EMPIRICAL DETERMINATION OF EFFECTS OF CREDIT RISK MANAGEMENT ON MICROCREDIT LOAN PORTFOLIO QUALITY IN DEPOSIT TAKING SACCO'S IN KENYA

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ABSTRACT

Savings and Credit Cooperatives were invented in German to promote savings and curb the exorbitant interest rates that were being charged to the indebted rural poor. Despite this nobble idea, micro credit loans portfolio performance has been declining. In Africa, SACCOs are facing challenges associated with asset quality. In Kenya, SACCOs equally face similar challenges that SACCOs are facing at global, continental and regional levels despite their importance in the economy. Deposit Taking SACCOs have continued to record a lower Portfolio at Risk at 8.40% in 2022 compared to 13.80% for Commercial Banking Institutions and 31.78% for Microfinance banks in the same period. Even though the percentages of Portfolio at Risk in deposit taking saccos are the lowest in the financial sector, the figures of the loans written off are significant at 15.27, 19.38, 24.19, 34.05 and 36.95 billion from year 2018 to year 2022 respectively. Portfolio at risk which measures loan quality also show a poor trend of 6.3%, 6.15%, 8.39%, 8.86% and 8.4% for the years 2018-2022 respectively. Existing literature commonly cover general DT Saccos portfolio, but with limited attention to Microcredit loan, as credit product accessed by over 76% of borrowers in Kenya. It is not known to what extent the microcredit loans are contributing to the recorded portfolio at risk of DT SACCOs in Kenya. Therefore, this study sought to determine effect of credit risk management on micro credit loans as a product on portfolio quality in deposit taking SACCOs in Kenya. The study adopted a descriptive and correlational research design with a target population of 84 licensed Saccos using a purposive sampling technique consisting of identified DT Saccos which have micro credit loans as product within their portfolio. Results of the study revealed that Credit Risk Management has a significant effect on portfolio quality ($p=0.000<0.05$); this imply that deposit taking Saccos should enhance their credit risk management on microcredit loans in a bid to improve their portfolio quality. The study is important for industry practitioners, regulators and policy makers.

Key words: PaR, CAMEL, DT SACCOs, SASRA, KPI, WOCCU.

INTRODUCTION

Background of the study

The acronym SACCO means a Savings and Credit Co-operative Society registered under the Co-operative Act. A SACCO is a member-owned financial institution where members pool savings and use them to provide affordable credit. SACCO management are also expected to encourage members to save. The SACCO movement is lately becoming active and the demand for credit from

the Sacco members has become high rendering lending activity to become the major activity in the SACCO. When SACCOs carry out the credit operations, they expose themselves to some risks. It is therefore worth noting that management of credit risk and management loan portfolio are to a great extent factors determining the profitability of deposit taking SACCOs. Also, of importance is to ensure that the loan portfolio is of good quality. Murodovich (2022) defined a loan portfolio as a set of different loan types given to borrowers with certain terms of repayment. Therefore, a loan portfolio in a Deposit Taking Sacco is collection of loans, compiled in a certain criterion, having a specific description according to the quality of the loans granted under a credit activity, while a portfolio quality are those loans which generate optimum profits at a certain degree of inherent credit risk (Seitkasimov et al. 2008). A good quality portfolio in a SACCO indicates the actual achievement of the terms of loan performance. Magali (2014) opines that portfolio quality improves operational efficiency in MFIs, while Singh and Padhi (2019) found out that it gives guidance on actionable steps for identifying potentiall risks.

Loan portfolio quality indicates the scope to which the financial institutions attain their loaning goals which contributes to the overall organizational objective of shareholder wealth maximization (Cooper et al., 2006). Alarmingly, the PaR of Kenyan SACCOs stands beyond the prescribed minimum endorsed by World Council of Credit Unions of 3 percent while SASRA's prescribes a minimum of below 5 percent. (SASRA 2017). The performance of the loan portfolio therefore contains a significant implication on the broader Sacco's performance and ability to take care of their going concern status.

The portfolio quality in Deposit Taking SACCOs has over the years been better in comparison with portfolio quality in other financial institutions in Kenya. SACCOs have been registering lower ratios in terms of NPLs in comparison with other financial institutions in Kenya. Initially this was attributed to the fact that SACCOs are the preferred loaning institutions by savers due to their competitive interest rates and social collateral (guarantee) model. However, most Deposit Taking SACCOs opened their common bond and are now recruiting members from the same market environment where other financial institutions get their customers, without considering the common bond. This has made them to introduce new products suitable to this new market.

The 2018-2022 SASRA supervisory reports reveal a gradual increase in gross loans and advances in billions at 374.28, 419.55, 473.74, 522.25 and 586.16 for year 2018, 2019,2020,2021 and 2022 respectively. The same supervisory reports also indicate that Portfolio at risk (PaR) has also been increasing and so are the loss loans to be written off. In the years 2018-2022, Deposit Taking SACCOs have had a loss of 15.27, 19.38, 24.19, 34.05 and 36.95 billion written off from their books being loss loans. These reports clearly show that the increasing portfolio at risk is weighing down the quality of portfolio of deposit taking saccos as evidenced in the SASRA supervisory reports indicating portfolio at risk levels registered at 6.3%, 6.15%, 8.39%, 8.86% and 8.4% for the years 2018-2022 respectively, the rates being higher than the internationally accepted threshold of 3% and 5% by the regulating authorities. Non-performing loans has also been increasing gradually. Even with these figures and percentages, Deposit Taking SACCOs recorded a lower Portfolio at Risk of 8.40% in 2022 compared to 13.80% for Commercial Banking Institutions and 31.78% for Microfinance banks in the same period.

Credit risk arises due to the likelihood of a customer not paying their loans as per the schedule as or as per the terms of payment (Ndyagyenda, 2020). Kalio and Kiplimo (2014) sought to study credit risk management practices and loan performance of micro finance institutions in Baringo County. The study used primary data and questionnaires to collect data; the researchers used descriptive and inferential statistics for data analysis. The study revealed that there is a strong relationship between the client appraisal and loan performance in MFIs. In Uganda, Ndyagyenda, (2020) studied credit risk and financial performance of Bank of Africa Limited, the study revealed that increase in credit leads to reduction of the banks profit.

Essendi (2013) studied credit risk management and loans portfolio among SACCOs in Kenya, the study employed descriptive survey research design, the study population consisted of 106 deposits taking SACCOs listed by SASRA of which a sample of 35 SACCOs were selected. The study used structured and semi structured questionnaires; the questions in the study instrument consisted of both closed questions and open-ended questions. Furthermore, secondary data for the study was sourced from SASRA publications and the SACCOs. The study revealed that Saccos have loan risk management policy, they involve stakeholders in formulating loan risk management policy and CAMEL rating system plays a very significant role in SACCO soundness and rating. Establishing the effect of credit risk management on microcredit loans on Portfolio quality in Deposit Taking SACCO's therefore remains imperative.

Statement of the problem

A trend analysis on performance of SACCO sub sector within the financial sector conducted by SASRA in 2019 using CAEL parameters reveal that on loan disbursements, commercial banking institutions continued to dominate the financial sector segment of the economy followed by the SACCO subsector, as Microfinance institutions come far behind the SACCOs. However, on portfolio performance using portfolio at risk (PAR) as a measure, the SACCO subsector has been performing better over the years. In as much as this information is true on the ranking in the financial sector, the empirical studies show a plummeting trend attributed to deteriorating quality of loan assets with non-performing loans ratio increasing every year in the SACCO subsector. In theory and practice, there are quite a number of factors which may lead to high portfolio at risk (PAR), it is from this background that the study proposes to determine the contribution of micro credit loan parameters on loan portfolio quality in Deposit Taking SACCOs in Kenya. SASRA while annually reporting on the financial performances of DT Saccos, report generally on the percentages of increase or decrease of the PaR in DT Saccos, without giving attention into the root course of the loan products contributing to the increase in the PaR. Many studies reviewed revolved around credit management in DT Saccos, credit policy in DT Saccos, general performance in DT Saccos and no one has so far conducted a study by specifically picking on a loan product and analysing how that loan product contributes to the portfolio quality of deposit taking saccos in Kenya, using combined four constructs of micro credit loan parameters which are micro credit loans lending terms, member quality, credit risk and information management. Microcredit loan, as credit product accessed by over 76% of borrowers in Kenya, and knowing how this loan contributes to the quality of portfolio is very important to SASRA, individual DT Saccos, policy makers, scholars, and the government because it will enhance prudent lending. This knowledge will enable DT Saccos put in measures

that will adequately address the declining quality of portfolio in DT Saccos and enhance the reduction of PaR to the allowed limits or even below.

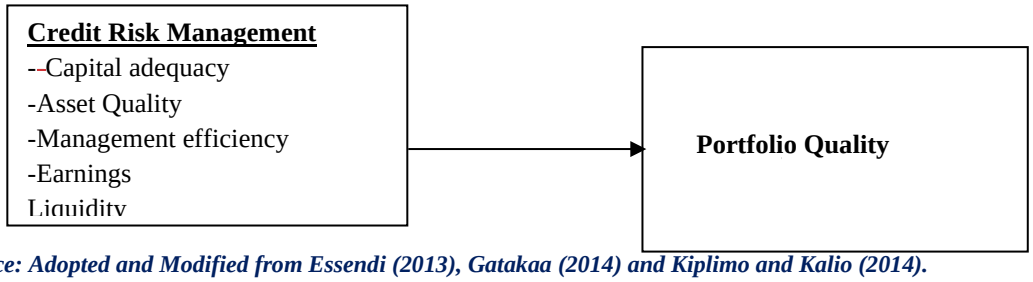
Objective of the study

The main objective of this study was to determine how application of credit risk management practices in DT Saccos applied on microcredit loans affects the quality of the general loan portfolio quality in DT Saccos.

Conceptual Framework

The study's structure is conceived as a functional relationship between a predictor variable, which is credit risk management as shown in the figure below.

Figure 1: Conceptual Framework



Source: Adopted and Modified from Essendi (2013), Gatakaa (2014) and Kiplimo and Kalio (2014).

LITERATURE REVIEW

Theoretical Literature review

The study was anchored on the credit risk theory, theorised by Merton (1974) describing credit risk as the possibility of facing a financial constraint due to not honouring of financial obligation by a counterparty in a financial operation. The theorists formed an opinion that the first ground of credit risk is the default risk which means that the risk that counterparty will fail to honour their contractual obligations. (Sunardi, 2017) studied risks inherent in credit unions in Indonesia and stated several risks exposures. Among the several risks he stated is Credit risk which arises when the loanee cannot and or does not want to meet the obligation to pay the principal installments and / or the interest as agreed in the loan agreement. The theory is particularly key with regard to measures taken by SACCOs and understands what triggers default and measures taken to lessen the effect of default including delinquency management safeguard.

The Concept of Credit Risk Management and Portfolio Quality

Reviewed empirical literature and theory links credit risk management and performance. For instance, in a study done at the University of Nairobi by Abdirahman (2020) about loan quality and performance of commercial banks in Kenya reveal that both loan quality and size of the bank has a

significant association with financial performance of the commercial banks. Other major control variables in the study were loan loss provisions coverage ratio, standard risk costs, write off ratio and liquidity. From the foregoing, it is clear that there is a relationship between credit risk management and portfolio quality despite the fact that many of the reviewed studies were done in commercial banks and microfinance institutions.

In yet another study about credit risk management and performance of commercial banks in Ethiopia by Bari *et al* (2015) they opined that there is a strong positive relationship between credit risk management and performance of commercial banks in Ethiopia. In Kenya, and in none financial institutions, Ombok (2017) investigated Forward Integration Credit Risk Mitigation Mechanisms and Return on Equity in agribusiness firms in Kenya; the study revealed that Forward Integration Credit Risk Mitigation Mechanisms positively and significantly influence Return on Equity of the firms. Ombok and Nyongesa (2016) studied Forward Integration Credit Risk Mitigation Mechanisms of commercial banks and the performance of agribusiness firms in Kenya, the study revealed that credit risk and performance of Agribusiness firms in Kenya are significantly related. Consequently, it is clear that most of the empirical studies reviewed used the traditional method of measuring organization's performance such as profitability, ROA, ROI and ROE. The proposed study however deviates by focusing of portfolio quality which is just a small component of financial performance of the organization. The proposed study is therefore imperative and clinical since it is specific to portfolio investigating the contribution of credit risk management to portfolio quality.

Empirical Literature

This section reviewed the previous undertaken studies which are related to the current study on the following variables:

Credit Risk and Portfolio Quality

Empirical investigations into credit risk management and loan portfolio quality have demonstrated that credit risk is the most critical and costly risk associated with MFIs, as pointed out by Crabb and Keller (2006). Credit risk can also pose a potential threat to the solvency of MFIs, as noted by Kayode et al. (2015). (Yusoff & Ho, 2009) in their research on credit risk management strategies in selected financial institutions in Malaysia, discovered that financial institutions employ multiple monitoring and evaluation tools to mitigate inherent credit risks, as no single strategy can cover all exposures within the financial sector. It is imperative to exercise due diligence and care when appraising and disbursing loans. A poorly performing loan portfolio can lead to both liquidity and credit risks, ultimately affecting a firm's performance.

Kibui & Moronge (2014) conducted a study focused on the impact of credit risk management on the financial performance of SACCOs. The research specifically aimed to examine the contemporary credit risk monitoring and control methods adopted by Harambee Sacco. The analysis employed a descriptive survey design, and the results indicated that the performance of SACCOs significantly improves when proper credit risk management is in place, with regulatory oversight by SASRA.

Silikhe (2018) conducted research on credit risk management in microfinance institutions in Kenya and found that despite the measures implemented by managers, loan recoveries remained a challenge. This challenge is a significant reason why many financial institutions either fail to grow or face closure.

Gisemba (2010) researched the relationship between risk management practices and the financial performance of SACCOs. The study revealed that SACCOs employed various approaches in loan appraisal and risk analysis before disbursing loans to minimize loan losses. This included establishing the "5 Cs" of credit appraisal and utilizing risk analysis to reduce and mitigate credit risks. The conclusion was that for SACCOs to effectively mitigate credit risks, they should aim for minimal loan defaulters, loan write-offs, and overall improved SACCO performance.

Essendi (2013) conducted a study on the effect of credit risk management on loan portfolios among SACCOs in Kenya. The research found that most SACCOs in Kenya have credit policies outlining how to manage the various risks encountered in their lending activities. These credit policies should encompass overhead costs and the current trends of creditors. Ledgerwood (2000) recommended that to effectively manage credit risk, MFIs should establish systematic loan distribution based on well-defined credit policies and procedures. Ahmed and Malik (2015) highlighted that credit risk management involves loan appraisals to minimize loan losses.

Ademba (2017) identified the determinants of financial performance for deposit-taking SACCOs in Nairobi County. The specific factors examined included asset quality, capital adequacy, operational efficiency, and liquidity, all in relation to the financial performance of deposit-taking SACCOs in Nairobi County. Correlational research design was employed, and the study concluded that there is a strong correlation between capital adequacy, asset quality, operational efficiency, liquidity, and the financial performance of deposit-taking SACCOs.

Kiplimo and Kalio (2014) conducted an analysis of credit risk management and loan performance in microfinance institutions in Baringo County, Kenya. They assessed the performance of seven MFIs in the county using a descriptive research survey design, along with statistical procedures such as regression and correlation analysis. The results revealed a significant relationship between client appraisals and the loan performance of MFIs.

RESEARCH METHODOLOGY

Research Design

The research utilized a descriptive and correlational research design. As per Cooper & Schindler (2014), a descriptive study involves the depiction of existing conditions and attitudes through observational and interpretative techniques. This design was selected because it offered a contextual means of interpreting and comprehending the influence of micro-credit loans on the portfolio performance of deposit-taking SACCOs. The study employed purposive sampling, a method chosen for its simplicity and effectiveness in aligning the sample size with the research objectives, thus

enhancing the validity and reliability of the study's data and results. This approach allowed the researcher to extract valuable insights from the collected data, facilitating a comprehensive description of the significant impacts on the population. Furthermore, this method was highly efficient in terms of both time and cost, especially when compared to other sampling techniques. The sampling method was specifically directed at deposit-taking SACCOs offering micro-credit loans as a product.

Sample Size and Study Population

The population consisted of 84 deposit taking Saccos that have microcredit loan as a loan product in their portfolio of loans. According to SASRA there were 176 deposit taking Sacco licensed by SASRA as at December 2022. The 84 DT Saccos were purposively sampled because they have microcredit loans as a loan product in their portfolio. The sample of 84 DT Saccos constituted 100% of the entire population of DT Saccos offering microcredit loans. Respondents were credit Managers in each branch. The choice of credit managers as the only respondents was also purposive with the belief that they have valuable and relevant information for this study. There were 62 returned questionnaires making the response rate to be 74%. The sample period was one month, this sample fairly represented the whole population and should be considered large enough to provide a general view of the entire population and serve as a good basis for valid and reliable conclusions.

Study Area

The study was carried out in a specific geographic region, encompassing all the SACCOs licensed by SASRA and operating in Nairobi, Kisumu, Kakamega, Siaya, Kisii, and Homabay. A larger portion of the sample was drawn from Nairobi County due to the fact that a majority of the licensed SACCOs have their headquarters located there. Additionally, Nairobi was chosen because it could potentially provide a representative sample of the entire population. This chosen setting is deemed suitable and adequate for addressing the research objectives guiding this study. The list of the SACCOs under consideration is detailed in appendix

Research Hypothesis

H01: There is no significant effect of Credit Risk Management on micro credit loan Portfolio quality in Deposit Taking SACCO's in Kenya.

Model Specification

A model was created to establish a connection between credit risk management (X_1) and the portfolio quality (Y) of deposit-taking SACCOs in Kenya.

$Y=\beta_0 + \beta_1 X_1 e_t$…….....1.

Where:

Y= Portfolio Quality,

β_0= Constant coefficients,

β_1= coefficient of credit risk management

X_1= Credit Risk management

e_t= error term

RESULSTS AND DISCUSSIONS

Response Rate

The number of questionnaires that were given out to prospective respondents were 84, out of which 62 questionnaires were properly filled and returned. Some of the questionnaires which were in hard copies were returned half-filled while others both in soft and hard copies were completely not returned despite a lot of follow ups. The response rate was 74%.

Demographics

Figure 4.1: Designation of Respondents

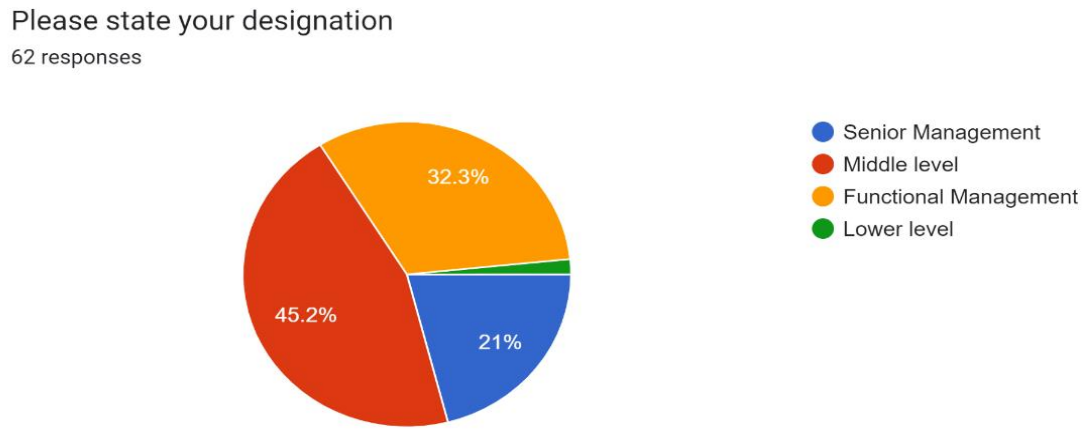


Figure 4.1 shows that 21% of the respondents are in senior management, 45.2% are in middle level management, 32.3% functional management and 1.5% are in lower level management.

Figure 4.2: Gender of Respondents

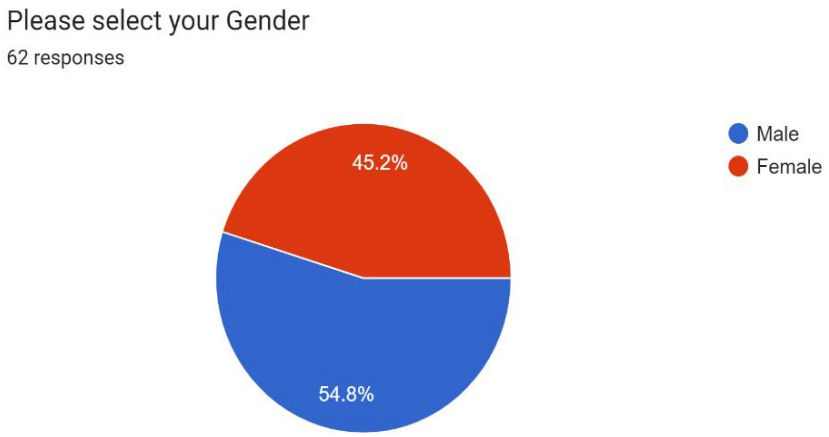


Figure 4.2 shows that 45.2% of respondents were male and 54.8% were female.

Figure 4.3: Age of Respondents

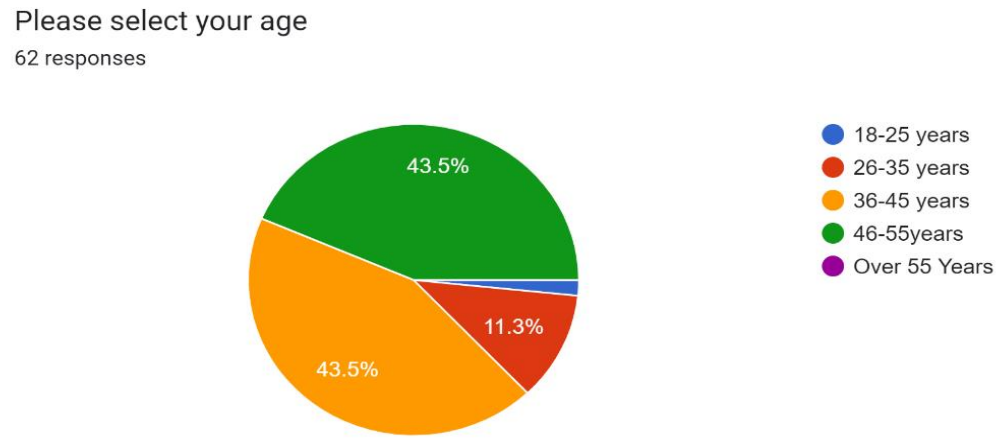


Figure 4.3 shows that 67.7% of the respondents had undergraduate degree, 17.7% had postgraduate degree and 14.5% had diploma certificate.

Figure 4.4: Education Level attained

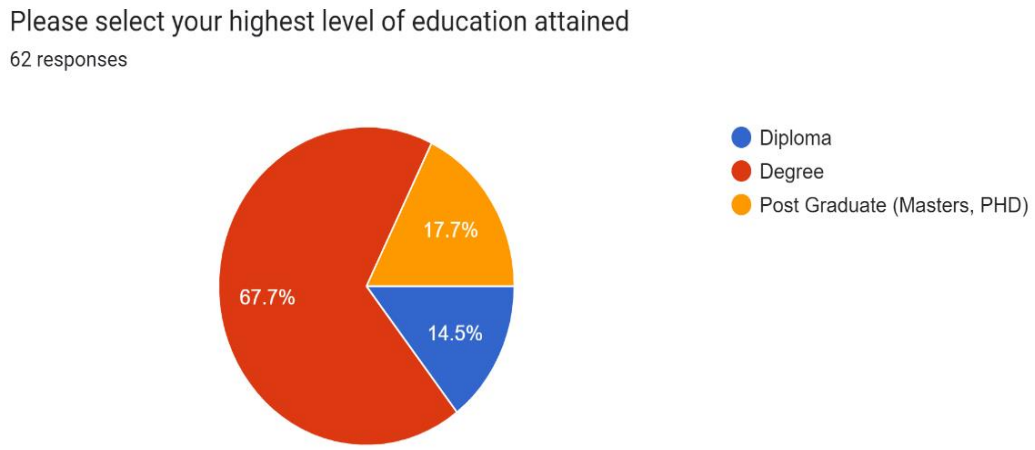


Figure 4.4 shows education level of respondents, 67.7% of the respondents were degree holders, 17.7% had post graduate qualification (masters and PhD) and 14.5% were diploma holders.

Figure 4.5: Years respondents had worked in their current positions

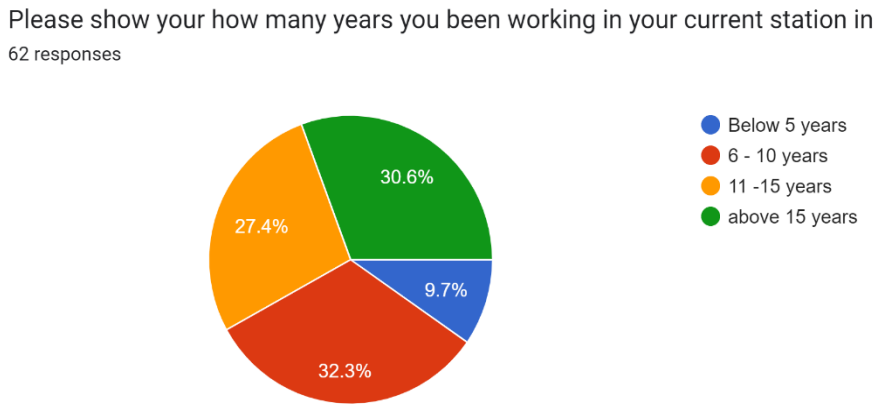


Figure 4.5 reveal the number of years respondents have worked in their current positions, 27.4% had worked in their current positions between 11-15 years, 30.6% have worked in their current positions above 15 years, 32.3% had worked in their current positions between 6-10 years and 9.7% of respondents have worked in their current position below 5 years.

Table 4. 1: Model Summary of Credit Risk Management on micro credit loan Portfolio quality

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.713[a]	.509	.501	.17756

a. Predictors: (Constant), Credit Risk

Table 4.1 presents a summary of the results of the Ordinary Least Squares (OLS) regression model. A modified R value of .713 indicates that the results were trending in the right direction (positively), based on the provided range of -1 to +1. There exist a .713 (71.3%) chance that the Credit Risk Management will affect Portfolio Quality of deposit taking SACCO's. Credit Risk Management accounts for 50.9%, leaving 49.1% to other factors not considered in this study. The value of R indicates how closely actual values of the dependent variable match those forecasted value of Portfolio Quality of deposit taking SACCO's.

Table 4. 2: ANOVA of Credit Risk Management on micro credit loan Portfolio quality

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.960	1	1.960	62.160	.000[b]
	Residual	1.892	60	.032		
	Total	3.851	61			

a. Dependent Variable: Portfolio Quality

b. Predictors: (Constant), Credit Risk

Table 4.2 is a presentation of the analysis of variance (ANOVA), The F-statistic and significance level. From the table, F statistics of 62.160 is above 2 and significant at 95% confidence level where

(P=0.000<0.05), this implies that Credit Risk Management has a significant effect on Member Quality at 95% confidence level

Table 4.3: Coefficients of Credit Risk Management on micro credit loan Portfolio quality

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.092	.258		8.122	.000
	Credit Risk	.493	.063	.713	7.884	.000

a. Dependent Variable: Portfolio Quality

$$\boldsymbol{PQ = 2.092 + 0.493\, CRM} \text{ .....4.3}$$

Credit Risk Management (p=0.000) significantly affect Portfolio Quality. A unit increase in Credit Risk Management causes an increase in Portfolio Quality by 0.493 units.

The coefficient for credit risk management suggests that for every one unit increase in one credit risk management, portfolio quality is estimated to increase by approximately 0.493 units. The high standardized coefficient (Beta) of 0.713 indicates that credit risk management has a moderate influence on portfolio quality compared to other variables in the model. The significant p-value (p=0.000) suggests that the relationship between credit risk management and portfolio quality is unlikely to be due to random chance and is statistically meaningful.

In table 4.1, Coefficient of determination (R^2 = 0.509) implying that 50.9% of loan portfolio quality can be explained by credit risk. These results indicate that credit risk has a significant and positive impact on portfolio quality, with better credit risk management practices associated with higher portfolio quality.

These findings are in line with the outcomes of a prior study conducted by Kibui N. (2014), which aimed to investigate the impact of credit risk management on the financial performance of SACCOs. The study had a specific focus on assessing the contemporary credit risk monitoring and control methods implemented by Harambee Sacco. The analysis employed a descriptive survey design, and the results indicated that credit risk management played a vital role in enhancing the performance of the SACCOs in Kenya.

While the current study used a correlational research design, a study by Ademba (2017) employed a correlational research design to identify the factors influencing the financial performance of deposit-taking SACCOs in Nairobi County. The specific objectives of this research encompassed aspects such as asset quality, capital adequacy, operational efficiency, and liquidity concerning the financial performance of deposit-taking SACCOs in Nairobi County. The study concluded that there is a robust correlation between capital adequacy, asset quality, operational efficiency, and liquidity, all of which have a significant impact on the financial performance of deposit-taking SACCOs in Kenya.

CONCLUSION AND RECOMMENDATION

Conclusion

Based on the findings, this study revealed that there is a positive relationship between credit risk management and microcredit portfolio quality. The study concludes that constructs of credit quality which are, capital adequacy, asset Quality, management efficiency, earnings, liquidity positively and significantly influence microcredit portfolio quality. An enhanced credit risk assessment on microcredit loans plays an important role in determining the quality of the portfolio. This means that adequate capital, low Portfolio at Risk, efficient management, good returns and proper liquidity improves on portfolio quality.

Recommendation

It is recommended that it is necessary that a separate credit policy be made specifically for the microcredit loans. DT Saccos should invest in staff training and development to staff members involved in credit risk assessment and management. The staff should be equipped with skills and knowledge necessary to effectively evaluate credit risk, make informed lending decisions and implement risk mitigation strategies. There should be a thorough credit risk assessment process to ensure that loan borrowers are credit worthy, have stable income and a good credit history. Close monitoring and evaluation of both loan payment and deposit contribution should be enhanced since Deposit Taking SACCOs are self-financing. Overdue loans should be detected within the shortest time possible. The monitoring should also include compliance issues such as liquidity ratios and capital adequacy ratios.

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