

**EFFECTS OF CREDIT RISK MANAGEMENT PRACTICES ON SAVING
AND CREDIT COOPERATIVE SOCIETIES SUSTAINABILITY IN BABATI
TOWN COUNCIL, TANZANIA**

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends the acceptance by the open university of Tanzania a dissertation entitled; **“Effects of Credit Risk Management Practices on Saving and Credit Cooperative Societies Sustainability in Babati Town Council, Tanzania”** in partial fulfillment of the requirements for the Degree award of Master of Arts of Monitoring and Evaluation (MAME).

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Dr. Salvio Macha
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Date

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DECLARATION

I, **Lenard Kamuru**, declare that the work presented in this dissertation is original. It has never been presented to any other University or Institution. Where other people's works have been used, references have been provided. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfillment of the requirement for the Degree of Master of Arts in Monitoring and Evaluation (MAME).



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Signature

18/09/2023

.....

Date

DEDICATION

I sincerely dedicate this work to my dear wife who has always been available for encouragement and assistance throughout the entire period.

ACKNOWLEDGEMENT

To start with, I humbly and sincerely accord glory and honor to the Almighty Father for enabling me to accomplish this work successfully.

I actually acknowledge The Open University of Tanzania for granting me an opportunity to pursue my studies at the institution, and more so I sincerely extend my appreciation for the encouragement, patience and the invaluable suggestions and guidance that my supervisor Dr. Salvio Macha provided to me throughout the development and writing up this dissertation report.

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ABSTRACT

Saving and Credit Cooperative Societies (SACCOS) are important micro-finance institutions (MFIs) which provide credit services to the marginalized people who are excluded from financial services offered by the formal financial institutions because of their economic vulnerability. However SACCOS are not free from credit risk which is inevitable in any lending institution. Therefore execution of credit risk management is imperative in SACCOS to ensure their sustainability. This study investigated the effects of credit risk management practices on SACCOS' sustainability in Babati town council, Tanzania. Specifically the study examined the effects of credit risk analysis, credit risk monitoring and credit risk mitigation practices on SACCOS' sustainability in Babati town council. A descriptive survey was used with a target population of 11SACCOS in Babati town council. Census methodology was also adopted and cross-sectional research design was used to guide data collection. Questionnaire was used to collect primary data in 11 SACCOS which was analyzed through statistical package for social sciences (SPSS v-20) tools. Descriptive and inferential statistics were used for data analysis where multiple regression analysis was performed to test the overall effect of credit risk management on SACCOS' sustainability. The findings of the study indicated that credit risk analysis, credit risk monitoring and credit risk mitigation have negative and statistically insignificant effect on SACCOS' sustainability. The study recommended that SACCOS should not implement credit risk management practices solely for improving sustainability.

Keywords: *Credit Risk, Credit Risk Management, Risk, SACCOS' Sustainability.*

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LIST OF ABBREVIATION AND ACRONYMS

DT-SACCOS	Deposit Taking Savings and Credit Co-operative Societies
FIs	Financial Institutions
FSS	Financial Self-Sufficiency
MFIs	Microfinance Institutions
SACCOS	Savings and Credit Co-operative Societies
TCDC	Tanzania Co-operative Development Commission

CHAPTER ONE

INTRODUCTION

1.1 Chapter Overview

This chapter essentially focused on Background of the study, statement of the problem, study objectives, research questions and scope of the study, significance of the study, finally the limitations and organization of the study.

1.2 Background to the Study

Saving and credit cooperative societies (SACCOS) are organizations where members regularly pool their savings and consequently obtains loans which they may use for different purposes. The drive behind the establishment of SACCOS is to promote savings and make credits available to the members. They are important micro-finance institutions which mobilize financial resources for various development activities especially in rural areas where majority of marginalized reside and earn their living from agriculture (Bwana & Mwakunjonga, 2013).

Danga *et al.*, (2018) argued that the essence of SACCOS' establishment is objectively to provide credit services to the marginalized people who can't be served by the formal institutions because of their economic vulnerability. It is therefore obvious to state that the core function of SACCOS borders on loans and hence the risk of default is inevitable and this becomes an issue of great concern within the management SACCOS. Babati Town is the Headquarter of Manyara Region in the Northern part of Tanzania, with a population of 93,108 people according to the 2012 National census. According to Babati town council cooperative office (BTC-DCO) as at June 2021, there are 17 registered SACCOS out of which 11 are active and 6

are dormant with a total of 1328 members with 32 groups registered as individual members in different SACCOS.

According to Ngonyani (2019), Credit is a transaction that involves many parties, one part being the lender while the other is the borrower or the debtor. The lender provides services, goods, money as well as securities and borrower/debtor who borrows money or services and repays in future which normally includes the repayment of the principal sum together with interest. The author further affirmed that parties involved in credit transactions have been noted to be constrained by inability to meet their obligation of loan repayment on time, This is normally so when the borrowers are poorly loaned or due to other external factors resulting to inability of servicing the loan on time and therefore it is imperative for creditors to have enough Knowledge of credit management so as to be able to establish the financial ability of their clients.

Credit risk according to Hesborn *et al.*, (2016) is the potential that a SACCOS borrower or counterparty will fail to meet his obligations as per the agreed terms. It is the risk to earnings or capital arising from the failure of a borrower to meet the terms of any agreement with SACCOS, or failure to perform as per the obligation. Credit risk is found almost in all activities whose success depends on the counterparty, issuer or borrowers' performance. According to Chijoriga (1997) credit risk is the most expensive risk whose effect is more significant compared to other risks and threatens the solvency of the financial institutions directly, therefore credit risk management is critical for the sustainability of any lending institution. Kalu *et al.*, (2018) attested that credit risk management refers to the systems, procedures and

controls which an organization should have in place to ensure the borrowers' payments are collected efficiently to minimize the risk of non-repayments.

The author further posited that techniques of credit risk management include credit risk identification, analysis, monitoring, and mitigation. Credit risk management need to be a robust process that enables the banks to manage the loan portfolios proactively in order to minimize the losses and earn an acceptable level of return to its shareholders. The importance of the credit risk management is recognized by banks for it can establish the standards of process, segregation of duties and responsibilities in policies and procedures endorsed by the banks. The established procedures and techniques are used to reduce and prevent the occurrence of credit risk associated with loan exposures (Lagat et al., 2013).

Credit risk management according to George & Sile (2017) is the identification, measurement, monitoring, and control of risks arising from the possibility of a borrower failing to effect loan repayments as per the agreed terms. Credit extended to borrowers may be at risk of default such that whereas banks extend credit on the understanding that borrowers will repay their loans, some borrowers usually default resulting to decrease of banks income due to the need of loan provisions. Every financial institution bears with it a degree of risk when the institution lends to business and consumers and hence experiences some loan losses when certain borrowers fail to repay their loans as per the agreement.

The author further attests that Credit risk management is very important to financial institutions and needs to be an integral part of the loan process. It maximizes an

institution adjusted risk rate of return by maintaining credit risk exposure with a view to protect the financial institution from the adverse effects of credit risk. Adequate management of credit risk in financial institutions (FIs) is critical for their sustainability.

Studies on credit risk management against different aspects of SACCOs have been conducted locally and around the globe, in Tanzanian Magali (2013); Edison (2014) & Moshi (2020) investigated on credit risk management against profitability of rural SACCOs, MFIs' performance, reduction of NPLs among MFIs respectively. Ismail (2016) investigated on credit risk management practices on MFIs; Magali & Qiong (2014) compared credit risk management in commercial banks and in rural SACCOs while Kilembe (2017) studied on factors that affected financial sustainability of SACCOs. None of the analyzed studies explained the effect of credit risk management on SACCOs' sustainability.

Beyond the Tanzanian boundaries studies which have been conducted on credit risk management against different SACCOs parameters includes, Kariuki (2017); Bwire & Omangwa (2019) and Shieler *et al.*, (2017) - financial performance of DT-SACCOs and MFIs respectively; Koori & Buro (2019) – performance of loan portfolio on SACCOs; Kalui & Kahuthu (2016) – growth of SACCOs wealth while Mutuku (2016) and Omar (2017) investigated risk management against loan performance and financial performance in commercial banks respectively. Nabi, et al., (2018) studied effect of credit risk management on credit performance in Bangladesh MFIs just to mention a few.

However Kariuki (2017); Koori & Buro (2017); Bwire & Omangwa (2019); and Kimoi, *et al.*, (2016) revealed that credit risk identification, credit risk analysis, risk control, credit risk monitoring, credit appraisal and credit risk mitigation impacted positively on the respective dependent variables, which contradicted with the findings of Kalui & Kahuthu (2016) and Shieler, *et al.*, (2017)' results. Kalui & Kahuthu (2016) revealed that credit risk identification, credit risk analysis and credit risk monitoring had no effect on SACCOS' growth, under the same tune Shieler, *et al.*, (2017) in their study found that credit risk identification and analysis had strong relationship on financial performance of MFIs while credit risk monitoring and credit risk mitigation related moderately to financial performance of MFIs.

Moreover, Omar (2017) and Mutuku (2016) revealed that risk monitoring impacted negatively on performance of commercial banks while Kiprop (2017) found a positive relationship of risk monitoring on the performance of FIs. The reviewed literature warrants further investigation on credit risk management due to the inconsistent results depicted by different scholars, and therefore with such a background this study investigated on the effect of credit risk management on SACCOS' sustainability in Babati town council.

1.3 Statement of the Problem

In Tanzania SACCOS are considered to be very important and especially in rural areas since they are semiformal FIs which serve many people particularly those who were not served by the formal FIs. In their operations, SACCOS focuses not only on the profit but also on improving their members' welfare and eventually contributes to the overall economy of the country (Magali, 2014). Bwana & Mwakunjonga

(2013) affirmed that SACCOS contribute to about 40% of the Tanzania GDP and provides employment to secondary school and college leavers, they also finance small and medium enterprises in rural areas and at the same time creates opportunities for people both in rural and urban areas to save their money which makes SACCOS to work as rural banks. Therefore sustainability of SACCOS is critical and inevitable.

However, SACCOS in Tanzania are not without drawbacks which affect their survival and sustainability negatively. For instance, Hesborn, et al., (2016) affirmed that in Tanzania, SACCOs are identified as capable of promoting expansion and availability of Micro-finance services in rural areas but in many cases SACCOs do not have the necessary skilled staff to maintain good records in bookkeeping, accounting, cash management and credit operations. Because of this poor record keeping, many SACCOs could not provide proper accounting records or show audited accounts, TCDC (2018) annual statistical report presents a severe problem on the sustainability of SACCOS because as at December 31, 2018 registered SACCOS were 4770 out of which 1015 (31.55%) were active, 2097 (43.96%) were dormant and 1168 (24.49%) were untraceable.

Under the same note Danga, *et al.*, (2018) and Magali (2014) noted that SACCOS in Tanzania are faced with poor practices or lack of credit risk management resulting to NPLS which eventually threatens their sustainability. From the reviewed literature, Magli (2013), Moshi (2020) and Edison (2014) each investigated on different aspects of credit risk management against rural SACCOS profitability, reduction of NPLs, and practice of policies and procedures respectively. Mutku (2016) and Omar

(2020) in their studies on the effect of credit risk management on banks' performance found that credit risk monitoring was negatively insignificant on the banks' performance which contradicted with Nuwatuhaire (2020) and Biwott et al., (2015)'s results.

Kalui & Kahuthu (2016) found that credit risk identification, analysis, and monitoring were statistically insignificant on SACCOS growth of wealth while Koori & Buro (2017), and Kimoi et al., (2016) found that credit risk identification, analysis, monitoring were positively and statistically significant to different parameters of SACCOS. Lagat et al., (2013) found that credit risk mitigation had a positive statistical significance while Shieler et al., (2017) results indicated just a moderate statistical significance on credit risk mitigation against the performance of MFIs. The presented inconsistency on the effect of credit risk management on various SACCOS' aspects requires a consensus and taking into account that no study has been conducted locally on the subject, There was a dire need for further investigation on the subject and it is against this background that this study filled the identified study gap by investigating on the effects of credit risk management practices on SACCOS' sustainability in Babati town council.

1.4 General Objective of the Study

The main objective of the study was to investigate the effect of credit risk management practices on SACCOS' sustainability in Babati Town council.

1.4.1 Specific Objectives of the Study

- i. To investigate the effect of credit risk analysis practices on SACCOS' sustainability in Babati Town council

- ii. To determine the effect of credit risk monitoring practices on SACCOS' sustainability in Babati town council.
- iii. To determine the effect of credit risk mitigation practices on SACCOS' sustainability in Babati town council.

1.4.2 Research Hypothesis

H0₁. Credit risk analysis practice has no statistical significant effect on SACCOS' sustainability in Babati town council.

H0₂. Credit risk monitoring practice has no statistical significant effect on SACCOS' sustainability in Babati town Council.

H0₃. Credit risk mitigation practice has no statistical significant effect on SACCOS' sustainability in Babati town council.

1.5 Scope of the Study

This study was conducted on SACCOS operating in Babati town council, Manyara region. The study focused on the effects of credit risk management practices specifically on credit risk analysis, credit risk monitoring and credit risk mitigation because of their influence on SACCOS' sustainability.

1.6 Significance of the Study

The study will provide useful information and knowledge for researchers, government, policy makers, academicians, and SACCOS' management in planning for business strategies, policies and procedures. It will also help SACCOS in their mission of protecting and maximizing the shareholders' wealth which in return will boost the economy of the country and poverty reduction.

1.7 Organization of the Study

The study was organized as follows; chapter one included background to the study, statement of the problem, Objective of the study, Specific objective, research scope and significance, research limitations and organization of the study. Chapter two presents the definitions of key terms and concepts, theoretical and empirical literature review, the study gap and the conceptual framework. Chapter three includes research philosophy, research design, sampling procedures, data collection and analysis techniques, data validity and reliability, variables and measurements, and finally research ethical issues considerations. Chapter four presents data analysis and discussion of the findings while chapter five covered summary of the findings, conclusion, recommendations, and suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

This chapter basically focuses on the definition of key terms and concepts, theoretical and empirical review, and finally presents the research gap and conceptual framework of the study.

2.2 Definition of the Key Terms and Concepts

2.2.1 Credit Risk

Credit risk According to Mabonga & Maina (2017) is the potential that a borrower or counterparty will fail to meet its obligations as per the agreed terms. The author argued that credit risk is the most expensive risk in financial institutions (FIs) and with a more significant effect compared to other risks since it threatens the solvency of FIs directly. The magnitude and level of loss caused by the credit risk in comparison with other kind of risks is severe and can cause high level of loan losses and even institutional failure. Taiwo, *et al.*, (2017) defined credit risk as the probability that a bank borrower will fail to honor its obligations as per the contract terms or the possibility of the outstanding loan becoming partially or totally lost due to credit risk. Nevertheless, poorly administered credit reduces bank profitability and results to bank distress and or failure.

On a similar front Hesborn *et al.*, (2016) asserted that credit risk is the current and prospective risk to earnings or capital arising from a borrower's failure to honor the contract terms with the SACCOS. In all activities in which the success depends on the counterparty, lender or borrower's performance Credit risk is inevitable and

arises any time SACCOS funds are exposed through actual or implied contractual agreements, whether shown on or off the balance sheet, which means that credit risk is a major concern for the viability of SACCOS.

2.2.2 Credit Risk Management

Credit risk management has been defined by Wanjohi & Baimwera (2016); Makori & Sile (2017); Afriyie & Akotey (2013) as the identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments. Credit issued to borrowers may be at risk of default such that when banks extend credit on the idea that the borrowers will repay their loans, some borrowers normally default and hence a decrease of banks income is realized due to the need to provision for the loans. The authors further affirmed that Credit risk management is an important structured approach for managing uncertainties by assessing risk, developing strategies to manage it and using managerial resources to mitigate risks. Such strategies include avoiding the risk, reducing the negative effects of the risk, transferring to another party, and accepting some or all of the consequences of a particular risk.

Makori & Sile (2017) attested that for the survival of FIs adequate management of credit risks in the said institutions is critical, To SACCOS credit risk management is of greater concern due to the fact that apart from the higher levels of perceived risks resulting from some of the features of clients and business conditions that they encounter, SACCOS' main income generating activity is the Credit creation. The goal of the credit risk management is essentially to maintain the efficiency of the business activities and the continuity of the entire business (Spuchl'ákavá, *et al.*,

2015).

On the other hand Kalui & Kiawa (2015) argued that imperfect credit risk management is a primary cause of many business failures including FIs. Kariuki (2017) attested that it is important for SACCOs to have in place a comprehensive risk management practices and reporting process to identify, measure, monitor, manage, report and control credit risks. Efficient credit risk management practices have been essential in allowing the phenomenal growth in credit unions. Effective management of credit risk is critical for the SACCOs` viability and sustained growth. The author further attested that if credit risk is not controlled it may lead to insolvency.

2.2.3 Credit Risk Analysis

Risk analysis refers to the process of assessing the likelihood of risk occurrence using quantitative and qualitative analysis method, assessment of the cost and benefits of addressing and analyzing risks which includes prioritizing of the risks and selecting those that need active management. Other areas of more consideration during analysis and assessment of risks includes economical, legal, environmental and social facets. Active credit risk analysis is an important practice to decision-makers in commercial banks since it helps in future plans forecast and enables them to measure, prioritize and reduce risks in an optimal way (Sleimi. 2020).

Kimoi, *et al.*, (2016), affirmed that after risk identification risk analysis follows to provide a greater understanding of risks and helps the organization to compare risks and prioritize on risky events. Impacts and probability assessment of risks is

basically done through effective risk analysis to make it clearly understood across the organization. To ensure credit risk analysis relevancy and appropriateness with regard to the nature and level of risk within the organization, it should be reviewed regularly may be quarterly or after six months but not yearly, a frequency that reflect the profile of the risks in the organization.

Lagat, et al., (2013) argued that credit risk analysis involves methods which are applied to calculate the creditworthiness of a borrower. It involves the analysis or examination of sources of repayment as well as credit history of the borrower. For a credit to be approved, the SACCOS will check for all the factors with primary emphasis on the borrowers' ability as well as the various policy requirements. Risk analysis also includes the management's policies and the activities conducted during loans granting, that highly influences whether the loan will be a good or a bad loan.

2.2.4 Credit Risk Monitoring

Credit risk monitoring is defined as the identification, measurement, monitoring and control of risks that may arise from default in repayments of loans and entails the systematic application of management policies, procedures and practices of the tasks of identifying, analyzing, assessing, treating and monitoring risk. Moreover, credit monitoring is recognized in current business world as an integral part of good management practice (Olukwo, 2020). According to Omar (2020) risk monitoring is positioned last in the risk management process and it is the most essential activity performed by risk managers as it involves contacting clients frequently who see managers as problem solvers and trusted advisors. It also assists managers to unveil problems which occur in the systems early. By adopting an appropriate risk

monitoring strategy, achievement of an appropriate product pricing in line with the estimated risk is realized which in turn affects profitability of FIs positively.

Nuwatuhaire, *et al.*, (2020) asserts that lending institutions should have in place comprehensive procedures and information systems to monitor the performance of its loan portfolio which should include methods to identify and report defective loans to ascertain that they are appropriately monitored as well as administered and provided for. Credit risk monitoring system should feed senior management with the relevant information for making its judgments on the credit quality of the loan portfolio and provide the base upon which a loan loss or provisioning methodology is built.

It is from such information that the senior management is able to monitor the condition of the loan portfolio together with criteria for determining the extent of loan loss provisions for credit risk assessment, accounting and capital adequacy purposes. Moreover, to ensure effective loan monitoring, MFIs need to work to establish its presence, its purpose, and its commitment to the growth of the local business community since the community outreach plays an important part in the sustainability of an institution.

The author further observed that proper credit monitoring ensures that lending organization keeps track of loan dynamics which enables mitigation of adverse changes and therefore improve the performance of loan in terms of repayment of interest and the principal that shape the liquidity of the businesses. Credit risk monitoring system should observe the adherence to the collection policy and that the

right actions for loan collections and bad debts are kept within the limit.

2.2.5 Credit Risk Mitigation

Credit risk mitigation is the application of various methods to reduce the risks to FIs and other business which provide credit. Banks use various strategies to relieve the credit dangers to which they are uncovered. For example, exposures might be collateralized by first need claims, whole or to some degree with money or securities, an advance introduction might be ensured by an outsider, or a bank may purchase a credit subsidiary to balance different types of credit hazard (Sikolia et al., 2019).

Dohnal (2008) contends that Credit Risk Mitigation is a technique used by a lending institution to reduce the credit risk involved in an exposure or exposures which the institution continues to hold. A collateralized transaction is a transaction where the credit exposure or potential credit exposure of the lending institution to a borrower is hedged in whole or in part by the provision of a collateral by the borrower or by a third party on behalf of the borrower. Such collateralized credit exposures must have a risk weighted exposure amount lower than the same credit exposure without credit protection.

The author further attested that credit risk mitigation can either be funded credit protection such as real estates and financial instruments (Collateralized) or unfunded credit protection such as the use of guarantors. In the later case the reduction of the credit risk exposure of a lending FI derives from the undertaking of a third party to pay an amount in the event of a default of the borrower or on occurrence of other

specified events. Lagat et al., 2013 argues that established procedures and techniques are used to mitigate the occurrence of credit risks associated with loan exposures where such risk mitigants protects an exposure which the SACCOS continue to hold and guarantee system is the most common technique applied in SACCOS.

2.2.6 SACCOS' Sustainability

Mutiso (2019) defined sustainability as the ability to maintain, support or long term endurance. That is to say for the SACCOS to be financially sustainable they must meet the costs of all their transaction, maintain a consistent earning and consequently function without subsidies. Sustainability is defined as the ability of a given activity to continue into the future within the organizations' resources. In financial terms, sustainability refers to the ability of an organization to service all of its expenses through its generated revenue where MFIs are said to be sustainable when their generated revenue is enough to cover all operating expenses and continues with operations even after the withdrawal of grants and soft loans to the organization (Nthiga, 2017).

Marwa & Aziakpono (2015) as well defined sustainability as the ability of an organization to continue with a defined behavior indefinitely, meaning that organization is able to meet its goals or target over a long period in future. In firms and FIs self-sustainability can be measured in terms of both economic and financial sustainability. The author argued that sustainability is a broad term and whose dimensions includes financial sustainability, institutional sustainability, programme sustainability, legal policy environmental sustainability, impact sustainability, human resource sustainability, mission sustainability and market sustainability.

The author argued that once financial sustainability is achieved in FIs, so do other dimensions of sustainability. Basically MFIs were established to reduce poverty by empowering the poor and it is from such a background that the welfare proponents argues that the success of MFIs can be assessed by considering the number of people served (outreach depth) and not financial sustainability. In the same light the institutional approach proponents argued that due to the volatility and unsustainability of donors' funds, ignoring financial sustainability may disturb the quality of the revolving fund and endanger the future availability of the service. This implies that if financial sustainability is not one of the major goals, then MFIs may collapse in the long run since unsustainable MFIs might help the poor now, but they will not help the poor in the future because they will not be in existence.

Rutanga, *et al.*, (2021) argued that a sustainable MFI can be able to continue offering services after the withdrawal of donors or government funds. MFIs are shifting from the initial paradigm of grants and social oriented to the new fashion of regulated commercial firms and institutional viability which has developed the importance of accountability, transparency, efficiency, and have freedom of setting interest rate, financing decision and appropriate management remuneration. Therefore, like any other lending institution, financial sustainability of MFIs can be estimated by taking into account the operational self-sufficiency (OSS) and financial self-sufficiency (FSS) of the organization. Khan *et al.*, (2017) affirmed that financial sustainability is among the essential areas to examine for MFIs performance. Nevertheless, MFIs usually focuses on operational self-sufficiency (OSS) and financial self-sufficiency (FSS).

Operational self-sufficiency (OSS) is a ratio that indicates the extent to which a financial institution is able to meet operational costs using generated revenue. The cost of operation includes: financing costs, administrative costs, wages and other costs incurred to run MFI' activities. Thus when the ratio is high, the OSS as well is high hence the MFI is financially sustainable. On the other hand Financial self-sufficiency (FSS) measures how well MFI is earning from lending after covering its expenses, that is to say, MFI is generating sufficient revenue from lending to cover operating expenses, financing costs, cost of capital and provision for loan loss. Financial self- sufficiency is also a ratio that indicates the extent to which the adjusted business income of an MFI covers adjusted costs (Khan *et al.*, 2017). Therefore, the current study will use financial sustainability as a measure of SACCOS' sustainability.

2.3 Theoretical Review

2.3.1 Credit Risk Theory

The study was guided by credit risk theory of Markowitz (2002). Markowitz in his theory, pointed out that credit risk is a challenge which has been facing many lenders for centuries although it is an area that has not been researched widely until 1930s. Literature attests that loans management portfolio used old traditional methods of actuarial in establishing credit risk which is deferent to today credits dynamics. According to the theory in traditional methods the lender somehow completely depended on history of the borrowers rather that actual and current data. credit risk theory insists of three quantitative approaches i.e, when analyzing credit risks, the credit offered structures and approach, appraisal method and information

dissemination method which incorporates awareness by both sides in the transaction (Joseph, 2017).

Robert Melton 1979 introduced the credit risk theory which is also referred to as the structural theory which is derived from a firm's assets evaluation by distribution process with continuous limitations. The structural models are usually explained and depend on assessments relating to a certain issuer. Such a dynamic change is represented by a number of models where the loss arising on failure to meet an obligation as per requirements is specific. In these models, the failure to meet the obligation can happen throughout the life of financial institutions corporate bond and not only in maturity (Kimoi *et al.*, 2016).

2.4 Empirical Review

2.4.1 Credit Risk Analysis and SACCOS' Sustainability

Active credit risk analysis is an essential practice for decision makers in FIs as it aids the forecast of future plans and helps to measure and reduce risk in an optimal way. Njeri & Daniel (2014) undertook a study in Kenya that assessed the role of credit risk management practices on financial sustainability of micro credit schemes in Nakuru County. Descriptive survey research design was adopted together with simple random sampling. Primary data was obtained through the use of a questionnaire and analyzed using descriptive and inferential statistics. The results of the study revealed that credit risk management significantly, positively and strongly affected sustainability of the micro-credit schemes. Nevertheless, the study presented a contextual gap since it was conducted in Kenya.

Rutanga, *et al.*, (2021) in Rwanda conducted a research on the effect of capital structure on financial sustainability of MFIs. Data was collected from annual financial reports of MFIs and SACCOS for the period of 2014-2018. Because of data availability, panel of the 20 MFIs and SACCOS was considered using fixed effects OLS regression models. Results of the study indicated that debt as a financing source adversely affects firms' financial self-sufficiency and performance. However, the study employed secondary data and looked at only one factor, the effects of other factors of credit risk management needs to be investigated together with the use of primary data. This study filled the gap by examining effect of credit risk management on SACCOS' sustainability where primary was used.

Another study was conducted by Murigi & Thuo (2018) in Kenya on determinants of financial sustainability of SACCOS in the matatu industry in Nkuru County. The study specifically examined cash management as one of the determinants of financial sustainability. Descriptive survey design and simple random sampling were adopted in the study. Structured questionnaire was used to collect data that was analyzed through SPSS, descriptive and inferential statistics. The findings indicated that cash management significantly influenced financial sustainability of the SACCOS in the Matatu industry. Nonetheless, the study presented a study gap by failing to explain the effects of other determinant of financial sustainability in SACCOS. This study examined the effect of credit risk management on SACCOS' sustainability in the Tanzanian context.

A study was conducted in Malawi by Kayembe, *et al.*, (2021) on factors that influence the sustainability of MFIs. The study adopted a cross-sectional survey

design where convenience and purposive sampling techniques were employed and primary data was collected online and analyzed through SPSS with statistical significance at 0.05. Results of the study indicated that reporting of loan management system and commercialization positively influenced sustainability of MFIs while loan portfolio management and loan design were found to impact MFIs negatively. However, the study failed to clarify why loan portfolio management and loan design impacted MFIs negatively, and yet they are part of loan management system which influenced sustainability of MFIs. Moreover other factors like credit risk analysis, credit risk monitoring and credit risk mitigation were not examined.

In Tanzania a study was conducted by Magumula & Ndiege (2019) to explore on the role of members' participation in the sustainability of SACCOS. The study adopted a qualitative case study approach. Focus group and interview methods were employed to collect primary data which was analyzed by the use of content analysis. The findings of the study indicated that member's participation and SACCOS' formation structure were crucial in SACCOS' sustainability while conditions hindering the ability of members to practice democratic right decreased members' participation and SACCOS' sustainability.

The study recommended that to improve sustainability in SACCOS the focal point should be strengthening member's participation by promoting close membership which will improve the democratic process in SACCOS. Nevertheless the study considered only members' participation which creates a research gap that was filled by this study as it investigated on credit risk management against SACCOS' sustainability.

Another study was conducted in Kenya by Kiptoo & Kimani (2018) on the effect of credit risk management strategies on sustainability of table banking groups in Uasin Gishu County. The study adopted descriptive research design where purposive and simple random sampling methods were employed to sample 230 table banking group. The study measured credit risk management through credit limits, strict repayments period policies and reliable guarantors. Regression analysis and descriptive statistics were employed for data analysis. The findings of the study revealed that there was a positive significant relationship between credit risk management strategies and Uasin Gishu county table banking groups' financial sustainability. Nevertheless, the study did not exhaust all the facets of credit risk management hence the current this study examined the effect of other credit risk management facets against SACCOS' sustainability and in the local context.

As well Kamunto et al., (2020) investigated on the effect of credit risk management on financial performance of DT-SACCOS in western Kenya. The study adopted correlation design together with census methodology in the study where purposive sampling was used to select the 19 DT-SACCOS from which secondary data was obtained by the use of financial statements for the period 2013-2017. Data analysis was done through hierarchical panel data regression. The findings of the study revealed that credit risk management had a negative significant effect on financial performance of DT-SACCOS in western Kenya. Nevertheless the results were inconsistent with Kiptoo & Kimani (2018) results and it was conducted in Kenya.

Githaiga (2021) investigated on whether revenue diversification affects financial sustainability of MFIs. The study adopted a two-step Generalized method of

moments estimation model where a worldwide panel data set was used to collect data in 443 MFIs in 108 countries. The study findings indicated that revenue diversification had positive effect on financial sustainability of MFIs. Nonetheless, the study employed data from various countries in the world which creates a research gap which this study bridged by undertaking a study in the local context by using a different methodology.

A study by Joseph (2017) examined the effect of credit risk management on the loan portfolio among SACCOS in Tharaka Nithi County in Kenya. The study adopted descriptive research design where systematic sampling procedure was used. All SACCOS in the county were sampled since the number was small. Data was collected by the use of a questionnaire and analyzed by the use of SPSS version 22. Findings of the study revealed that credit risk management practice had a positive impact on loan portfolio among SACCOS. However the study failed to explain how credit risk management influences SACCOS' sustainability which was addressed by the current study.

2.4.2 Credit Risk Monitoring and SACCOS' Sustainability

Various scholars have conducted studies on credit risk monitoring in relation to different aspects of FIs and more so in SACCOS. Such studies included Nuwatuhaire, *et al.*, (2020) who conducted a study to investigate the relationship between credit risk monitoring and financial performance of SACCOS in Rwanda, Ngorosero district. Cross-sectional and correlation research design were employed in the study with a sample of 30 respondents where descriptive and inferential statistics were used in data analysis. Findings of the study revealed that there was a positive

significant correlation between credit risk monitoring and the financial performance of SACCOS. However, the study failed to explain how credit risk monitoring can influence SACCOS' sustainability, moreover the study was conducted in a different context, this warranted for further investigation.

Another study was conducted in Somalia by Omar (2020) on the effect of credit risk management and loan performance in commercial banks in Mogadishu. The study assessed the effects of credit risk identification, assessment, and monitoring on loan performance in commercial banks. Descriptive research design and mixed method approach were adopted in the study. Findings of the study revealed that among the three variables credit risk monitoring had negligible influence on Banks loan performance, therefore a further research on the effects of credit risk monitoring on SACCOS sustainability is necessary, and also the study was conducted on commercial banks and in a different context.

Another study was conducted in Kenya by Biwott *et al.*, (2015) who examined the effect of credit risk management on the financial performance of KARI SACCO LIMITED in Kenya. A descriptive research design was employed with a sample size of 104 SACCO members. Data collected through a questionnaire and analyzed by the use of SPSS program, descriptive and inferential statistics were as well employed in the study. Findings of the study revealed that credit risk monitoring positively influences the financial performance of KARI SACCO LIMITED in Kenya. The study presents a contextual study gap warranting for further investigation.

Kalui & Kahuthu (2016) investigated on the effect of credit risk management practices on growth of SACCOS' wealth. Descriptive survey was adopted in the study where primary data was collected using questionnaires and analyzed by correlation and regression analysis. Study findings indicated that credit risk identification, credit risk analysis, and credit risk monitoring had no statistically significant effect on growth of SACCOS' wealth. The results were inconsistent with the results of Nuwatuhaire *et al.*, (2020); Biwott, *et al.*, (2015) and therefore it was imperative for further investigation.

Mutuku (2016) in Kenya undertook a study to analyze the effect of risk management practices on financial performance of commercial banks .The study examined the effect of risk management environment, risk monitoring, risk measurement, internal controls, capital adequacy, investment and strategic guidelines on profitability of commercial banks. Data was collected through a questionnaire and analyzed by the use of SPSS tool and multiple regression analysis. The findings indicated that among the study variables capital adequacy and risk monitoring had negative effects on banks profitability. Nevertheless, the study was conducted on banks hence a study needs to be conducted on SACCOS' sustainability and in the local context.

Another study was conducted by Makori & Sile (2017) specifically to establish the effect of credit appraisal and credit monitoring on the profitability of DT-SACCOS in Nairobi County. Descriptive research design was adopted in the study where primary data was collected by the use of a questionnaire and analyzed through SPSS v.21. Findings of the study revealed that credit appraisal and credit risk monitoring

had a positive effect on the financial profitability of the SACCOS. However the study failed to explain the sustainability of MFIs in relation to credit risk monitoring because FIs can be profitable and at the same time unsustainable, In addition the study was conducted in Kenya and this warranted for a study to be conducted in the local context.

On the same note Maina *et al.*, (2020) conducted a study in Kenya that evaluated on the moderating effect of SACCOS' size on cash management practice and financial sustainability. Descriptive cross-sectional survey design was adopted and binary logistic regression. The findings of the study revealed that SACCOS' size had a significant moderating effect on cash management which eventually influences the SACCOS sustainability. However the study did not explain the effect of credit risk management on SACCOS' sustainability.

A study was conducted by Korankye (2014) in Ghana that analyzed the causes and control of loan delinquency and default in MFIs. 25MFIs and 250 clients were sampled randomly for the study which involved questionnaire and interview guide for data collection. The findings indicated that the causes of loan default included high interest rates, inadequate loan sizes, poor appraisal, Lack of monitoring and improper client selection. Finally the study found that MFIs should have clear and effective credit policies and procedures and must be regularly reviewed. Nevertheless, an investigation is necessary to assess the effect of credit risk management aspects on the sustainability of SACCOS since credit risk monitoring were found to be linked with loan default, and too the study was conducted in

Ghana.

Karanja, *et al.*, (2018) conducted a study that evaluated the influence of credit risk monitoring on lending performance of commercial banks in Nairobi County, Kenya. Descriptive research design was adopted in the study and primary data was collected by the use of a questionnaire that contained both structured and unstructured questions. Descriptive statistics and logistic regression were applied for data analysis. Results of the study depicted that combined efforts of credit risk monitoring activities significantly influenced bank lending performance positively. The study presents a research gap since it was conducted on commercial banks in Kenya. Therefore a similar study needs to be conducted in the local context on SACCOS because their major business is lending.

2.4.3 Credit risk Mitigation and SACCOS' Sustainability

Credit risk mitigation is imperative in FIs which provide credits. Sikola *et al.*, (2019) undertook a study in Kenya to assess the impact of credit risk mitigation on financial performance of Invest and Grow SACCOS in Kakamega County. The study had a target population of 90 employees of the 6 branches of the SACCOS and because of the small number Census method was adopted in the study. Information was dissected utilizing measurable bundle for sociologies rendition 24 and both enlightening and inferential investigation demonstrated all conceptualized examination factors. Findings of the study revealed that SACCOS should embrace credit risk mitigation policy as the credit risk mitigating factor. However the study presented a contextual research gap since it was conducted in Kenya.

Shieler, et al., (2017) investigated on whether there exists a relationship between credit risk management techniques and financial performance of MFIs in Kampala, Uganda. The study adopted a census survey method where 60 respondents were used from the three licensed MFIs in Kampala. Primary data was collected with the usage of a structured questionnaire while secondary data was obtained from annual reports of the MFIs for a 5 years period from 2011 to 2015. Frequencies and descriptive statistics were employed to analyze the population. Pearson linear correlation coefficient was used as well to examine the relationship of credit risk management techniques and financial performance.

The results of the study indicated that credit risk identification and credit risk appraisal had strong positive relationship on financial performance of MFIs while credit risk monitoring and credit risk mitigation had moderate significant positive relationship on financial performance. However the study failed to show how credit risk management influences SACCOS' sustainability. Under the same tune Semaw (2019) conducted a study that examined the sustainability and outreach performance of SACCOS in eastern Ethiopia. Descriptive and causal research design was employed where secondary data was obtained from financial statement of the society for the year 2016. The results of the study indicated that SACCOS in eastern Ethiopia were sustainable while outreach performance was at moderate levels. Nevertheless, the study neither explained how sustainability was achieved in the SACCOS nor how can credit risk management influence SACCOS' sustainability.

Another study was conducted in Cameroon by Mbah & Wasum (2019) to find out the impact of credit management on MFIs' sustainability. The study selected one

highly rated functioning MFIs to find out problems associated with credit management process. Primary data collection was done by the use of a questionnaire, observation and secondary data was also used and analyzed through descriptive method. The findings of the study indicated that lapses in the credit management included high provisioning, poor recovery procedures, untrained credit officers in the MFIs business, slow credit management process, bad faith of customers and poor follow up of loans given out. Nevertheless apart from the contextual gap that the study presented, the study failed to explain how slow was the credit management process yet poor recovery procedures means credit risk mitigation were questionable.

As well Lagat, *et al.*, (2013) studied the effect of credit risk management practices on lending portfolio among SACCOS in Nakuru County, Kenya. Descriptive survey research design was adopted where respondents were purposively sampled. Primarily data was collected by the use of a questionnaire that was analyzed through descriptive statistics and multiple linear regression models were employed. The study examined credit risk identification, credit risk analysis, credit risk monitoring, credit risk evaluation and credit risk mitigation on 59 SACCOS.

Results of the study revealed a significant effect of all the risk management practices on lending portfolio except risk evaluation which failed to show any significant effect on the lending portfolio of the SACCOS. However the study was conducted in the Kenyan context and contradicted with the results of some other scholars like Kalui & Kahuthu (2016).

Another study was undertaken in Kenya by Kariuki (2017) who investigated on the effect of credit risk identification, credit risk analysis, credit risk monitoring, and credit risk mitigation measures practices on financial performance of DT-SACCOS. Descriptive survey design was adopted in the study where primary data was collected through semi-structured questionnaire, descriptive and inferential statistics were as well employed. Results of the study revealed that all the predictor variables had a positive and significant effect on the financial performance of DT-SACCOS.

The study recommended that stringent credit risk analysis techniques, credit monitoring practices as well as mitigation measures and policies should be ensured in SACCOS. Nonetheless, the study was conducted in the Kenyan context, to bridge the gap this study was conducted in the local context under the concept of SACCOS' sustainability. Magali & Lang'at (2014) examined the influence of corporate governance on the efficiency and sustainability of the rural SACCOS. The study compared the best three rural SACCOS, their efficiency and sustainability in an attempt to find the best overall performer and outline reasons for the overall performance.

Descriptive analysis was adopted in the study from which results indicated that Morogoro SACCOS performed better than Dodoma and Kilimanjaro SACCOS since it had enough experience in SACCOS' affairs, it was committed in loan screening, processing and recovery, adhered to good leadership, it's staff were royal and as well as its management applied proper credit mitigation techniques. The study compared the performance of SACCOS and failed to depict how credit risk mitigation was related to SACCOS' sustainability.

Chindu (2014) as well investigated on the determinants of SACCOS' financial sustainability in Ilala municipality, Tanzania. The study adopted a mixed research design where data was collected through the use of questionnaire and interviews from the respondents who were sampled by the use of purposive and convenience sampling techniques. SPSS was used for data analysis. The results of the study indicated that portfolio at risk, cost per borrower and operating self- sufficiency were among the major determinants of financial sustainability. However the study failed to investigate on credit risk management against SACCOS' sustainability which this study undertook to bridge the study gap.

2.5 Study Gap

Reviewed literature attests that different scholars around the globe have been working round the clock to unveil the dilemma that seems to exist on different parameters of SACCOS such as performance, profitability, sustainability and the like. However, research gaps have been identified in this study which includes contradicting results, contextual and conceptual gaps. For instance Karanja *et al.*, (2018); Biwott, *et al.*, (2015); Mokori & sile (2017) and Nuwatuhaire *et al.*, (2020) results indicated that credit risk monitoring influences positively different aspects of SACCOS which contradicted with the results of Kalui & Kahuthu (2016) which indicated credit risk identification, analysis, and monitoring had no statistically significant effect on growth of SACCOS.

Also Omar (2020) and Mutuku (2016) found that credit risk monitoring had negative effect on financial performance of commercial banks. Moreover Karanja, *et al.*, (2018); Omar (2020) and Mutuku (2016) researched on commercial banks, therefore

apart from results inconsistency there exist a conceptual and contextual study gaps, and too studies were conducted on banks. This warranted for a study on SACCOS' sustainability.

Murugi & Thuo (2018); Kayembe, *et al.*, (2021); Semaw (2019); Rutanga *et al.*, (2021); Chindu (2014); Magali & Lagat (2014); Githaiga (2021) looked at determinants of revenue diversification, factors influencing sustainability of SACCOS and MFIs while Kariuki (2017); Lagat *et al.*, (2013); Shieler *et al.*, (2017); Joseph (2017) investigated on the effect of credit risk management against different aspects of SACCOS and MFIs with some results indicating inconsistency. Moreover, Mbah & Wasum (2019)-credit risk management on MFIs' sustainability. As well Sikola, *et al.*, (2019) looked at credit risk mitigation against SACCOS financial performance while Kamunto *et al.*, (2020) examined the credit risk management against DT-SACCOS whose result contradicted with Njeri & Daniel (2014) Kiptoo & Kimani (2018) and Njeri & Daniel (2014) who looked at credit risk management strategies, credit risk management respectively against SACCOS and MFIs' sustainability and presented inconsistent findings together with contextual study gap since they were conducted outside Tanzania and with different methodologies.

Therefore, with such a background from the reviewed literature and considering the time frame, contradicting results, context, concepts and the literature attestation that no study has been conducted in Tanzania on credit risk management in relation to the SACCOS' sustainability it was paramount to undertake this study.

2.6 Conceptual Framework

A conceptual framework is defined as the scientific research process in which a

specific concept is defined as a measurable occurrence or in measurable terms, that basically presents a clear meaning of the concept. It is a diagrammatic presentation of the relationship between dependent and independent variables of the study (Claude & Edison, 2018). In this study credit risk management practices was the Independent Variables which the SACCOS employ to explain the variation or changes in the sustainability of SACCOS (Dependent variable). The independent variables were credit risk analysis, credit risk monitoring, and credit risk mitigation. The application or use of these practices determines the level of SACCOS' sustainability. The variables are as depicted in the conceptual framework Figure 1.

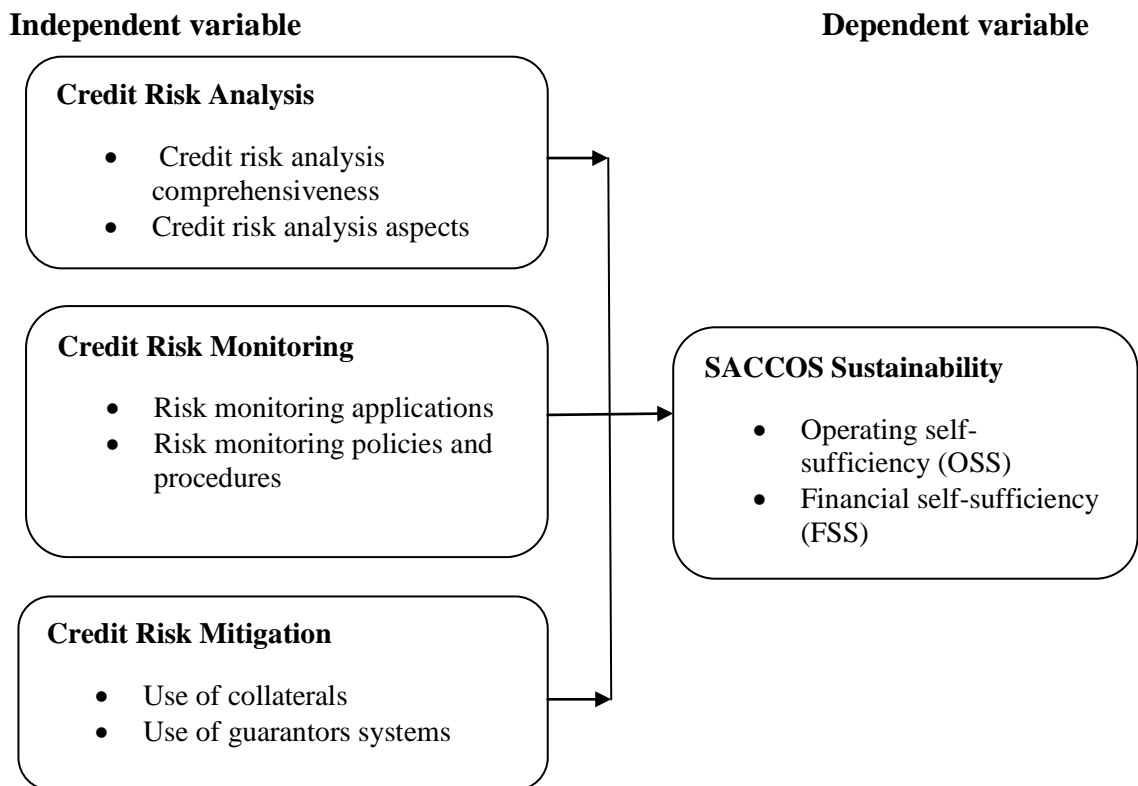


Figure 2.1: Conceptual Framework

Source: Researcher Construct, (2022).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Chapter Overview

This chapter covers the research philosophy, research design, Area of study, population of the study, Sampling and Sample size, Census and data collection instrument. Validity and reliability of the data collection instrument together with data analysis, variables and measurements, and finally research limitations and research ethics will be presented.

3.2 Research Philosophy

Saunders *et al.*, (2009) contend that research philosophy entails the source, nature and development of knowledge. Knowledge creation is evident when a researcher provides answers to the research questions through collecting and analyzing either primary or secondary data, or both in his/her study. Research philosophy stresses on the researchers beliefs and assumptions on his/her study which eventually determines the research process stance. Research philosophy is essentially important in research methodology since it guides the whole research process.

Philosophical approaches which are commonly applied in social science studies includes: positivism which is usually used in quantitative studies while intepretivism is applied in qualitative studies and pragmatism which is applied for mixed studies. This study adopted positivism research approach since it was purely quantitative. This was because the approach satisfies the desired requirements of separating researcher from data collection, large sample size and testing of hypotheses.

3.3 Research Design

According to Saunders *et al.*, (2009) research design describes the procedures used for data collection and analysis. It is a general layout (blueprint) through which collection, measurement and analysis of data is achieved in a study. According to Lelissa (2018) research design sets out the procedure for the required data, methods to be employed for data collection and analysis, and how all these will help to answer the research questions. Research design is categorized into exploratory, descriptive and explanatory depending on the type of research questions and purpose of the study.

This study employed descriptive research design which guided the establishment and obtaining information on the current status of the effect of credit risk management on SACCOS' sustainability in Babati town council. Also to map out the relationship between the study variables explanatory design was also adopted together with cross-sectional design since data was collected only once due to the scarcity of resources such as time and funds.

3.4 Area of the Study

The current study was conducted in Babati town council in Manyara region Northern part of Tanzania, Manyara region was formed from Arusha region on August 2nd, 2012. Babati town is 167KM from Arusha, 157KM from Singinda, 248KM from Dodoma and covers approximately an area of 461KM² (URT, 2016). Babati town has a total population of 93,108 residents with an estimated population growth rate of 3.2% per year (NBS, 2012). Because the researcher resides in Babati town it was more economical in terms of time and funds to conduct this study in the area, and

moreover the targeted SACCOS in the study are located and operates within the town.

3.5 Population of the Study

According to Saunders *et al.*, (2009) population of a study is a homogenous entity of interest to the researcher. It is the entire group of people or units of interest that the researcher wishes to investigate in relation to the problem of the study. Cooper & Schindler (2014) affirms that target population is the people, events, or records that contain the desired information to enable answering the research questions which eventually determine whether to sample or to undertake census. According to June, 2021 report of Babati Town Council District Co-operative Office (BTC-DCO), registered SACCOS were 17 out of which 11 were active while 6 were dormant. Therefore, because of the small number, census survey was employed on the 11 active SACCOS in Babati town council where all SACCOS' staff members constituted the study population since they all work in lending institutions. All the 11 SACCOS have a total of 88 staff members which makes the target population of the study.

3.6 Sampling and Sample Size

Sampling refers to a process of selecting a number of individuals such that the selected individuals represent the larger group from which the sample has been selected from. The selected sample makes up the sample size of the study and thus, sample size is the number of participants who will be representative of the target population (Saunders *et al.*, 2014). Therefore, because of the specificity of the study purposive sampling was employed to select respondents which included SACCOS'

manager, 2 credit officers and 2 accountants/internal auditors from every SACCO due to their key involvement in the lending business and repayments of loans. In total all respondents was 55 i.e. 5 participants from each SACCO.

3.7 Census

According to Kothari (2004) census is a complete enumeration of all objects in the population such that in a case where all objects are covered the highest accuracy is obtained since no element of chance is left. Census methodology is difficult when a large population is to be studied because it involves a great deal of time, money and energy. Nevertheless, Cooper & Schindler (2014) affirms that census is feasible when the population is small and manageable and helps in eliminating bias which arises from sampling. Therefore, in this study census was applied due the small numbers of SACCOs in Babati town council.

3.8 Data Collection Instrument

Data collection is an essential element in conducting research and therefore the current study will apply primary data which will be collected with the use of a structured questionnaire. According to Kothali (2004) questionnaire is the most appropriate instrument since it is able to collect a large amount of information in a reasonably quick span of time. Also Mugenda & Mugenda (2003) argued that questionnaires are commonly used to obtain important information about a population being studied while Mengich & Njiru (2015) affirmed that in survey studies questionnaires are highly recommended data collection tools.

For data collection the study used questionnaires which contained close-ended questions based on a 5-point likert scale and which were structured to enable data

collection on the study variables, the credit risk analysis, credit risk monitoring, credit risk mitigation and their effect on SACCOS' sustainability. The questionnaire was administered by use of the drop and pick method to respondents. That is the researcher distributed questionnaires to the respondents and collected them later after a period span of not more than two weeks which the researcher found adequate for completing the questionnaires.

3.9 Validity of Data Collection Instrument

The validity of a research instrument is that it should be able to measure what it is intended to measure (Kimberlin & Winterstein, 2008). Since there are various types of validity, content validity should provide evidence that the items of an instrument are appropriate and comprehensive relative to its intended measurement concepts. In this study content validity was determined by seeking expert opinions of the University supervisors simply because content validity couldn't be determined statistically.

3.10 Reliability of Data Collection Instrument

According to Kimberlin & Winterstein (2008) Reliability is the consistency of the research instrument when administered to different populations with similar characteristics. Data must be consistent, accurate, stable, dependable and predictable and any data collection instrument will not be effective if it is not reliable. In this study crownback's alpha (α) was used to measure the reliability of the research instrument (the questionnaire) and the results were as follows

Table 4.1: Reliability Test Results

Variables	No. o f Items	Cronbanch's Alpha
Credit risk Analysis	5	0.781
Credit Risk Monitoring	3	0.728
Credit Risk Mitigation	3	0.775

Source: Research data, (2023).

From the results in Table 4.1, the cronbach's alpha of 0.71, 0.728 and 0.790 (>0.7) were obtained for the questionnaire items on risk analysis, risk monitoring and risk mitigation respectively. This indicated that the questionnaire was reliable for data collection.

3.11 Data Analysis

The data collected was classified, analyzed to determine the effect credit risk management practices on SACCOS' sustainability. Data was analyzed through Statistical Package for Social Sciences (SPSS) version 20. The study used descriptive statistics (means and standard deviations) to describe credit risk management practices. Inferential statistics (correlation analysis) was used to establish relationship between credit risk management and SACCOS' sustainability. The study as well used multiple regression analysis to establish combined effect of credit risk management practices on SACCOS' sustainability and ANOVA test was used to test statistical significance of the overall effect. Findings of the study were presented using tables. The multiple regression equation below was used to guide the study analysis.

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

Where: -

Y = SACCOS' sustainability

β_0 = constant coefficient (the value of dependent variable when all the independent variables are zero).

β_1 , β_2 and β_3 = Regression coefficients of determination

X_1 = Credit Risk Analysis

X_2 = Credit Risk Monitoring

X_3 = Credit Risk Mitigation

ε = the normal error term.

3.12 Gender Analysis

Gender analysis involves the differences in conditions, needs, participation rates, and access to resources and developments, control of assets, decision-making power, etc between women and men in their assigned gender roles (EIGE, 2019). At the same time, March et al., (2005) contend that gender analysis explores and highlights the relationship between women and men in society, and the inequalities in those relationships by asking: who does what? Who decides? How? Who gains? Who loses? And when such questions are encountered, the next question is which Men? Which Women? Basically gender analysis involves the promotion of equality between Men and Women.

According to UN-MDG (2015) the Millennium development goals requires the integration and promotion of gender equality and women empowerment in all social interventions. Based on the above background, this study as well assessed the participation of both men and women in SACCOS business in Babati town council by collecting gender disaggregated data from the research participants.

3.13 Variables and Measurements

The variables credit risk analysis, credit risk monitoring, credit risk mitigation and SACCOS' sustainability were measured by the use of 5-range Likert scale which is in ordinal scales. The ratings were as follows: (5 –Strongly Agree, 4 –Agree, 3 – Neutral, 2 –Disagree, 1-Strongly Disagree). Age of the respondents was measured through the use of interval or ratio scale while all other demographic independent variables were measured using the nominal scale.

3.14 Research Limitations

The study was hampered by the scarcity of financial resources and time factor since the researcher was working and at the same time undertaking this study.

3.15 Research Ethical Issues Consideration

Research ethics is also referred to as the research norms which ensures enhancement of the research purpose (Akaranga & Makau, 2016). Ethics in research requires to be addressed throughout the research process to intensify the research work integrity, such issues in research includes seeking consent, plagiarism, data fabrication and falsification. The author argued that plagiarism involves a researcher presenting ideas from other scholars as his/her own new work. Plagiarism on the other hand is the use of sources without ascription while data fabrication is the making of data and reporting it as the true findings of the research work. Data falsification is also an essential research issue that needs attention since it is the manipulation of data to present a false impression through changing, omitting or adding data points (Kang & Hwang, 2020).

To address such research ethical issues, the researcher sought for permission from the Open University of Tanzania to undertake research in the said area of study. Also consent from the respondents was obtained before data collection commencement. Respondents were assured of the confidentiality of their identity and information since the study was purely for academic purpose. For data falsification and fabrication the researcher ensured that collected data truly represented the respondents' perceptions and not anything else. Plagiarism was observed by ensuring originality of the research work by avoiding paraphrasing and ensuring APA style of referencing was totally observed throughout the entire study.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF THE FINDINGS

4.1 Chapter Overview

This chapter presents the results and interpretation of the study, which was guided by the research objectives. Data analysis was performed using (SPSS version 20), descriptive statistics, correlation and multiple regression analysis were used in the study to determine the effect of the research specific objectives on the SACCOS' sustainability in Babati Town council.

4.2 Respondents' Response Rate

Table 2 presents the respondents' response rate whereby fifty five (55) Copies of the questionnaire were distributed to the respondents by the researcher in the eleven (11) SACCOS in Babati town council. Out of the fifty five (55) questionnaires distributed, fifty (50) questionnaires were duly filled out. The aggregate response rate was at 90.9%, which was quite outstanding as per Mugenda and Mugenda (2003). Mugenda & Mugenda (2003) affirmed that a fifty percent response rate is adequate for generalization and 60% is good, while 70% is an outstanding response rate. This outstanding response rate was due to the technique used to collect information in the sense that all respondents were briefed about the questionnaire. The researcher ensured that the respondents had enough time fill the questionnaires.

Table 4.2: Respondents' Response Rate

Response	Frequency	Percentage
Fully answered questionnaires	50	90.9%
Unanswered questionnaires	05	9.1%
Total	55	100%

Source: Research data, (2023).

4.3 Respondents General Information

Study's respondents were drawn from management of SACCOS because of their involvement in the lending business and repayment of loans. The findings were as follows.

4.3.1 Gender of the Respondents

The study as well sought to determine the gender of the respondents. They were therefore asked to specify their gender. The findings were as shown in Table 4.3.

Table 4.3: Gender of the Respondents

Gender	Frequency	Percentage
Male	29	58%
Female	21	42%
Total	50	100%

Source: Research data, (2013)

It is clear from Table 4.3 that the gender disaggregated data shows that majority of respondents are male at 58%, while the female are 42%. This is an indication that there are more males engaged in the management of SACCOS than females in Babati town council. However, the difference was not big and therefore its effect was assumed to be negligible. The results indicated gender integration in the SACCOS' management of Babati town council was almost as per the requirements of the millennium development goals.

4.3.2 Respondents Age Group

The study as well sought to analyze the age of the respondents since it has an influence on the ability to work and more so in decision making process on how well to run the SACCOS' business. As the Table 4.4 shows respondents' age was

measured group wise in years ranging from 18 – 25, 26 – 30, 31 – 40 and above 40 years. The respondent with the age between 18 to 25 were 2 equivalent to 4%, the respondents with the age between 26 to 30 years were 13 equivalent to 26%, respondents with the age of 31 to 40 were 23 equivalent to 46% and those with the age above 40 years were 12 equivalent to 24%. The respondents age analysis depicted that majority of SACCOS' staff are in the age group between 31 and 40 years.

Table 4.4: Respondents' Age Group

Category	Frequency	Percentage
18 – 25 years	02	4%
26 – 30 years	13	26%
31 – 40years	23	46%
Above 40 years	12	24%
Total	50	100%

Source: Research data, (2013)

4.3.3 Respondents' Highest Qualification Achieved

The researcher as well assessed the respondent's level of formal education. This was to determine whether the level of education of participants had an impact on the management of credit risk among SACCOS in Bbati town council. Respondents were asked to specify their level of education and the outcomes were shown in the Table 4.5.

Table 4.5: Respondents' Highest Qualification Achieved

Categories	Frequency	Percentage
Certificate	16	32%
Diploma	25	50%
Degree	7	14%
Master	2	4%
Others		
Total	50	100%

Source: Research data, (2013).

The level of education has also been evaluated in the questionnaire. As shown in the Table 4.5, the diploma level was dominant at 50%, followed by certificate at 32% and master at only 4%. No other education category of respondents was found. The result implies that the respondents have an understanding of the issues and know how to fill out the questionnaire with efficient responses.

4.3.4 Respondents' Current Position in the Organization

Respondents were asked to give their current position in the organization and they indicated their designation by ticking the appropriate level. The results were as tabulated in Table 4.6;

Table 4.6: Respondents' Current Position in the Organization

Designation	Frequency	Percentage
Accountant	18	36%
Credit officer	16	32%
Manager	10	20%
CEO	6	12%
Total	50	100%

Source: Research data, (2013).

From the above analysis 36% were accountants in their respective SACCOS while 32% were credit officers. Managers accounted for 20% while chief executive officer of the respective SACCOS constituted 12%.

4.3.5: Respondents' Number of years in MF Industry

The study as well sought to determine the length of time the respondents had been involved in the SACCOS business. This helped to determine their level of expertise in the management of the SACCOS and also helped to determine the power of the data provided.

Table 47: Respondents' Number of Years in SACCOS Industry

Years	Frequency	Percentage
1- 5 years	13	26%
6 – 10 years	26	52%
11 -15 years	7	14%
16 – 20 years	4	8%
Over 20 years	—	—
Total	50	100%

Source: Research data, (2013).

As indicated in Table 7 above majority of the respondents (52%) were in the SACCOS industry for a period of 6-10 years while 26% were there for a period of between 1- 5 years, 14% for a period of between 11 - 15 years, 8% for 1- 20 years and none appeared for over 20 years. This was good for the study as the respondents were assumed to have knowledge and understanding of their respective SACCOS' credit risk management practices which were relevant to the study.

4.3.6 Number of Years of SACCOS' Operation

The researcher also sought to establish the SACCOS length of operation. Majority (54%) of SACCOS had operated for 7 – 10 years followed by those which had been in operation for over 10 years (30%). The SACCOS with the least number of years in operation ranged between 4 – 6 years and accounted for (16%). The responses were as presented as shown below in Table.

Table 4.8: Number of Years of SACCOS' Operation

Years	Frequency	Percentage
1 – 3 years	—	—
4 - 6 years	8	16%
7 – 10 years	27	54%
Over 10 years	15	30%
Total	50	100%

Source: Research data, (2013)

4.4 Descriptive Statistics

Descriptive analysis was presented in the form of percentages, means and standard deviation.

4.4.1 Effects of Credit Risk Analysis on SACCOS' Sustainability

The researcher collected data on credit risk analysis aspects in an attempt to determine the comprehensiveness of credit risk analysis in SACCOS of Babti town council. First and foremost the researcher sought to find out whether SACCOS ranked loans in terms their magnitude in risks. The findings were as follows;

Table 4.9: Ranking Loans in Terms of Risk Magnitude

Do your SACCOS rank loans in terms of magnitude in risks?	Frequency	Percentage
YES	36	72%
NO	14	28%
Total	50	100%

Source: Research data, (2013).

As depicted in Table 4.9 the findings of the study, 72% indicated that loan ranking was widely practiced by the SACCOs. The study as well sought to know the extent to which risk analysis was comprehensive in the SACCOs. The study findings were as presented in Table 4.9.

Table 4.10: Credit Risk Analysis Comprehensiveness

Credit Risk Analysis Comprehensiveness	Strongly-Agree	Agree	Neutral	Disagree	Strongly-disagree	Weighted Mean	S.D
Credit risk is comprehensive in SACCOS	16%	56%	24%	4%	0%	3.84	0.738
Effective credit risk analysis requires a reporting and review structure	14%	58%	22%	6%	0%	3.80	0.756
Credit risk analysis comprises identification of outcomes	20%	30%	32%	12%	6%	3.46	0.942
Credit risk analysis and assessment comprises estimating the magnitude of the consequences	18%	28%	40%	10%	4%	3.46	1.034
Risk analysis and assessments involves assessment of hazardous outcome	16%	24%	40%	14%	6%	3.30	1.093
AVERAGE						3.572	0.913

Source: Research Data, (2023).

From the findings in Table 4.10, 72% of the respondents indicated that risk analysis was comprehensive in the SACCOS of Babati town council. Similarly, 72 % confirmed that effective credit risk management requires a reporting & review structure. Reporting is necessary for coordination of credit risk management activities. 50% of the respondents agreed that credit risk analysis comprises identification of the outcomes where 12% disagreed. 46% of the respondents agreed with the statement that risk analysis and assessment comprises estimating the magnitude of the consequences while 14% disagreed. Lastly, 40% of the respondents indicated that risk analysis and assessment involves assessment of hazardous outcome and 20% disagreed. On a five-point scale, the average weighted mean score of the responses was 3.572 which meant that most of the respondents agreed to the statements which were posed to them. However, the answers were varied as shown by a standard deviation of 0.912.

4.4.2 Effects of Credit risk Monitoring on SACCOS' Sustainability

The second study's objective was to establish the effects of credit risk monitoring practices on SACCOS' sustainability. The finding was as presented in this section.

4.4.2.1 Credit Policy Review Frequency

The study also analyzed how frequent review of credit policy was practiced in SACCOS in Babati town council. The findings were as indicated in Table 4.11.

Table 4.11: Credit Policy Review Frequency

Frequency of Review	Frequency	Percentage
Quarterly	4	8%
Semi-annually	4	12%
Annually	40	80%
Total	50	100%

Source: Research Data, (2023).

From the findings as depicted in Table 4.11, 80% of the respondents indicated that their SACCOS reviews credit policy annually, 12% semi-annually while the rest 8% review their SACCOS credit policy quarterly. It was evident that most SACCOS review their credit policy on annually basis.

4.4.2.2 Credit Risk Monitoring Applications

The researcher collected and analyzed data on credit risk monitoring. The finding was presented in Table 4.12 as follows.

Table 4.12: Credit Risk Monitoring Applications

Credit risk monitoring Applications	Strongly-agree	Agree	Neutral	Disagree	Strongly-disagree	Weighted Mean	S.D
Credit risk monitoring is used to ensure that credit risk management practices are effective.	30%	64%	6%	0%	0%	4.24	0.555
Credit risk monitoring helps the SACCOS management to discover mistakes at an early stage	32%	60%	8%	0%	0%	4.24	0.591
The director's report on risk monitoring enables the shareholders to assess the status of the organization knowledgeably and thoroughly	16%	24%	38%	6%	16%	3.18	1.257
AVERAGE						3.87	0.801

Source: Research Data, (2023).

Majority of the respondents 94% confirmed that credit risk monitoring can be used to ensure that credit risk management practices are effective. Similarly majority 92% of the respondents were in agreement that risk monitoring helps the SACCOS' management to discover mistake at an early stage. At the same time 40% of the respondents were in agreement that the director's report on risk monitoring enables the shareholders to assess the status of the SACCOS knowledgeably and thoroughly.

With the use of a five point scale likert mean, the overall weighed mean of the responses was 3.87 which indicated that majority of the respondents agreed to the statement of the questionnaire. On the other hand, the standard deviation of 0.801 indicated that the responses were varied. The results herein imply that credit monitoring influences sustainability of SACCOS.

4.4.3 Effects of Credit Risk Mitigation Practices on SACCOS' Sustainability

The third specific objective of the study sought to establish the effects of credit risk mitigation on SACCOS' sustainability. The findings were as represented in the Table 4.13.

Table 4.13: Credit Risk Mitigation Practices

Credit Risk Mitigation practices	Strongly-Agree	Agree	Neutral	Disagree	Strongly-Disagree	Weighted Mean score	S.D
SACCOS use collaterals to ensure timely loan repayments	42%	44%	8%	2%	4%	4.18	0.962
SACCOS use guarantor system to secure loans	40%	44%	6%	6%	4%	4.10	1.035
All loans issued by SACCOS are insured	10%	18%	16%	18%	38%	2.44	1.417
AVERAGE						3.57	1.138

Source: Research Data, (2023).

The respondents were asked to respond on statements on credit risk mitigation practices. The responses were rated on a 5-likert scale as presented in Table 4.13. Majority of the respondents 86% agreed with the statement that the SACCOS use collaterals to ensure timely loan repayments. 92% agreed with the statement that SACCOS use guarantor system to secure issued loans, while 40% of the respondents agree that all loans issued by SACCOS are insured. On a five point likert scale, the

average weighted mean score of the responses was 3.57 which meant that majority of the respondents agreed with most of the statements; however the answers were varied as shown by a standard deviation of 1.14. From the results it was evident that credit risk mitigation influences SACCOS' sustainability.

4.4.4 SACCOS' Sustainability

Finally the study assessed the sustainability of SACCOS in Babati town council. The findings were as presented in Table 4.14.

Table 4.14: SACCOS' Sustainability

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Weighted Mean score	S.D
The SACCOS' capital base has increased significantly	22%	64%	10%	2%	2%	4.02	0.769
The total revenue collected by our SACCOS has increased substantially	20%	62%	14%	2%	2%	3.96	0.781
There are fewer cases of loans failing to be repaid on time compared to previous years	18%	42%	30%	8%	2%	3.66	0.939
Our SACCOS has recorded a significant decline in the number and amount of loan defaults	12%	56%	26%	4%	2%	3.72	0.809
AVERAGE						3.84	0.823

Source: Research Data, (2023).

According to the results as illustrated in Table 4.14, the study found that majority of respondents 86% admitted that the SACCOS' capital base had increased significantly. It was evident that SACCOS' revenue collection as well had increased substantially, this was revealed by 82% of the respondents. The study also indicated that, 60% of respondents agreed that there were fewer cases of loans failing to be repaid on time compared to previous years while 68% of respondents admitted that

SACCOS recorded a significant decline in the number and amount of loan defaults. With the five point likert scale, the average weighted mean score of the responses was 3.84 indicating that majority of the respondents agreed with most of the statements; however the answers were varied as shown by the standard deviation of 0.823.

4.5 Inferential Statistics

4.5.1 Correlation Analysis

The study conducted correlation analysis to establish the relationship between credit risk management practice and SACCOS' sustainability. The findings were as presented in Table 4.15.

Table 4.15: Correlation Analysis Matrix

	SACCOS' Sustainability	Credit Risk Analysis	Credit Risk Monitoring	Credit Risk Mitigation
SACCOS' Sustainability				
Sig (2-tailed)	1.000			
N	50			
Credit Risk Analysis	-0.148*	1.000		
Sig (2-tailed)	0.306			
N	50	50		
Credit Risk Monitoring	-0.227*	0.311*	1.000	
Sig (2-tailed)	0.113	0.028		
N	50	50	50	
Credit Risk Mitigation	0.34*	-0.072*	0.178*	1.000
Sig (2-tailed)	0.815	0.618	0.217	
N	50	50	50	50

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

As depicted in Table 4.15, there was a positive moderate significant relationship between credit risk analysis and credit risk monitoring at $r = 0.311$ and $p = 0.028$ (< 0.05), while the relationship between credit risk analysis and credit risk mitigation was negative and insignificantly weak at $r = -0.072$ and $p = 0.618$ (> 0.05). Also there

was a positive and weak insignificant relationship between credit risk mitigation and credit risk analysis at $r = 0.178$ and $p = 0.217$ (>0.05).

The results as well revealed a negative weak insignificant relationship between credit risk analysis and SACCOS sustainability at $r = -0.148$ and $p = 0.306$ (>0.05). As well there was a negative insignificant relationship between credit risk monitoring and SACCOS' sustainability at $r = -0.227$ and $p = 0.113$ (>0.05). There was a moderate positive insignificant relationship between Credit risk mitigation and SACCOS' sustainability at $r = 0.340$ and $p = 0.815$ (<0.05).

4.5.2 Regression Analysis

Multiple regression analysis was used to test the collective effect of credit risk management practices on SACCOS' sustainability. The findings were as presented in Table 4.16.

Table 4.16: Regression Model Summary

Model	R	R square	Adjusted R square	Std. Error of Estimate
3	0.249 ^a	0.062	0.001	0.65188

Source: Research Data, (2023).

As depicted in Table 4.16: The simple correlation of 0.249 indicated a weak positive correlation between credit risk management and SACCOS' sustainability. The value R square of 0.062 indicates that collectively, credit risk analysis, credit risk monitoring and credit risk mitigation explained only 6.2% of the variations in SACCOS' sustainability.

Table 4.17: Analysis of Variance (ANOVA)

Model	Sum of Square	Df	Mean Square	F	Sig
Regression	1.297	3	0.432	1.018	0.394 ^b
Residual	19.548	46	0.425		
Total	20.845	49			

- Independent variables: (Constant), Credit Risk Analysis, Credit Risk Monitoring, Credit Risk Mitigation.
- Dependent Variable: SACCOS' Sustainability

ANOVA test (F- statistic) was used to test the significance of the overall effect of credit risk analysis, credit risk monitoring and credit risk mitigation on SACCOS' sustainability. The p-value of 0.394 (>0.05) implied that the effect of the three variables was not statistically significant.

Table 4.18: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	4.802	0.760		6.322	0.000		
Credit Risk Analysis	-0.073	0.147	-0.076	-0.501	0.619	0.886	1.128
Credit Risk Monitoring	-0.226	0.162	-0.215	-1.399	0.169	0.863	1.159
Credit Risk Mitigation	0.051	0.112	0.067	0.455	0.651	0.850	1.052

Source: Research Data, (2023).

From Table 4.18, the tolerance values 0.886, 0.863 and 0.850, VIF (variance inflation factor) values 1.28, 1.59 and 1.052 for credit risk analysis, credit risk monitoring and credit risk mitigation respectively indicated the absence of multicollinearity between the variables since the tolerance values were well above 0.1 and the VIF values were far below 10. Otherwise tolerance values below 0.1 and VIF values above 10 indicates the presence of multicollinearity problem within the independent variables.

Also from Table 18 the following regression model was developed.

$$Y = 4.802 - 0.073X_1 - 0.226X_2 + 0.051X_3 \dots\dots\dots(I)$$

Where Y = SACCOS' Sustainability

X₁= Credit Risk Analysis

X₂= Credit Risk Monitoring

X₃= Credit Risk Mitigation

The multiple regression model (I) indicates the regression analysis for the entire study which related the three independent variables (credit risk analysis, credit risk monitoring and credit risk mitigation) with the dependent variable (SACCOS' sustainability). The constant (B = 4.802) indicates the level of SACCOS' sustainability achieved by SACCOS in the absence of the credit risk management practices. The coefficient (B = -0.073) indicates the level of sustainability achieved by SACCOS when they implement credit risk analysis holding other practices constant, Coefficient (B = -0.226) indicates the level of sustainability achieved by the SACCOS when credit risk monitoring is implemented holding other practices constant.

Lastly, the coefficient (B = 0.226) indicates the level of sustainability achieved by the SACCOS when they implement credit risk mitigation holding other credit risk management practices constant. From the findings it was evident that both credit risk analysis and credit risk monitoring hand negative and statistically insignificant effect on SACCOS' sustainability (B = -0.073, p = 0.619) and (B = -0.226, p = 0.169) respectively. On the other hand credit risk mitigation hand a positive and statistically insignificant effect on SACCOS sustainability.

The overall effect of the three study variables was computed to at an R squared coefficient of 0.062, meaning that the variables accounted for 6.2% of the variations in the SACCOS' sustainability that could be explained by the variables of credit risk management. This depicts an almost negligible influence of the three variables on SACCOS' sustainability. The ANOVA section as well offers supporting evidence of the value 0.394 (>0.05), which implied that there was no statistical significance between the study variables and SACCOS' sustainability. Therefore based on the regression analysis and ANOVA test, all the three variables credit risk analysis, credit risk monitoring, and credit risk mitigation had no statistically significant effect on SACCOS' sustainability, hence the null hypothesis **H0₁**, **H0₂**, and **H0₃** were accepted.

The findings concurred with the findings of a study that was conducted by Kalui & Kahuthu (2016) which concluded that credit risk management variables (credit risk identification, credit risk analysis and credit risk monitoring) had no statistical significance on SACCOS' growth. Lagat et al., (2013) in their study also found that credit risk analysis had an insignificant effect on the performance of portfolio, while Mutuku (2016) and Omar (2019) in their studies and in different contexts found that credit risk monitoring had a negative statistically insignificant effect on financial performance of commercial banks in Kenya and Somali respectively.

The findings also concurred with the results of Mbah & Wasum (2019) in their study which revealed that poor loan recovery procedures, high provisioning, poor follow up of given out loans contributed to poor and slow credit management processes and eventually compromised the MFIs' sustainability. The study recommended stringent

credit risk management should be practiced to realize the sustainability of the MFI.

The findings of the study was further supported by the findings of Taiwo, et al., (2017) which revealed that credit risk management had a statistically insignificant impact on the growth of total loans advances in the Nigerian deposit money banks. On the same note Gisemba (2010) in his study concluded that for SACCOS to manage credit risk effectively, it is imperative to minimize loan defaulters, loan loss and ensure the organization performs better to increase return on assets. He however cautioned that risk management should not be employed solely aiming to achieve financial growth since the relationship between risk management and financial growth is insignificant.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

5.1.1 Effect of Credit Risk Analysis on SACCOS' Sustainability

The study objectively related credit risk analysis with SACCOS' sustainability in Babati town council and revealed that credit risk analysis does not have significant effect on SACCOS' sustainability and therefore null hypothesis (H_{01}) was accepted. SACCOS can invest in credit risk analysis for the purpose of enhancing loan performance. However, credit risk analysis is not a good strategy to enhance SACCOS' sustainability in Babati town council.

5.1.2 Effect of Credit Risk Monitoring on SACCOS' Sustainability

The study's second objective was to determine the effects of credit risk monitoring on SACCOS' sustainability in Babati town council. The study revealed that credit risk monitoring also does not have significant effect on SACCOS' sustainability in Babati town council hence the null hypothesis (H_{02}) that credit risk monitoring has no significant effect on SACCOS' sustainability was accepted. Credit risk monitoring is therefore not a significant factor to determine SACCOS' sustainability in Babati town council and thus can't be used to improve it.

5.1.3 Effect of Credit Risk Mitigation on SACCOS' Sustainability

The third objective sought to determine the effect of credit risk mitigation on SACCOS' sustainability in Babati town council. The study revealed that credit risk mitigation has a positive insignificant effect on SACCOS' sustainability and hence the null hypothesis (H_{03}) was accepted. Therefore it is clear that credit risk

mitigation can't significantly determine sustainability of SACCOS in Babati town council and thus can't be used to enhance it.

5.2 Conclusion

Based on the findings, the study concluded that collectively, credit risk analysis, credit risk monitoring and credit risk mitigation do not have significant effect on SACCOS' sustainability of SACCOS in Babati town Council. It was therefore evident that credit risk management is not a key determinant of SACCOS' sustainability and therefore SACCOS in Babati town council should invest in such practices for other purposes and not for the reason of improving sustainability.

5.3 Recommendations

In relation to the study outcome, the following recommendations were made;

- i) For SACCOS in Babati town council to manage their business effectively, effective evaluation of the relationship between each risk management component and individual SACCOS' policy is imperative so as to ensure the right balance is adopted to promote the entire performance of SACCOS basically to enhance sustainability.
- ii) SACCOS' management in Babati town council should ensure that there are clear strategies and policies which clearly stipulate stringent guidelines for implementation of their activities.
- iii) It is important for SACCOS in Babati town council to evaluate their risk analysis approaches in an attempt to understand how its outcome can impact on their sustainability.

5.3 Areas for further Research

- i) The study adopted descriptive research design, it is therefore important for a similar research to be conducted using a different design.
- ii) As well this study dealt with only three aspects of credit risk management and therefore a similar study can be conducted featuring on other parameters of credit risk management.
- iii) For generalizability, a similar study can be conducted in a different local context e.g other regions in Tanzania.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

I am **LENARD KAMURU MAGANGA**, a master degree student of the Open University of Tanzania in the Faculty of Business Management. Currently, I'm undertaking a research study on the *“effect of credit risk management practices on SACCOS’ sustainability. A case of Babati town council”* This questionnaire is intended to provide information for the completion of the entire study and by all means information provided by the respondents will be used only for academic purpose and not otherwise. The information will be treated with utmost confidentiality during and after the study completion.

I therefore, kindly request you to answer the following questions by writing a brief answer or ticking (✓) in the space or boxes respectively.

SECTION A: GENERAL INFORMATION

1. Gender: Male [] Female []

2. Participants age group in years:
 - 18-25 []
 - 26-30 []
 - 31-40 []
 - Above 40 []

3. What is your highest qualification achieved?
 - Certificate []
 - Diploma []
 - Degree []
 - Master []
 - Others []

4. What is your current position within the organization?
 - Accountant []
 - Credit officer []
 - Manager []
 - CEO []

5. How many years have you been in the Micro Finance industry?

1 - 5 year []

6 - 10 years []

11 - 15 years []

16 - 20 years []

Over 20 years []

6. How long has your SACCOS been in operation?

1-3 years []

4 - 6years []

7 - 10 years []

Over 10 years []

SECTION B: STUDY'S MAIN PARAMETERS

I. CREDIT RISK ANALYSIS AND SACCOS' SUSTAINABILITY.

7. Do your SACCOS rank loans in terms of the magnitude of their risks?

Yes []

No []

8. To what extent do you agree with the following statements about credit risk analysis in credit risk management by using a scale of 1 to 5 where; **5-Strongly agree, 4-Agree, 3-Neutral, 2-Disagree** and **1-Strongly disagree**.

Credit Risk Analysis Comprehensiveness	5	4	3	2	3
Credit risk analysis is comprehensive in the SACCOS					
Effective credit risk analysis requires a reporting and review structure.					
Credit risk analysis comprises identification of the outcomes					
Credit risk analysis and assessment comprises estimating the magnitude of the consequences					
Risk analysis and assessments involves assessment of hazardous outcome.					

II. CREDIT RISK MONITORING AND SACCOS' SUSTAINABILITY

9. How regularly is credit policy reviewed in your SACCOS?

Quarterly

Semi-annually

Annually

10. To what extent do you agree with the following statement about risk monitoring in credit risk management? Use scale; **5-Strongly Agree, 4-Agree, 3-Neutral, 2- Disagree and 1-Strongly Disagree.**

Agree, 4-Agree, 3-Neutral, 2- Disagree and 1-Strongly Disagree.

Credit Risk Monitoring Applications	5	4	3	2	1
Credit risk monitoring is used to ensure that credit risk management practices are effective					
Credit risk monitoring helps the SACCOS' management to discover mistakes at an early stage					
The director's report on risk monitoring enables the shareholders to assess the status of the organization knowledgeably and thoroughly					

III. CREDIT RISK MITIGATION AND SACCOS' SUSTAINABILITY.

11. To what extent do you agree with the following statement about credit risk mitigation in credit risk management? Use scale; **5-Strongly Agree, 4-Agree, 3-Neutral, 2- Disagree and 1-Strongly Disagree.**

Strongly Agree, 4-Agree, 3-Neutral, 2- Disagree and 1-Strongly Disagree.

Credit Risk Mitigation Practices	5	4	3	2	1
SACCOS use collaterals to ensure timely loan repayments					
SACCOS use guarantor system to secure loans					
All loans issued by your SACCOS are insured					

SECTION C: FINANCIAL SUSTAINABILITY OF SACCOS

- 12.** To what extent do you agree with the following statements about financial sustainability of SACCOS? Use scale; **5-Strongly Agree, 4- Agree, 3-Neutral, 2-Disagree and 1-Strongly disagree.**

Financial sustainability Aspects	5	4	3	2	1
The SACCOS capital base has increased significantly					
The total revenue collected by our SACCOS has increased substantially					
There are fewer cases of loans failing to be repaid on time compared to previous years					
Our SACCOS has recorded a significant decline in the number and amount of loan defaults					

THANK YOU

APPENDIX II: TARGET POPULATION OF THE STUDY (No. SACCOS WHICH WERE INVOLVED)

1. BABATI TOWN COUNCIL (BTC) WORKERS SACCOS
2. BABATI SACCOS
3. AKE TEACHERS SACCOS
4. MANYARA TEACHERS SACCOS
5. VETA MANYARA SACCOS
6. KWARAA TEACHERS SACCOS
7. BAHATI SACCOS
8. TANZANIA CHAMBER OF COMMERCE INDUSTRY AND AGRICULTURE (TCCIA) SACCOS.
9. JAMII FARM AFRICA SACCOS
10. BOGI TEACHERS SACCOS
11. MABANDILIKO SACCOS

APPENDIX III: RESEARCH CLEARANCE

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF POSTGRADUATE STUDIES

P.O. Box 23409
Dar es Salaam, Tanzania
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Our Ref: PG2017997129

2nd March 2022

The Regional Administrative Secretary,

Manyara Region,

P. O. Box 310,

BABATI-MANYARA

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007. In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.

To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr. KAMURU, Lenard, Reg No: PG2017997129** pursuing **Master of Arts in Monitoring and Evaluation**. We here by grant this clearance to conduct a research titled **"Effects of Credit Risk Management Practices on Saving and Credit Cooperative Societies (SACCOS)' Sustainability in Babati Town Council"**. He will collect his data at your area from 7th March 2022 to 25th March 2022.

In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania. P.O. Box 23409, Dar es Salaam. Tel: 022-2-2668820. We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours,

THE OPEN UNIVERSITY OF TANZANIA

Prof. Magreth S. Bushesha
DIRECTOR OF POSTGRADUATE STUDIES.