

Internal Determinants of Credit Risk Management of Deposit Taking Saccos in Nairobi County

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Abstract: The study aimed to establish internal determinants of credit risk management in SACCOs. Specifically, the study aims to establish the influence of credit policy and internal audit, on credit risk in SACCOs. The study used a descriptive survey research design. The study targeted the deposit taking SACCOs in Nairobi County. Branch managers' and section heads (were the respondents in the study. The respondents were drawn using stratified random sampling. Data collection was done using a structured questionnaire. Descriptive methods were used to summarize data. Regression analysis was also conducted with the help of SPSS. Presentation of the findings was done through tables and graphs. The findings showed that that 61.1% of credit risk can be explained by internal determinants. Credit policy ($p=0.01$) and internal audit ($p=0.007$) were statistically significant at 95% confidence level. The study concluded that internal factors such as credit policy and internal audit influence credit risk in SACCOs. Credit policy is the most important determinant of credit risk followed by internal audit. The study recommended that credit managers should ensure that the credit policy is reviewed and updated frequently to reflect changes in the market to ensure that the SACCO is not open to risks inadvertently.

Keywords: Credit policy, Credit risk, Credit risk management, Internal audit and Non-performing loan

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I. INTRODUCTION

For the developing countries, Micro financing is relatively an emerging financial concept, providing alternative source of savings and credit availability for people who, otherwise, have no access to those facilities from the mainstream financial intermediaries (Addo & Twum, 2013). According to Ahmed et al. (2016) Microfinance institutions (MFIs) have the function of providing financial facilities to the low-income class people who have long been deemed 'unbankable', not forgetting the self-employed and customers without collateral assets. Microfinance is designated to reduce poverty since it is directed towards the poor people in the economy and the efficacy of the functions is dependent on having well defined credit granting criteria (Microfinance Gateway, 2009).

According to Kimondo (2013), MFIs in Kenya are grouped and registered into three different tiers: deposit-taking institutions such as banks, credit only non-deposit taking institutions, and informal organizations under a supervision of an external agency apart from the government. Savings and Credit Cooperative Societies (SACCOS) are co-operative predicated microfinance institutions. All over the world SACCOs remain the most paramount players in the provision of financial services than any other type of financial institution (Thiagarajan et al., 2011). In Kenya, out of the 7,400 registered SACCOs, 3800 are active and 164 have FOSAs offering fundamental banking accommodations across the country (SASRA, 2016). The SACCO movement has mobilized over Ksh. 150 billion in savings (more than 30% of the National Domestic savings) and loans amounting to Ksh. 120 billion (Njoroge & Rotich, 2016).

Microfinance foundations engage in risky activity when they perform their money related intermediation in the economy. In so doing, they are faced by various risks, which include: operational risk, credit risk, liquidity risk and investment rate risk. Overseeing the risks may be necessary for their survival and manageability as well (National bank of Ethiopia (NBE), 2010). The survival and growth of the MFIS is dependant on how the credit risk on money related businesses are managed. As for the SACCOs, those issues of credit risk may be of greater concern due to the higher levels about discerned risks coming about because of some of the aspects about customers and business conditions they are subjected to. (Mutua, 2016). Non-performing loans (NPLs) or bad debts which are attributed by poor or ineffective loaning policy according to Mutua (2016), have brought most failures in the financial sector. NPL on SACCOS typically happen due to inappropriate practices in credit risk management (Magali&Qiong 2014). In order to bring down the number of NPL SACCOs, strategies have to be put in place to manage the risk on both individual loan and loan portfolio. Indications show that uncontrolled risk can lead to huge losses and these in turn endanger the safety and

soundness of microfinance institutions and that of microfinance institution's depositors. (NBE, 2010) Proactive risk management may be crucial to the long term survival of microfinance establishments (MFIS) since the microfinance foundations might fail to meet its social and financial objectives on its social and money related targets.

1.1 Statement Of The Problem

Deposit taking SACCO societies in Kenya are witnessing elevated credit risks that manifest in more expeditious growth of non-performing loans (NPLs) (Central Bank of Kenya, 2016). The quality of loans has been a challenge as the average gross non-performing loans (NPL) stood at 9.6% for the licensed SACCOs contrary to the SASRA prudential guidelines which provide that the level of non-performing debts should not be more than five percent (Maina, Kinyariro&Muturi, 2016). Available statistics indicate a considerable increase in the amount defaulted by SACCO Members each year with the default amounts increasing steadily from 10.6 million in 2009 to just under 15 million in 2015. The number of defaulters also increased from 129,398 in 2009 to 240,100 in 2015 (Mutua, 2016).

Mugwe (2011) notes that default on loan repayments poses the greatest risk to stability of the SACCO movement in Kenya. Masinde (2014) indicates that the problem of default has become so serious in the SACCO sector that some members have chosen to withdraw their membership, saying the system can no longer be trusted and they fear losing their money. The high rate of non-performing loans is indicative of problems in the credit risk management of SACCOs. It is a sign that the regulations spelt out in SASRA (2008) may not be having the intended effect. This study therefore sought to establish the internal determinants of credit risk management in SACCOs.

1.2 Objectives

- i. To determine the influence of credit policy on credit risk management in deposit taking SACCOs in Nairobi County.
- ii. To assess the influence of internal audit on credit risk management in deposit taking SACCOs in Nairobi County.

1.3 Hypotheses

H₀1: There is no significant relationship between credit policy and credit risk management in deposit taking SACCOs in Nairobi County

H₀2: There is no significant relationship between internal audit on credit risk management in deposit taking SACCOs in Nairobi County.

II. LITERATURE REVIEW

2.1 Theoretical Literature

2.1.1 Loanable funds theory

According to the loanable-funds theory, the charge of interest is decided by using the demand for and the provider of dollars in the economy at that degree at which the two are equated. Thus, it may be a trendy demand-supply idea as connected to advertise for loanable money (credit), treating the price as the charge of such funds. As stated by those Loanable Funds theory of interest, the rate of interest may be computed on the framework of demand and grant of loanable money existing in the capital market (McConnell & Brue, 2005).

The loanable funds theory is an explanation of the strong desire/formal decision about something of real interest rates - that is, rates of return expressed in terms of real buying-related power. The explanation (of why something works or happens the way it does) comes from the idea that savers make a decision between consumption now and consumption in the future (Wessels, 2000). The more people consume now out of present income the lower will be future income. So, a trade off always exists between present consumption and future consumption. It is assumed that people would prefer to consume now, other things being equal. Because of this, to convince them to save and provide money for investment, they must be paid interest. The real interest rate is therefore the rate needed to convince people to give up/forget about present consumption. It was sometimes referred to as the reward for waiting - the reward for delaying the pleasure of consumption and waiting to consume later. It follows that savings will be positively related to the rate of interest.

Pandey (2008) demonstrates that a monetary establishment's credit arrangement is enormously affected by the prevailing economic conditions. As economic conditions change, the credit policy of the firm might additionally transform. The loanable funds theory is relevant to this study because it indicated that the rate of interest is determined by the demand for and supply of loanable funds. The demand and supply may be affected by the income level of borrowers. This study sought to determine the influence of credit policy on credit risk management in SACCOs.

2.1.2 Agency theory

Since ground-breaking work by Jensen and Meckling (1976), agency theory has been the dominant lens for examining executive compensation. According to agency theory, principals who employ agents to work on their behalf incur agency costs because the interests of principals and agents diverge. Corporate governance is viewed as a key component of audit. It is very useful in providing an independent review of the financial position of the organization. (Caers et al., 2006) stated that when performing an audit, auditors act as agents to principals who are the shareholders in this case and this connection brings some concerns regarding confidence and trust in the relationship between director and shareholder. Agency theory points that the auditor is meant to serve the interests of both the third parties and the management.

Agency problems arise between creditors and shareholders because creditors don't participate in the high profit firms beyond the contractually agreed debt service, but share in losses in case of insolvency (Odar, Korošec & Horvat, 2006).. This asymmetry creates an incentive, once debt has been incurred, for shareholders to prefer the firm undertake more risky investment projects than creditors would like. One way to deal with agency conflicts is through auditing (Mills, 2009). The auditing function ensures that management is focused on the common interests of the shareholders and other stakeholders.

The audit function exists to monitor the activities of management and to attest to management's performance. The cost of the audit function is an example of an agency cost. The agency theory not only helps to explain and predict the existence of internal audit but that it also helps to explain the role and responsibilities assigned to internal auditors by the organization, and that agency theory predicts how the internal audit function is likely to be affected by organizational change.

2.2 Empirical Review

2.2.1 Credit policy and performance of loans portfolio

Recommendations by NBE (2010) state that credit policies should be designed and implemented with consideration for internal and external factors such as the microfinance institution's market position, trade area, staff capabilities and technology; and should concretely establish targets for portfolio mix and exposure limits to single counterparties, groups of connected counterparties, industries, geographic regions and specific products. Moti et al. (2012) states that it may be so hard to establish an optimal credit policy as the best of the variables of credit policy is quite hard to obtain. A firm will alter one or two variables at a time and observe the effect.

Wachira (2015) denoted that credit standard policy significantly affects financial performance, credit terms and accumulation effort. Maiti (2015) found that utilization of collection policy (Default Rate) led to consequential increase in profitability of regulated SACCOs denoting that lowering non-performing loans to total loans would significantly lead to increment in profitability. The study concluded that the application of credit standards led to significant increase in financial performance, utilization of credit standards would improve return on assets of regulated SACCOs and that application of credit terms policy significantly incremented ROA of regulated SACCOs thereby decreasing loan to assets ratio significantly leading to increment in financial performance. Wanja (2013) found that the nature of loan terms and conditions have a large effect on the bank's competitiveness. It was found that the nature of the loan policies a bank adopts affect the volume of loan applications that a bank attracts. It was found that most loan terms and conditions only affect the volumes of the loans procured at a bank to a small extent. Similarly, Otieno (2013) found that lending policies and non-performing loans are indeed related. Lending policies help the banks lend prudently and lower the risk level to the banks, and strict adherence to lending policies therefore has led to reduced non-performing loans.

Essendi (2013) denoted that formulation of the credit policy is mostly formulated by members of the organization and regulation with moderate participation of employees and the directors. The current credit policy of the SACCO is the primary document upon which formulation of new credit policy is predicated. In the process of formulation, trends of creditors and overhead costs are also factored in. Kimondo (2013) designated a positive paramount relationship implicatively insinuating that credit policies affect the financial performance of deposit taking micro finance organization with a minimal effect since there are other more factors that affect financial performance with a bigger effect. The results denoted that credit standard policy significantly affects credit financial performance credit terms and collection effort involved. Agola (2014) revealed a positive relationship between financial performance, credit policy, credit risk controls, credit appraisal and accumulation policy. Credit policy was a crucial predictor when credit appraisal and credit policy procedures on risk management are competent, they can influence achievement of amended financial performance objective. Mutangili (2011) revealed that commercial banks review their credit policy yearly and half yearly, and that employees are informed of credit policies through credit manual, customary training, conventional meeting and supervision.

2.2.2 Internal audit and performance of loans portfolio

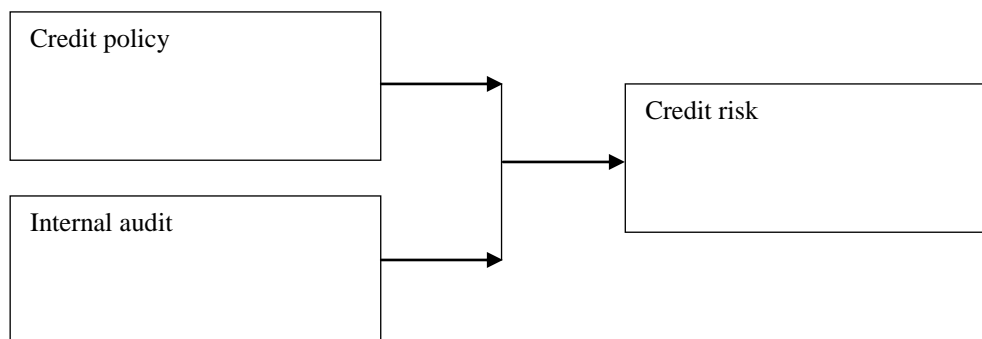
Internal audit function need to systematically introduce risk based internal audit to ascertain efficacy of risk management practices and this calls for the microfinance to be more risk focused in their functions (NBE, 2010). Internal auditors normally perform operational audits, as they will have more experience with the general operations of an organization, and will be better prepared to analyze the structure of operations critically. Internal audit functions can take different forms e.g. management spot checks where an operational manager is assigned specific audit obligations to an entirely separate department (Mbuti, 2014). The internal auditor may find major discrepancies between information in the client's file and the authenticity in the field, which could expose the organization to credit or fraud jeopardy. Loan officers, nevertheless might be receiving kickbacks on loans that do not emerge in a delinquency report.

O'reilly et al. (2014) exhibited a significant contrast effect, and range-frequency theory that has consequential portion of the variance in their judgments. The results suggested that auditors inclined to utilize the range principle more than the frequency principle to classify the loans. According to the authors, this bias has a consequence for audit practice. Mbuti (2014) findings reveal that objectivity of financial reporting in SACCOs, internal audit report completeness and timeliness of internal audit reporting all had consequential effect on financial performance of SACCOs. However, internal audit reporting channels did not have a consequential influence on financial performance of SACCOs. Munyi and Njiru (2015) findings denoted that risk-based auditing was vital in detecting risks, promoting transparency and accountability and enhancing quality financial reporting which was key in corporate governance.

Results of a survey conducted in commercial banks, in Kosovo, showed that each commercial bank operating in Kosovo had the departments of internal audit. This customarily and unregularly undertake process of controlling in order to reduce credit risk (Siqani&Sekiraca, 2016). Steffanelli and Matteo (2010) showed an overall weakness of the board role (expressed by Independents and Audit Committee on board) in monitoring loan portfolio quality of the bank, with the subsequent damage of the interest of stakeholders. Kim and Song (2011) results suggest that auditor quality plays an important role in loan syndication by alleviating information asymmetries between lead banks and non-lead participant banks.

Schneider and Church (2008) found that the lenders' assessment of the jeopardy of elongating a line of credit and the probability of elongating the line of credit are negatively affected when the company receives an adverse internal control opinion as compared to an ineligible one. The researchers did not find any evidence that the effect is diminished by the utilization of an auditor. A study by Kalui and Kiwa (2015) established that auditors were involved in risk identification for sundry reasons. They commenced the inherent risk evaluation process by generating prospects of account balances, they additionally identify changes that have occurred in the firm or its environment and determines also how those changes should interact with historic trends to produce an expected balance in the account which in turn leads to expansion of the organizations.

2.3 Conceptual framework



Efficient credit policy influences sharing of information among financial institutions about borrowers, stabilizes interest rates, reduces non-performing loans, increases deposits and increases credit extended to borrowers. A well-designed internal audit function is essential for verifying that policies and procedures that support risk management are being followed and are yielding the desired outcomes. Internal audits can be helpful in identifying fraud and portfolio quality problems before they result in significant losses. It therefore requires more frequent reporting and a special internal audit to reduce the higher risk of a new and less understood product.

III. RESEARCH METHODOLOGY

3.1 Research Design

The study used a descriptive survey research design. According to Kombo and Tromp (2009), descriptive survey is a strategy for gathering data by meeting or regulating a survey to a specimen of people. A descriptive survey is suitable for this study as information was collected from respondents on internal determinants and credit risk management in SACCOs. Descriptive research can include multiple variables for analysis; this study involved analysis of credit policy, internal audit and credit risk.

3.2 Study population

According to Bailley (2011), target population is the gathering of people or objects which scientists are keen on summing up the conclusions. The study targeted deposit taking SACCOs in Nairobi County. There were 40 registered deposit taking SACCOs that were active in Nairobi (SASRA, 2015). Branch managers' and section heads (finance, credit and audit) were the respondents in the study.

3.3 Sampling Procedure

In this study, Slovincs formula was used to come up with a sample. According to Burns (2010), this formula is a derivative of the sampling formula to estimate population proportion, not population mean. It assumes a P value of 0.05 and a confidence level of 95 percent.

$$n = N / (1 + N e^2)$$

Where: n= sample size, N= population and e=margin of error

Therefore in a population of 291 persons,

$$n = 291 / (1 + 291 * 0.05^2) = 168$$

Stratified random sampling was used to draw respondents in the study. Stratified sampling is a probability sampling method and a form of random sampling in which the population is divided into two or more groups (strata) according to one or more common attributes (Blaxter et al., 2007). In this study, the population was divided into different population groups such as branch managers and section heads. Stratified random sampling is superior to simple random sampling because the process of stratifying reduces sampling error and ensures a greater level of representation.

Table 1 Sampling Frame

	Total	Sample
Branch managers	88	51
Heads of finance	87	50
Heads of credit	87	50
Heads of audit	29	17
Total	291	168

Therefore, a sample of 168 respondents was involved in the study comprising 51 SACCO branch managers, 50 heads of finance, 50 heads of credit and 29 heads of audit departments. A random number generator was used to select individual persons to participate in the study. A random number generator (RNG) is a computer software that is designed to generate a sequence of numbers or symbols that lack any pattern (Kroese, Taimre & Botev, 2011).

3.4 Data Collection

Data collection was done using a structured questionnaire; this method is preferred since it has the potential to pick good quality data using scarce resources. In this study closed and open ended questions were used. The items of questionnaire were developed and tailored to the objectives of the study. The administration of the questionnaires was done by "drop and pick" method since it allowed the respondents ample time to complete the questionnaires. The researcher had the questionnaire reviewed by a lecturer from the department of business administration in the school of business at Kenya Methodist University who were experts at research to enhance validity. A pilot study was also conducted to find the instruments reliability and the procedures of administration. Piloting was conducted among deposit taking SACCOs in Nairobi County.

3.5 Data Analysis

Descriptive methods such as percentages mean, and standard deviation were used to analyze data. Data from open ended questions was arranged into themes and analyzed using descriptive statistics. Descriptive statistics included frequencies and percentages. Regression analysis was employed to find out the relationship between variables. Regression analysis aided in solving the study hypothesis. The model used in the study is shown below

$$Y = C + \beta_1 CP + \beta_2 IA + e$$

Where Y is the dependent variable, C is the constant, CP and IA are the independent variables and their respective coefficients β_1 and β_2 . The error term reflects all other factors that are not in the model. $Y = \text{Credit risk}$, $C = \text{Constant}$, $B_1 = \text{Coefficient for credit policy}$, $B_2 = \text{Coefficient for internal audit}$, $CP = \text{Credit policy}$, $IA = \text{Internal Audit}$ and $e = \text{error term}$

The Statistical Package for Statistical sciences (SPSS) version 20 was used to analyze data with the aid of a computer. Analysis of data was conducted at 95% confidence level where p-values less than 0.05 were considered significant. Presentation of the findings was done through tables and graphs. Tables present the simplest way of summarizing data for individual variables so that specific values can be read (Saunders et al., 2009).

IV. DATA ANALYSIS AND PRESENTATION

4.1 Response Rate

A total of 168 questionnaires were distributed to branch managers, heads of finance, heads of credit and heads of audit. A total of 159 questionnaires were returned filled and fit for analysis. This represents a response rate of 95% which is higher than the 70% threshold recommended by Mugenda and Mugenda (2010).

4.2 Credit policy

The study sought to establish the aspects of credit policy in the participating SACCOs. This included person in charge of preparing policy, frequency of review and its contents. The findings would enable the study determine the influence of credit policy on credit risk management in deposit taking SACCOs in Nairobi County. According to the findings, the personnel in charge of preparing the credit policy in the deposit taking SACCOs include the board of directors, the credit committee, credit manager and controllers, accountants and external consultants. The findings therefore show that deposit taking SACCOs in Nairobi County employed varying strategies in terms of preparation of the credit policy.

Majority 60% (n=96) of the respondents indicated that credit policy in their SACCO was reviewed occasionally while 37% (n=59) indicate that credit policy in their SACCO was reviewed often. The findings therefore show that credit policies in majority of deposit taking SACCOs in Nairobi County were not reviewed frequently.

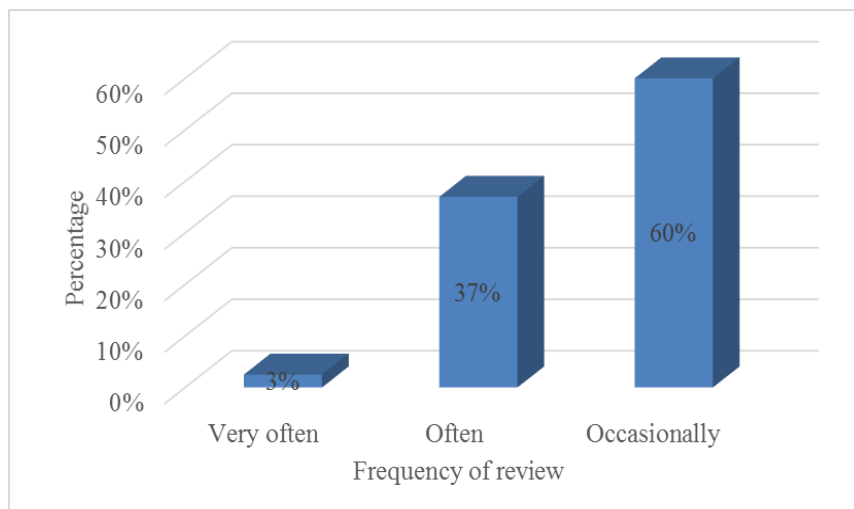


Figure 1: Frequency of review of credit policy

Source: Field Data (2016)

Majority (93%) of the respondents indicated that the credit policy had goal statement of the entire loan portfolio. Majority (91%) of the respondents agreed that lending authority was given to each loan officer while 80% of the respondents agreed that lines of responsibility in making assignments and reporting information. Majority (91%) of the respondents agreed that there were operating procedures for soliciting evaluating and making decisions on customer loan applications. Similarly, 93% of the respondents agreed that their SACCO required documentation to accompany each loan application. In addition, 83% of the respondents agreed that there were lines of authority on who is responsible for marinating and reviewing the credit files. The low mean values (<2) and low standard deviation values (<1) indicate a high agreement among respondents. The findings therefore show that deposit taking SACCOs in Nairobi County had credit policies with solid process to ensure proper credit risk management.

Table 2 Credit policy processes

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	SD
Goal statement of the entire loan portfolio	59%	34%	7%			1.47	0.619
Lending authority given to each loan officer	37%	54%	6%	1%	2%	1.78	0.782
Lines of responsibility in making assignments and reporting information	43%	37%	20%			1.77	0.763
Operating procedures for soliciting evaluating and making decisions on customer loan applications	50%	45%	3%	2%		1.57	0.648
Required documentation that is to accompany each loan application	51%	42%	5%		2%	1.61	0.765
Lines of authority on who is responsible for marinating and reviewing the credit files	49%	44%	5%		2%	1.61	0.755

Source: Field Data (2016)

4.3 Internal audit

The study assessed the internal audit function of participating SACCOs in terms of reporting procedures, independence of internal auditor and auditing processes. The findings enabled determination of influence of the internal audit on credit risk management in deposit taking SACCOs in Nairobi County. The study sought to establish the party to which the internal auditor reported to. From the findings, the respondents indicated that the internal auditor in their SACCO reported to the board of directors, the audit committee operations manager and the CEO. The findings therefore show that deposit taking SACCOs in Nairobi County had different reporting procedures regarding auditing.

Majority 84% (n=134) of the respondents indicated that the internal auditor had a high level of independence. The findings therefore show that internal auditors in deposit taking SACCOs in Nairobi County were free from conditions that threaten the ability of their internal audit activity to carry out internal audit responsibilities in an unbiased manner.

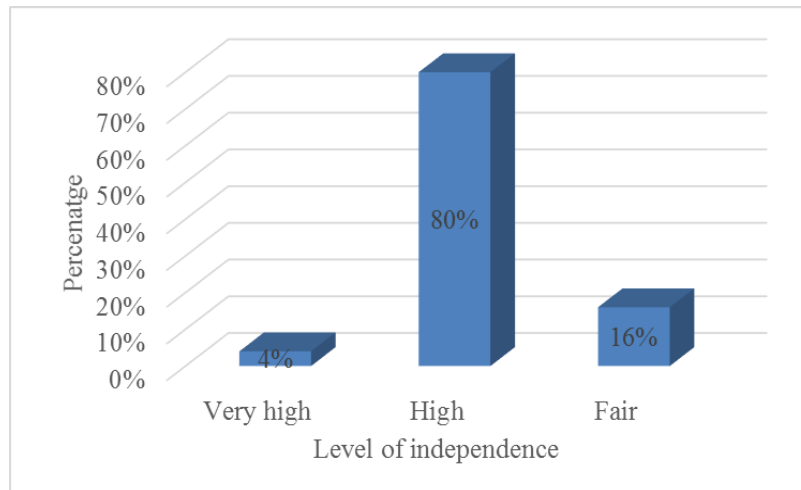


Figure 2 Independence of the auditor general

Source: Field Data (2016)

Majority (93%) of the respondents agreed that the internal audit in their SACCO assessed individual loans, including repayment risks. Majority (91%) of the respondents agreed that the internal audit function determined compliance with lending procedures and policies. Similarly, (97%) of the respondents agreed that internal audit in their SACCO identified lapses in documentation. An equal number (97%) of respondents indicated that internal audit provides credit risk management priority findings while a similar number (97%) indicated that internal auditing evaluated risk grades and their accuracy. Majority (96%) of the respondents indicated that internal auditing recommended practices and procedures to address findings. The study findings therefore show that deposit taking SACCOs in Nairobi County conducted had an internal audit function which comprised an array of processes that enhanced credit risk management. The low mean values (<2) and low standard deviation values (<1) indicate a high agreement among respondents.

Table 3 Internal audit processes

	Strongly agree	Agree	Neutral	Disagree	Mean	SD
Assesses individual loans, including repayment risks	74%	19%	6%	1%	1.34	0.645
Determines compliance with lending procedures and policies	61%	30%	8%	10%	1.50	0.719
Identifies lapses in documentation	59%	38%	2%	1%	1.47	0.635
Provides credit risk management priority findings.	47%	50%	3%		1.57	0.568
Evaluates risk grades and their accuracy.	58%	39%	4%	2%	1.5	0.674
Recommends practices and procedures to address findings	66%	30%	2%	3%	1.41	0.661

Source: Field Data (2016)

4.4 Regression analysis

Regression analysis was conducted to establish the internal determinants of credit risk management in deposit taking SACCOs. Findings from the regression would enable testing of hypothesis and solving of the model of the study. Regression analysis was conducted with the help of SPSS at 95% confidence level. The findings are presented in this section.

Table 4 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.782	.611	.601	.070

Source: Field Data (2016)

R is the square root of R-Squared and is the correlation between the observed and predicted values of dependent variable. The R value of 0.782 means that there is a strong positive correlation between independent variables and the dependent variable. This means that there is a strong positive correlation between internal determinants (credit policy and internal audit) and credit risk in deposit taking SACCOs in Nairobi County. R² is the proportion of variance in the dependent variable which can be explained by the independent variables; it tells us the goodness of fit of the model. The R² value of 0.611 means that 61.1% of credit risk can be explained by internal determinants. The adjusted is R² an adjustment of the R-squared that penalizes the addition of extraneous predictors to the model; it is intended to control for overestimates of the population R² resulting from small samples, high collinearity or small subject/variable ratios. The adjusted is R² value of 0.601 in this study means that about 60.1% of the variability of credit risk is accounted for by the model, even after taking into account the number of predictor variables in the model. The model summary therefore shows that the internal determinants considered for this study are very important to credit risk as they contribute greatly to the variation of credit risk in deposit taking SACCOs in Nairobi County.

Table 5 ANOVA output

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	118.469	4	29.617	60.437	.000
Residual	75.468	154	.490		
Total	193.937	158			

Source: Field Data (2016)

The ANOVA output reports how well the regression equation fits the data. The findings show that the F value of 60.437 is significant (p=0.00) at 95% confidence level. This means that overall, the regression model statistically significantly predicts the outcome variable. The findings therefore show that the model is valid for predicting credit risk in deposit taking SACCOs in Nairobi County since it accounts for significantly more variance in the criterion variable than would be expected by chance. The Coefficients table provides us with the necessary information to predict credit risk from internal determinants. Findings in Table 4.6 also help determine whether the internal determinants contribute statistically significantly to credit risk.

Table 6 Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.188	.201		15.835	.000
1 Credit policy	.456	.138	.299	3.301	.001
Internal audit	.265	.098	.182	2.713	.007

Source: Field Data (2016)

The beta values in the unstandardized coefficients can be used to solve the model of the study as shown below.

$$\text{Credit risk} = 3.188 + 0.456\text{CP} + 0.265 \text{IA}$$

Where CP= Credit policy, IA= Internal Audit

The new model shows that the constant is 3.188; this represents the value of the dependent variable (credit risk) when all other variables (credit policy and internal audit) are 0. In this study, it means that without the internal determinants, the credit risk (NPLs) would be 3.188%. The new model also shows the beta values or coefficients which indicate the amount of change one could expect in the dependent variable given a one-unit change in the value of that variable, given that all other variables in the model are held constant. In the above model, the 0.456 value of credit policy means that a unit change in credit policy would result in a 0.456 change in credit risk. From the new model we can deduce that credit policy is the most important determinant of credit risk followed by internal audit in that order. The error term 0.07 represents other factors affecting credit risk in SACCOs not investigated by the current study. The error term is small indicating that other factors contribute little to the credit risk in in deposit taking SACCOs in Nairobi County

The significance values in Table 4.16 tell us whether any of the two variables is significant to credit risk. The findings show that credit policy (p=0.01) and internal audit (p=0.007) are statistically significant at 95% confidence level. Using this information, we can now solve the hypotheses of the study.

Table 7Hypotheses decision table

Variable	Significance (P-value)	Interpretation	Decision on Ho	Conclusion
Credit policy	0.01***	Significant	REJECT HO ₁	There is a significant relationship between credit policy and credit risk management
Internal audit	0.007***	Significant	REJECT HO ₂	There is a significant relationship between internal audit and credit risk

*** Significant at 95% confidence level

Source: Field Data (2016)

Credit policy (p=0.01) is significant at 95% confidence level therefore we reject the first null hypothesis (H₀₁) and conclude that there is a significant relationship between credit policy and credit risk management in deposit taking SACCOs in Nairobi County. Similarly, internal audit (p=0.007) is significant at 95% confidence level therefore we reject the second null hypothesis (H₀₃) and conclude that there is a significant relationship between internal audit on credit risk management in deposit taking SACCOs in Nairobi County.

V. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion of Findings

Regression analysis showed that credit policy was statistically significant. In fact, credit policy was the most important of the internal determinants considered by this study. The findings therefore show that the credit policy was vital for the SACCOs in the study in managing risk. The findings are therefore in agreement with those of Otieno (2013) that lending policies and non-performing loans are indeed related. The findings are in agreement with Agola (2014) that when credit appraisal and credit policy procedures on risk management are competent, they can influence achievement of amended financial performance objective. The findings are also in agreement with Wachira (2015) and Maiti (2015) that credit standard policy significantly affects financial performance by decreasing loan to assets ratio significantly leading to increment in financial performance. The findings are however in disagreement with Kimondo (2013) who found that credit policies affect the financial performance of deposit taking micro finance organization with a minimal effect since there are other more factors that affect financial performance with a bigger effect.

Regression analysis showed that internal auditing was statistically significant and was only second to credit policy in influencing credit risk in deposit taking SACCOs in Nairobi County. The findings therefore show that the internal audit function is important in managing credit risk. The findings are consistent with those of Munyi and Njiru (2015) that risk-based auditing was vital in detecting risks, promoting transparency and accountability and enhancing quality financial reporting which was key in corporate governance. The findings are also in agreement with Mbuti (2014) who found that objectivity of financial reporting in SACCOs, internal audit report completeness and timeliness of internal audit reporting all had consequential effect on financial performance of SACCOs.

5.2 Conclusion

The study concludes that internal factors such as credit policy and internal audit influence credit risk in SACCOs. Credit policy is the most important determinant of credit risk followed by internal audit. Credit policies gives the SACCO credit officers and the SACCO'S management specific guidelines in making some loan decisions and in shaping the overall portfolios of the SACCO. With an elaborate credit policy, management is better positioned to control lending risks, ensure the institution's stability and soundness, and fulfill oversight responsibilities. An effective and up-to-date loan policy increases the likelihood that actual loan documentation and underwriting practices are effective in minimizing credit risk. The study concludes that internal audit influences credit risk in SACCOs. This is because the internal audit function ensures that the credit policy is being adhered to and gaps in the policy or processes are identified and rectified accordingly. Internal auditors not only scrutinize and control the work of the credit department but also provide efficacy and safety in the framework of managing the credit risk.

5.3 Recommendations

Credit managers should ensure that the credit policy is reviewed and updated frequently to reflect changes in the market to ensure that the SACCO is not open to risks inadvertently. Deposit taking SACCOs in Nairobi County should ensure that they have internal auditors in every branch to minimize credit risk.

5.4 Suggestions for Further Study

The study found that SACCOs have varying credit policy and internal audit structures. Future research should focus on the factors influencing such structures and their influence on loan portfolio performance. A similar study should be conducted while controlling for variables such as age and size of the SACCOs to enable a deeper understanding of internal determinants of credit risk management in deposit taking SACCOs. A similar study should also be conducted in rural areas where SACCOs draw members with varying characteristics to those in Nairobi County.

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