ensure members empowerment through mobilization of savings and disbursement of credit (Ofei, 2001). SACCOs in Kenya in their struggle to achieve this objective have been able to mobilize over Kshs.200 billion in savings, the largest in Africa with over 3.5 million members and a $2 billion loan portfolio (Co-operative Bank of Kenya, 2010).

Growth in Wealth of SACCOs

Savings mobilization is the main source of funds for SACCOs. Mobilization should therefore be backed by adequate institutional capital which ensures permanency, provide cushion to absorb losses and impairment of members' savings (Evans, 2001). The institutional capital which comprises the core capital and less share capital is mainly accumulated from appropriation of the surpluses. Therefore, SACCOs should strive to maximize on the earnings to build the institutional capital (Branch & Cifunentes, 2001; Ombado, 2010). This institutional capital ensures the permanence and growth of the SACCOs even in turbulent economic times (Evans, 2001). In fact, it helps the SACCOs to grow and, remain economically and financially viable (Gijselinckx & Devetere, 2007) and this growth is enhanced through effective credit risk management practices.

Ngugi and Kabubo (1998), Bisasi and Pagano (2001), noted that financial institutions including mobilize funds majorly to accumulate wealth. The wealth majorly goes to SACCO members and to the SACCO.

Olando (2005) discussed financial growth of an institution in terms of institutional capital and returns to members. He further pointed out that institutional capital goes into development of capacity of the SACCO which majorly involves acquisition of assets to assist in SACCO operations.

SACCOs in Kenya

In Kenya, SACCOS remain the most important players in provision of financial services and have deeper and extensive outreach than any other type of financial institution (ICA, 2002). They provide savings, credit and insurance services to a large portion of the population. Financial sector reforms were adopted in 1989 through the Structural adjustment programs supported by World Bank credit, which included liberalization of interest rate attained in July 1991, and exchange rate-attained in October 1993. From the year 2010 new developments and intense competition in lending industry in Kenya's economy has been witnessed since the introduction of the economic liberalization which has posed serious challenges to the SACCO's. The emergence of formal and informal segments in the financial sector fragmentation implies that different segments approached problems such as high transactions costs, risk management, mobilization of funds, grants and capitalization (Steel, 1998).

The Cooperative movement in Kenya dates back to 1931 when the first ordinance to regularize the operations of the cooperatives in the country was enacted. The following decade witnessed increased intervention in the sector with the eventual enactment of the Co-operative Ordinance Act of 1945, the predecessor of the current Co-operative Societies Act, Cap. 490 of the laws of Kenya - as amended in 1997. Savings and credit cooperative societies (SACCOs) are registered and regulated under the Co-operative Societies Act. SACCOs are accorded the same treatment as producer or marketing cooperatives, and to qualify for registration they are not required to raise any capital. In addition, SACCO's are restricted in terms of where to invest their funds of deposits (Sacco Act, 2008).

Three types of cooperatives are recognized in the Act; Primary Cooperatives, Cooperative Unions and Apex Cooperatives. SACCOs fall in the category of Primary Cooperatives. Before the 1990's, only employer – based SACCOs were operational in the country with employment as the common bond (WOCCU, 2005). This system locked out a large number of people who were self-employed. An amendment to the Act in1997 recognized the possibility of forming a SACCO on a base other than employment. This development ushered in a new category, referred to as rural SACCOs. Their activities derive from agricultural produce being marketed through an organized system such as marketing cooperative societies. The reforms also ushered in the formation of SACCOs among informal sector operators engaged in public transport, textiles and commerce. Informal sector SACCOs are referred to as "rural" and employer – based SACCOs are referred to as "urban".

The SACCO sub sector comprises both deposit taking and non-deposit taking SACCOs. Deposits taking SACCOs are licensed and regulated by SASRA while non-deposit taking SACCOs are supervised by the Commissioner for Co-operatives. SASRA licenses SACCOs that have been duly registered under the Cooperative Societies Act CAP 490 (SASRA, 2012). As at 31st December 2012, the total number of deposit taking SACCOs was 215 of which124 had been licensed. The remaining 91 SACCOs were at different levels of compliance with the provisions of the law. All deposit taking SACCOs were in operation prior to establishment of SASRA in 2009 and have applied to be considered for licensing as undertaking deposit taking SACCOs business. They are spread across the various counties in the country and are categorized as follows: Government based SACCOs (87); Farmers based SACCOs (74); Private institutions based SACCOs (24); and, Community based SACCOs (30), (SASRA, 2012).

Credit Risk Management

Credit risk is defined as the potential that a borrower or counterparty will fail to meet its obligations in accordance with agreed terms (Chijoriga, 1997). Deelchand & Padgett (2009) refers to risk as the variability of returns associated with a given asset hence must be controlled or minimized. Pagach & Warr (2008) pointed out that risk is generally considered to be the possibility of outcomes that deviate from what were expected however, it is primarily negative outcomes that are of most concern to organizations.

Risk taking is fundamental to every business (Spira, 2003). Cooperative Financial Institutions have a high exposure to credit risk (Cuevas and Fischer, 2006). According to Wenner, et al (2007) taking credit risk is part and parcel of financial intermediation hence its effective management by financial intermediaries is critical to institutional viability and sustained growth. Bald, (2007) re affirms the statement by Wenner, et al. (2007) saying it is the conscious engagement in risks that constitutes the economic value of financial intermediation.

SACCOs convert immediately available savings deposits into loans with longer maturities (maturity transformation). Individual savings deposits are also typically much smaller than an average loan, requiring multiple deposits to fund a single loan (size transformation) and these savings deposits are converted by the SACCOs with an absolute expectation of safety and repayment into credit-risky loans to members (credit risk transformation). Most importantly, the loans advanced by SACCOs carry a fixed interest rate for their entire term, as opposed to those of commercial banks that can be adjusted at any time according to changes in market

interest rates (interest rate risk transformation). All of these financial transformations are risky (Bald, 2007).

According to Chijoriga (1997) credit risk is the most expensive risk in financial institutions and its effect is more significant as compared to other risks as it directly threatens the solvency of financial institutions. While financial institutions have faced difficulties over the years for a multitude of reasons, the major cause of banking problems continue to be directly related to lax credit standards for borrowers and counterparties, poor portfolio risk management, or lack of attention to changes in economic or other circumstances that lead to deterioration in the credit standing of financial institution's counterparties (Basel, 1999).

Loans are the largest source of credit risk to a financial institution .However, other sources of credit risk exist throughout the activities of a financial institution including in the banking book and the trading book, and both on and off the balance sheet. The goal of credit risk management is to maximize a SACCOs risk adjusted rate of return by maintaining credit risk exposure within acceptable parameters. SACCOs need to manage credit risk inherent to the entire portfolio as well as the risk in individual credits as transaction (Sinkey, 1992).

The success of Credit management is mainly determined by the level of risk management in place, policies and procedures, professionalism and governance. If there is good risk management then it means they have been well thought by the professionals. A well working system also means that the leaders after they have come up with the policies and procedures leaves to operate an interrupted. Minimizing bad loans has benefits to all parties involved especially the lenders .First and foremost It will help in the identification of potential credit risks related to loan restructuring, underwriting and documentation. Secondly, it will help in gathering information required to monitor borrower relationships for changes in risks including determining the appropriate level of monitoring and identifying information required for both the lender and borrower. Thirdly, it will help in evaluation of changes in credit management that require action including assessing internal and external factors and recognizing and evaluating warning signals. Fourthly, it will assist in selecting appropriate solutions to solve emerging credit problems by using strategies that optimizes the outcome for the institution; it will also assist in recognition of lending institutions that entail exposure to lender liability. Lastly it will help in identification of the potential impact of bad loans to the institution Zeller (2001)

Statement of Problem

As is the case with all investments, wealth maximization is a key objective whenever SACCOs have chosen an investment avenue from a universe of possible investment vehicles. According to report by Central Bank of Kenya, (2012), SACCOs account for 75 percent of the total's industry assets and deposits. SACCO's operate under objectives of maximizing benefits to members by providing loans to help members achieve their standard of living goals. However, according to Thabo & Gichira (2003) SACCO societies have problems generating wealth due to poor credit risk management practices. In addition Munyiri (2006) pointed that such challenges hinder the achievement of the SACCOS key objectives of wealth maximization and even lead to decline in growth of SACCOs' wealth. Therefore Sacco managers need to reduce the risk of loan default because the institutions financial viability is weakened by the loss of principal and interest, yet on the other hand. Over time, SACCOs have been trying to address members' demands by mobilizing funds and granting credit to members. However, they have not been able to grow their wealth sufficiently through accumulation of enough institutional capital to finance non-withdrawn capital funded assets, provide cushion to absorb losses and impairment of members' savings. Despite various studies done, there is no clear relationship between credit risk practices and growth of SACCO's wealth. The study therefore attempted to close this gap by providing further insight and information on the effect of credit risk management on growth of SACCO's wealth in Nakuru Town.

General Objective

The main objective of the study was to investigate the effects of credit risk management practices on growth of SACCOs' wealth in Nakuru Town.

Specific Objectives

i. To determine the effects of credit risk identification on growth of Savings and credit co-operatives wealth in Nakuru Town.
ii. To establish the effects of credit risk analysis on growth of Savings and credit co-operatives wealth in Nakuru Town.
iii. To establish the effects of credit risk monitoring on growth of Savings and credit co-operatives wealth in Nakuru Town.
iv. To determine the combined effect of credit risk identification, credit risk analysis and credit risk monitoring on growth of Savings and credit co-operatives wealth in Nakuru Town.

Research Hypotheses

$H_0$1: Credit Risk identification practices have no significant effect on growth of Savings and credit co-

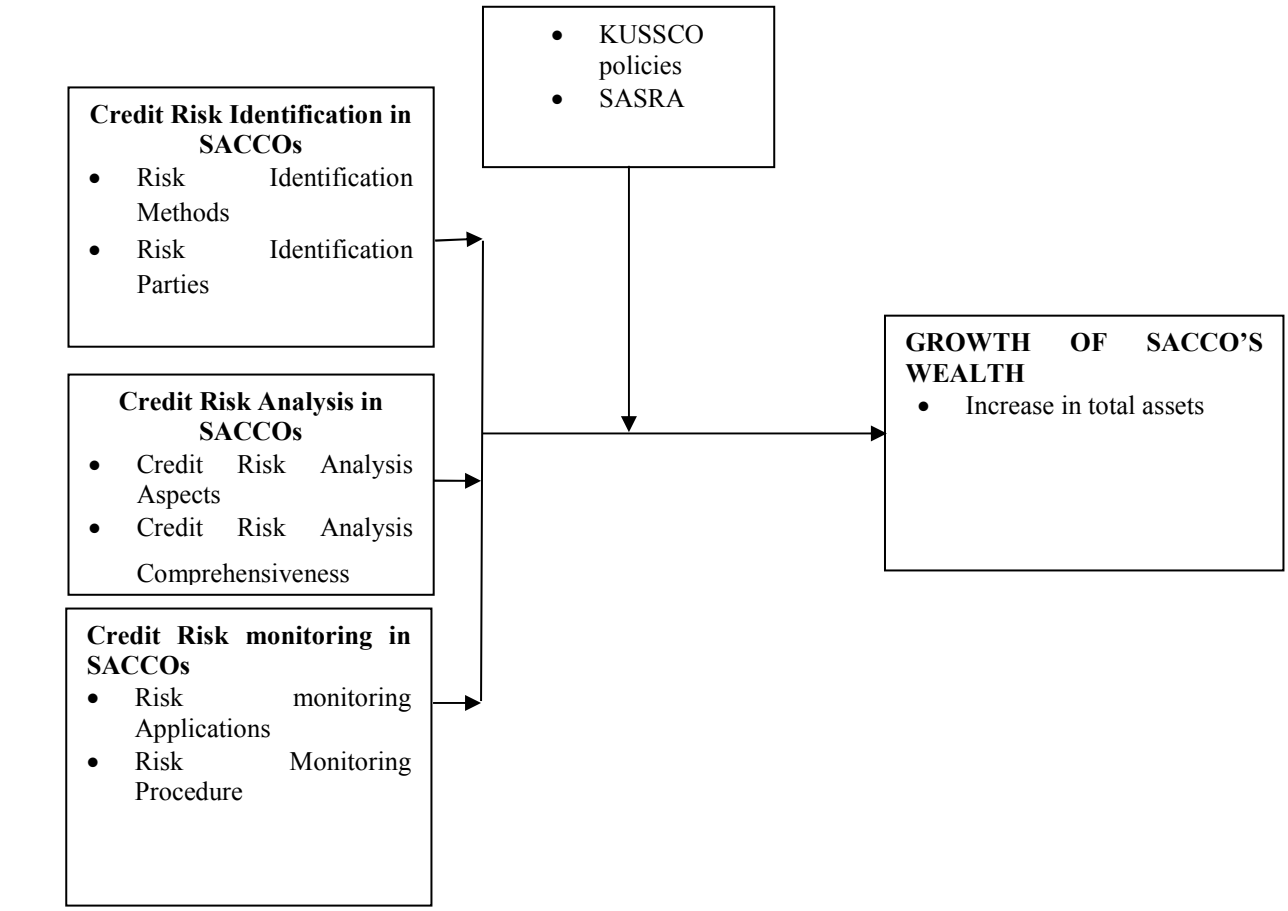
operatives wealth in Nakuru Town.

H_02: Credit Risk analysis has no significant effect on growth of Savings and credit co-operatives wealth in Nakuru Town.

H_03: Credit Risk monitoring has no significant effect growth of Savings and credit co-operatives wealth in Nakuru Town.

H_04: Credit risk identification, credit risk analysis and credit risk monitoring do not have significant effect on growth of Savings and credit co-operatives wealth in Nakuru Town.

Conceptual Framework



From the conceptual framework, growth of SACCOS' wealth is dependent on risks identification, how risk identified are analyzed and how those risk are monitored in the activities of the institution. Enhanced understanding of how risk affects financial performance may decrease the probability of insolvency and provide greater stability to a SACCOs. Risk management is a key aspect of a supervisory committee's role, and fair value measurements can have a significant effect on areas of risk management including risk identification in SACCOs, risk analysis in SACCOs and risk monitoring in SACCOs thus increasing SACCO's asset concentration levels as well as increase in SACCO membership and assets acquired by members. Wealth creation by SACCOs will be measured by the assessment of assets acquired by members after joining the SACCO. The overall increase SACCO assets and their net worth will be and indicator of wealth created. The researcher will determine whether the SACCO members have acquired more assets in the last five years as a result of being a member of such SACCOs. They will directly intervene and affect the direct effect of credit risk management on wealth creation hence the need for consideration in the research. Conspicuously KUSSCO policies and SASRA regulations affects credit risk management practices and growth of SACCOs' wealth.

Research Methodology

A descriptive survey was employed in the study, the design was appropriate because it provided a means to contextually interpret and understand credit risk management and growth of SACCOs, wealth. According to Cooper and Schindler (2003) a descriptive study describes the existing conditions and attitudes through

observation and interpretation techniques.

The target population consisted of all savings and credit cooperative societies licensed by SASRA in Nakuru as at January 2015. According to SASRA there are 13 deposits taking Sacco licensed by SASRA in Nakuru Town. Considering the fact that there were few registered SACCOs in Nakuru town the study used census sampling method to select the 13 SACCOs in Nakuru town. In addition, the study purposively sampled employees concerned with credit risk management. Therefore from each selected SACCO the researcher purposively selected a Director/ Bank manager, credit manager and a credit officer, to respond to the self-administered questionnaire that was used for the study. Therefore the total number of respondents was 39 respondents from 13 SACCOs in Nakuru town. This sample was fairly represents the whole population and was considered large enough to provide a general view of the entire population and serve as a good basis for valid and reliable conclusions.

The study made use of primary data and secondary data. The Primary data was collected using questionnaires. A semi-structured questionnaire was used to collect primary data. In order to ensure uniformity in response and to encourage participation, the questionnaire was kept short and structured with mostly multiple-choice selections in a likert scale. The questionnaire was carefully designed and tested with a few members of the population for further improvements. This was done in order to enhance its validity and accuracy of data collected for the study. This study collected qualitative data using a researcher-structured questionnaire. .

Pre-testing

Before the research tools were finally administered to participants, pre-testing was carried out to ensure that the questions were relevant, clearly understandable and make sense. The pre-testing aimed at determining the reliability of the research tools including the wording, structure and sequence of the questions. This pre-testing involved 10 respondents; the responses gotten were not used in the final analysis. The data collected was analyzed through SPSS. The results were as presented in table 3.1

Table 1: Reliability Test Results

Item	N of Items	Cronbach's Alpha
Credit Risk Identification	14	.871
Credit Risk Analysis	12	.796
Credit Risk Monitoring	7	.790

Cronbach alpha of 0.871, 0.796 and 0.790 (>0.7) were obtained for the questionnaire items on risk identification, risk analysis and risk monitoring respectively. This implied that the questionnaires were reliable for data collection. The purpose was to refine the questionnaire so that respondents in the major study had no problem in answering the questions. To ensure content validity, expert opinion was requested on the representativeness and suitability of questions and gave suggestions of corrections that were made to the structure of the research tools. This helped to improve the content validity and reliability of the data that was collected.

Data Analysis

Specifically, the study will use Pearson's correlation moment was used to test the strength of relationship for inferential statistics at 95% confidence levels.

The overall effect of the independent variable on growth of wealth of SACCOS was tested through use regression equation

The regression equation will:

$$\mathbf{Y = \beta 0 + \beta 1RI + \beta 2CRA + \beta 3CRM + \varepsilon}$$

Whereby the variables were identified as follows

Dependable variable Y = Growth of SACCO's wealth

Independent variable **RI**= Credit Risk Identification

Independent variable **CRA** = Credit Risk Analysis

Independent Variable **CRM**= Credit Risk Monitoring

While β1, β2 and β3 are coefficients of determination and ε is the error term.

Results

Risk Identification Methods

The first objective of the study sought to establish the various methods used by SACCOs in risk identification, extent of involvement of various parties and the importance of risk identification as perceived by the respondents. The findings of the study were as presented in table below

Table 2

Statement	Great Extent	Some Extent	Neutral	Low Extent	No Extent
Brainstorming	64.1%	30.8%	2.6%	2.6%	0.0%
Event inventories & loss event data	61.5%	38.5%	0.0%	0.0%	0.0%
Interviews and self assessment	66.7%	30.8%	0.0%	2.6%	0.0%
Facilitated workshops	69.2%	17.9%	0.0%	12.8%	0.0%
SWOT analysis	71.8%	25.6%	0.0%	2.6%	0.0%
Risk questionnaires and risk surveys	53.8%	33.3%	12.8%	0.0%	0.0%
Scenario analysis	76.9%	12.8%	0.0%	10.3%	0.0%
Using technology	69.2%	17.9%	10.3%	2.6%	0.0%

From table 2, the SACCOs focus of brainstorming as a method of risk identification as revealed by majority; 64.1% who indicated that brainstoring is adopted to a great extent indicates that brainstorming is a popular method of risk identification in SACCOs in Nakuru. 61.5% of the respondnets indicated large extent use of event inventories & loss event data with no respondent indicating otherwise. This indicates that event inventories & loss event data is one of the key methods of risk identification. Majority of respondents (66.7%) indicated that interviews and self-assessment was used as a risk identification method to a great extent. It also emerged from the finding that interviews and self-assessment are widely used method of risk identification among SAACOs as indicated by high percentage (66.7%) of the respndents.

The study sought to know the extent of involvement of various parties in risk identification. The respondents were requested to indicate the level of involvement using a scale ranging from no extent to greater extent. The findings were as presented in table below

Table 3: Involvement in Risk Identification

Statements	Greater Extent	Some Extent	Neutral	Low Extent	No Extent
Executive management	61.5%	28.2%	2.6%	5.1%	2.6%
Board of directors	69.2%	30.8%	0.0%	0.0%	0.0%
Credit committee	84.6%	2.6%	2.6%	10.3%	0.0%
Credit managers	74.4%	20.5%	2.6%	0.0%	2.6%
Employees	56.4%	43.6%	0.0%	0.0%	0.0%
Auditors in risk identification	64.1%	15.4%	2.6%	17.9%	0.0%
Mean Response					

From table 3, majority of the respondents (61.5%) indicated that there was active involvement of executive management in risk identification. This implies that the SACCOs actively involved executive managers in risk identification where necessary. Majority of the respondents (69.2%) concurred that boards of directors were involved in risk identification. This implies that board of directors are actively involved in development of strategies involved in risk identification.

This study sought to know the extent of involvement of credit committees in risk identification. The high percentage (84.6%) of respondents that concurred that edit committees were involved in risk identification confirmed that in deed the SACCOs inveolve credit committes in risk identification. Majority of the respondents (74.4%) indicated that there was involvement of credit managers in risk identification. Risk managers understand aspects of credit risks and assist in strategic identification of risks. Similarly, majority of the respondents (56.4%) confirmed strongly agreed that employees were involved in risk identification while 43.6% of the respondents felt involvement was to some extent confirming that in deed, the SACCOs invove emloyees in risk identification. Lastly, 64.1% of respondents confirmed that auditors were involved in risk identification technology.

Credit Risk Analysis and Management

The second objective of the study sought to establish the effects of credit risk management on growth of Savings and credit co-operatives wealth. The findings of the study were as discussed in this section.

Table 4: Credit Risk Analysis Aspects

Statements	Greater Extent	Some Extent	Neutral	Low Extent	No Extent
Loan protection/security	69.2%	23.2%	0.0%	7.7%	0.0%
Loan repayment period	59.0%	30.8%	10.3%	0.0%	0.0%
Eligibility of the loan	69.2%	0.0%	23.1%	7.7%	0.0%
Credit Risk Policies	84.6%	2.6%	2.6%	10.3%	0.0%

From the findings of the study in table 4, majority of the respondents (69.2%) confirmed that loan

protection/security was valued in credit management of the SACCOs. Loan securities protect the SACCOs from potential losses of defult. Average percentage of the respondents (59.0%) indicated that loan repayment period was valued in credit management of the SACCO. Loan repayment period can be balanced with interest rates protecting the SACCOs from ineffeciencies that come with irregular payment patterns. Eligibility for the loan was highly regarded as important by the SACCO as indicated by high percentage (69.2%). Similarly, credit risk policies waere largely applied as indicated by majority (84.6%) of the respondents who concurred with the research item.

The study sought to know whether SACCOs ranked their loans in terms of their magnitude. From the findings of the study, 87.2% indicated that loan ranking was widely done by the SACCOs. The findings also revealed that SACCOs used credit portfolio model as evidenced by (64.1%) followed by rating based approach with (30.8%). Other models were not in use in the SACCOs. The study then sought to know the extent to which risk analysis was comprehensive in the SACCOs. The research findings were as presented in table

Table 5: Credit Risk Analysis Comprehensiveness

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Risk analysis is comprehensive in the SACCOs	74.4%	20.5%	2.6%	0.0%	2.6%
Effective credit risk management requires a reporting & review structure	84.6%	2.6%	2.6%	10.3%	0.0%
Risk analysis & assessment comprises estimation of the magnitude of the consequences	56.4%	43.6%	0.0%	0.0%	0.0%
Risk analysis & assessment involves assessment of hazardous outcomes	66.7%	25.6%	7.7%	0.0%	0.0%

From the findings in table 94.9% of the respondents indicated that risk analysis is comprehensive in the SACCOs. Similarly, 87.2 % confirmed that effective credit risk management requires a reporting & review structure. Reporting is necessary for coordination of credit risk management activities. All respondents at least agreed that risk analysis & assessment comprises estimation of the magnitude of the consequences. This is important in predicting the potential effect of such risks. Lastly, 72.3 % of the respondents indicated that risk analysis & assessment comprises the probability of those outcomes.

Risk Monitoring

The third objective of the study sought to establish the effects of risk monitoring on growth of Savings and credit co-operatives wealth. The findings were as presented in this section.The study collected and analyzed data on credit risk monitoring. The findings were as presented in table below.

Table 6: Credit Risk Monitoring

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Risk monitoring used to align risk management practices with proper risk monitoring	51.3%	35.9%	12.8%	0.0%	0.0%
Risk monitoring helps to discover mistake at early stage	53.8%	46.2%	0.0%	0.0%	0.0%
The director's report on risk monitoring enables the shareholders to assess the status of the corporation knowledgeably & thoroughly	48.7%	51.3%	0.0%	0.0%	0.0%

From the findings , majority of the respondents (87.2%) confirmed that risk monitoring can be used to make sure that risk management practices are in line with proper risk monitoring. All respondents were in agreement that risk monitoring helps the SACCO management to discover mistake at early stage. Similarly, all respondents were in agreement that that the director's report on risk monitoring enables the shareholders to assess the status of the corporation knowledgeably & thoroughly.

Growth of SACCOs Wealth

The study sought to establish the growth of wealth in terms of total assets achieved by the SACCOs. The actual values were converted into log values to facilitate analysis. The findings were as presented in table 7.

Table 7: Logarithm of Growth of Wealth (Increase in Total Assets)

SACCOS	Total assets 2010	Total assets 2011	Total assets 2012	Total assets 2013	Total assets 2014	Mean Total Assets	Mean Increase Total Assets
Unaitas	22.08	22.23	22.41	22.61	22.65	22.40	0.57
Metropolitan	21.36	21.82	22.09	22.34	22.63	22.05	1.27
Mwalimu national	23.47	23.68	23.79	23.92	24.08	23.79	0.61
Cosmopolitan	20.82	20.95	21.16	21.36	21.67	21.19	0.85
Stima Sacco	23.41	23.45	23.59	23.63	23.80	23.57	0.39
Uni- County Sacco	20.94	21.11	21.08	21.23	21.32	21.14	0.38
Vision Africa	18.40	18.76	20.31	20.45	20.60	19.70	2.2
Tupendane Sacco	18.77	18.88	18.91	18.98	19.01	18.91	0.24
Boresha	18.64	18.68	18.72	18.79	18.87	18.74	0.23
Nakuru County Youth	16.62	16.73	16.93	17.00	17.39	16.93	0.77
Egerton University Sacco	20.03	20.14	20.29	20.48	20.58	20.30	0.55
Ukombozi	16.08	16.25	16.42	16.46	16.56	16.36	0.48
Harambee	23.80	23.91	24.00	24.27	24.38	24.07	0.58
Mean	**20.34**	**20.51**	**20.75**	**20.89**	**21.04**	20.70	0.7

The wealth of the Sacco has been measured in terms of increase in total assets and transformed to logarithms. The mean total assets for each year were calculated as shown in the table above. It was evident that the total assets increased steadily between 2010 and 2014.

Relationship between Credit Risk Management and Growth of Wealth

The study conducted correlation analysis to establish the relationship between credit risk management practices and growth of wealth in SACCOs and to dectect multicollinearity. The findings were as presented in table below

Table 8: Relationship between Credit Risk Management and Growth of Wealth

		Credit Risk Identifaction	Credit Risk Analysis	Credit Risk Monitoring	Growth of Wealth
Credit Risk Identifaction	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	39			
Credit Risk Analysis	Pearson Correlation	.391*	1		
	Sig. (2-tailed)	.014			
	N	39	39		
Credit Risk Monitoring	Pearson Correlation	.125	.056	1	
	Sig. (2-tailed)	.448	.734		
	N	39	39	39	
Growth of Wealth	Pearson Correlation	.137	.067	.090	1
	Sig. (2-tailed)	.404	.684	.585	
	N	39	39	39	39

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

From table 8, the results revealed significant positive relationship between credit risk identification and credit risk analysis at r=0.391* and p=0.014(<0.05). There was insignificant positive relationship between credit risk monitoring and credit risk identification at r=0.125 and p=0.448(>0.05). Similarly, credit risk monitoring has insignificant positive relationship with credit risk analysis at r=.056 and p=0.734 (>0.05).

There was positive insignificant relationship between credit identification and growth of wealth of SACCOs r=0.137 and p=0.404(>0.05). Credit risk analysis had insignificant positive relationship with growth of SACCOs at r=0.067 and p=0.684(>0.05). Lastly, credit risk monitoring was revealed to have insignificant positive relationship with growth of wealth of SACCOs at r=0.090 and p=0.585(>0.05).

The findings concurred with the findings of Wangui (2012) that while SACCOs rely heavily on the

discretion and ability of portfolio managers for effective credit risk management practices as opposed to a system of that standardizes credit and credit risk decisions. No direct relationship exists between risk management and growth of the SACCOs. Silikhe (2008) similarly established weak positive relationship between credit risk management in microfinance institutions in Kenya financial growth.

Regression Analysis

Multiple Multiple regression was used to test the collective effect of credit risk management practices on growth of wealth of SACCOs. The findings were as presented in table 9

Table 9 : Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.175[a]	.031	.052	.52533	2.590

a. Predictors: (Constant), Credit Risk Monitoring, Credit Risk Analysis, Credit Risk Identifaction

b. Dependent Variable: Growth of Wealth

The Durbin-Watson Statistic was used to test for the presence of serial correlation among the research variables. From table 9, the value; 2.590 closer to four indicates weak positive relationship between between risk identification, credit risk analysis and credit risk monitoring and growth of wealth. Durbin-Watson, 2.590 which is above 1.5 indicates that the variables are independent. The value R square of 0.031 indicates that collectively, credit risk identification, credit risk analysis and credit risk monitoring explain 3.1% of the changes in growth of wealth in SACCOs.

Table 10: ANOVA Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.305	3	.102	.368	.776[a]
	Residual	9.659	35	.276		
	Total	9.964	38			

a. Predictors: (Constant), Credit Risk Monitoring, Credit Risk Analysis, Credit Risk Identifaction

b. Dependent Variable: Growth of Wealth

ANOVA test (F statistic) was used to test the significance of the overall effect of credit risk identification, credit risk analysis and credit risk monitoring on growth of wealth of SACCOs. The value of .776 (>0.05) implies that the effect of the three factors is not significant.

Table 11: Table of Coefficients on Risk Identification

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.391	2.754		.505	.617
	CreditRiskIdentifaction1	.369	.450	.150	.819	.418
	CreditRiskAnalysis2	.007	.502	.002	.013	.990
	CreditRiskMonitoring	.226	.351	.109	.644	.524

From table the following regression model was developed.

Y = 1.391+ 0.369CRI + 0.007CRA + 0.226CRM ……..(i)

Where Y = Growth of SACCO's wealth

CRI= Credit Risk Identification

CRA = Credit Risk Analysis

CRM= Gredit Risk Monitoring

Model (i) indicates the multiple regression model for the entire study, relating the three independent variables (credit risk identification, credit risk analysis and credit risk monitoring) with the dependent variable (growth of wealth of SACCOs). The constant 1.391 indicates the level of growth in wealth achieved by SACCOs in the absence of the credit risk management practices. The coeffecint, 0.369 indicates the level of growth of wealth achieved by SACCOs when the SACCOs implement risk identification holding other practices constant, 0.007 indicates the level of growth of wealth achieved by the SACCOs when credit risk analysis holding other practices constant. Lastly, the coeffecint 0.226 indicates the level of growth of wealth achieved by the SACCOs when the SACCOs implement credit risk monitoring holding other credit risk management practices. The positive coefficients for credit risk identification, credit risk analysis and credit risk monitoring indicate that there is a direct relationship between credit risk identification, credit risk analysis and credit risk monitoring and

growth of wealth.

Hypothesis Testing

The individual regression coefficient results were used to test hypothesis using the t statistic. The metrics of the independent variables were individually regressed against the dependent variable at 0.05 significance level. Where p-value obtained in the analysis was greater or equal to 0.05, the null hypothesis was accepted.

Effect of Credit Risk Identification on Growth of Wealth of SACCOs

The first hypothesis was; $H_0$1: Credit Risk identification practices have no significant effect on growth of Savings and credit co-operatives wealth.

From table 11 , t=0.819 and significance value, 0.418 (>0.05) implies statistically insignificant effect of risk identification on growth of wealth of SACCOs. The null hypothesis is therefore accepted and it is concluded that risk identification does not have significant effect on growth of SACCOs. The study findings were in agreement with the findings of Muinde & Nyamute (2012) that loan portfolio management, risk identification is instrumental in credit risk management process. However, there was no evidence of significant contribution of the factors to growth of SACCOs.

Effect of Credit Risk Analysis on growth of SASSOs

The second hypotrhesis was; $H_0$2: Credit Risk analysis has no significant effect on growth of Savings and credit co-operatives wealth**.** The results in table 11, t=0.013 and p=0.990 (>0.05) implies statistically insignificant effect of credit risk analysis on growth of wealth of SACCOs. The study accepted the null hypothesis and concluded that credit risk analysis does not have significant effect on growth of Savings and credit co-operatives wealth. Similarly, Gisemba (2010) researched on the relationship between risk analysis and financial performance of SACCOs found out that the SACCOs adopted various approaches in screening and analyzing risk before awarding credit to client to minimize loan loss. He concluded that for SACCOs to manage credit risks effectively they must minimize loan defaulters, cash loss and ensure the organization performs better increasing the return on assets. However, he cautioned that risk management should not be adopted with sole aim of achieving financial growth as there is no significant relationship. Olando et al. (2012) in their study established significant relationship between loan risk analysis and management and growth of wealth of SACCOs.

Credit Risk monitoring on Growth of SACCOs

The third hypothesis was; **$H_0$3:** Credit Risk monitoring has no significant effect growth of Savings and credit co-operatives wealth**.** The values; t= 0.644 and p=0.524 (>0.05) implies statistically insignificant effect of credit risk monitoring on growth of wealth of SACCOs. The last hypothesis was equally accepted and conclusion made that credit risk monitoring does not have significant effect on growth of wealth of SACCOs. The findings agree with the findings of Iqbal and Mirarkhor, (2007) that the high perception that existence of poor risks monitoring may be an indication of the low degree of low performance is a fallacy as the relationship between risk monitoring and growth.

Overall effect of Credit Management Practices on Growth of Wealth

The forth hypothesis was stated as; H04: Credit risk identification, credit risk analysis and credit risk monitoring do not have significant effect on growth of Savings and credit co-operatives wealth in Nakuru Town was tested using the F test

From tables R-square=0.031 implied that the model can explain only 31% of variations in the dependend variable (Y). The ANOVA Table p=0.776 (>0.05) indicates statistically infignificant effect of credit risk management on growth of wealth of SACCOs hence the null hypothesis accepted. Implying that credit risk identification, credit risk analysis and credit risk monitoring are not significant determinants of growth of Savings and credit co-operatives wealth. Study by Essendi (2013) established that risk management is important in SACCOs to enhance capital adequacy, management quality, earnings and liquidity. The study however established negative effect of credit risk management on asset quality.

Summary of Findings

The summary of the research findings on the four objectives of the study were as presented in the section below;

Research Variables

From the findings, it was evident that various methods are used for risk identification in SACCOs. Brainstorming, event inventories and loss event data, interviews and self-assessment, SWOT analysis, scenario analysis and use of technology methods have been adopted by majority but not all SACCOs use them as some cited it being used to a low extent. It can be concluded that no method is used exclusively in risk identification.

The methods are used mutually in risk identification.

It was evident that there is active involvement of executive management in risk identification in the SACCOs. Executive management have responsibility for implementing the credit risk strategy approved by the board of directors and for developing policies and procedures for identifying, measuring, monitoring and controlling credit risk. Boards of directors are actively involved in development of strategies involved in risk identification. Similarly, edit committees were involved in risk identification to especially in formulation of strategies. Involvement of credit managers in risk identification was clearly evident as credit managers are directly involved with credit risks. Lastly, employees were involved in risk identification with auditors majorly involved in risk identification technology. The findings indicate that the SACCOs inolve stakeholders in risk identification to enhance risk identification process.

It was established that risk analysis is comprehensive in the SACCOs. However, it came out that effective credit risk management requires a reporting & review structure. Risk assessment in the SACCOs comprises estimation of the magnitude of the consequences and assessment of hazardous outcomes. It was clear that risk monitoring can be used to make sure that risk management practices are in line with proper risk monitoring, risk monitoring helps the SACCO management to discover mistake at early stage while the director's report on risk monitoring enables the shareholders to assess the status of the corporation knowledgeably & thoroughly.

It was clear that the majority of thenSACCOs review their credit policy quarterly with some reviewing semi-annually and annually. Credit risk monitoring can be used to make sure that risk management practices are in line with proper risk monitoring. It was evident that risk monitoring helps the SACCO management to discover mistake at early stage. Similarly, the director's report on risk monitoring were used by shareholders to assess the status of the corporation knowledgeably with respect to credit risk management.

Lastly, the study revealed that the SACCOs were experiencing steady growth in wealth with the average incerese between the years steadily increasing from year to year. The growth was evident both for individual SACCOs and collectively for all the SACCOs that were involved in the study.

Realtionship between Credit Risk Management and Growth of SACCOs' Wealth

The results revealed statistically insignificant positive relationship between credit risk identification, credit risk analysis, credit risk monitoring and growth of wealth of SACCOs. The three credit risk management practices can not be adopted by an organization in an attempt to increase their wealth.

Effect of Credit Risk Identification on Growth of SACCOs' Wealth

The study sought to determine the effect of credit risk identification on growth of SACCOs' wealth. The study established that credit risk identification has statistically insignificant positive effect on growth of wealth of SACCOs. Having an intensive and elaborate credit risk identification system would lead to some growth in the SACCOs wealth. However, the growth is not significant. It therefore implies that credit risk identification is not a critical determinant of growth of wealth of SACCOs.

Effect of Credit Risk Analysis on Growth of SACCOs' Wealth

The second objective related credit risk analysis with growth of SACCOs' wealth. The study revealed that credit risk analysis does not have significant effect on growth of wealth of SACCOs. The SACCOs can invest in credit risk analysis for other reasons such as enhancing loan performance. However, credit risk analysis can not be used as a strategy to enhance growth of wealth of SACCOs.

Effect of Credit Risk Monitoring on Growth of Wealth of SACCOs.

The third objective sought to establish the effect of credit risk monitoring on growth of wealth of SACCOs. The study revealed that credit risk monitoring does not have significant effect on growth of wealth of SACCOs. Credit risk monitoring is therefore not a significant determinant of wealth of SACCOs and can not be used to improve SACCOs wealth.

Combined effect of Credit Risk Management on Growth of Wealth of SACCOs

The last objective of the study was to determine the effect of credit risk management practices on growth of wealth of SACCOs. It was established that credit risk identification, credit risk analysis and credit risk monitoring collectively do not have significant effect on growth of Savings and credit co-operatives wealth. The three practices can therefore not be adopted by the SACCOs a means of improving their wealth.

Conclusions

From the research findings, the study made conclusions as follows;

The first conclusion was made that credit risk identification has weak positive effect on growth of

wealth of SACCOs though the effect is not significant. Credit risk identification is therefore not a key determinant of growth of wealth and can not be adopted as a strategy to increase wealth in SACCOs wealth or growth.

The study made the second conclusion that credit risk analysis has weak positive effect on growth of wealth of SACCOs. Similarly, the effect was however statistically insignificant implying that credit risk analysis is not a significant determinant of wealth of SACCOs.

The third conclusion was made that credit risk monitoring has insignificant positive effect on growth of wealth of SACCOs. This indicated that credit risk monitoring is not a significant determinant of wealth of SACCOs and can therefore not determine the level of wealth in a SACCO.

Lastly, the findings led to conclusion that collectively, credit risk identification, credit risk analysis and credit risk monitoring do not have significant effect on growth of SACCOs. It was evident that credit risk management is not key determinant of wealth of SACCOs and therefore SACCOs can not invest in such practices in attempt to achieve improved growth in wealth.

Recommendations

From the outcome of the study, the following recommendations were made;

Management of the SACCOs should consider risk management as a critical determinant of their portfolio performance. Not all the credit management procedures were performing to their expectation and hence the need to evaluate effectively the relationship between the individual risk management element and individual SACCOs policy with a view of adopting the right balance that promotes their performance.

Management of the SACCOs should ensure that there are clear methods and policies to direct their activities. It is also important that the SACCOs take a critical look at their risk analysis approaches so as to understand how its outcome influences their growth of wealth. Risk monitoring being a continuous process should be implemented in a progressive manner that allows the SACCOs to understand their potential risk and hence guide in the use of other risk management activities.

It is also important for the SACCOs to adopt new approached and tools for carrying out their risk evaluation, reliance on the traditional and historical information and records as key sources for evaluation process may lower the chances of understanding the inherent risks in their growth of wealth.

Suggestions for Further Research

From the findings and conclusions of the study, the following areas are suggested for further studies;

A study to critically look at the relationship between the different risk managements factors with the aim of revealing how they influence each other.

The need to isolate a few of the risk management elements that will allow the SACCOs to develop a cost effective model for managing their portfolio without necessarily undertaking all the risk management activities

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