Effect of Credit Management on the Financial Performance of Microfinance Institutions in Rwanda: A Case Study of Umurenge SACCOS in Rulindo District

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Abstract: *This study explores the effect of credit management practices, with a particular focus on loan appraisal, on the financial performance of Umurenge SACCOs in Rulindo District, Rwanda. Grounded in an Asymmetric Information Theory, the research adopts a descriptive design and employs a mixed-methods approach, integrating both quantitative and qualitative techniques. A total of 143 respondents were selected using purposive sampling, and data were collected through structured questionnaires. Descriptive analysis revealed that respondents generally agreed on the importance of loan appraisal, with a mean score of 3.75 for the statement "Loan appraisal is a viable strategy for credit management" and 3.91 for the role of collateral in loan appraisal. However, there was some variability in perceptions regarding the competency of personnel and the thoroughness of loan assessments. Inferential statistics, including correlation and regression analysis using SPSS Version 25, were employed to examine the relationships between loan appraisal and financial performance. The findings showed a strong positive correlation (r = 0.776) between effective loan appraisal and the financial performance of SACCOs. Regression analysis confirmed that loan appraisal practices significantly impact the financial outcomes of Umurenge SACCOs, with a standardized beta coefficient of 0.206 (p-value = 0.005), emphasizing the importance of robust loan evaluation processes in improving financial sustainability. Based on these findings, the study recommends that Umurenge SACCOs adopt more rigorous and standardized loan appraisal procedures, enhance the capacity of credit officers through continuous training, and integrate digital tools for more accurate, efficient loan assessments.*

Keywords: Credit Management, financial performance, Microfinance Institutions and Rulindo District

1. Introduction

The financial performance of microfinance institutions (MFIs) worldwide largely depends on credit management. Effective credit management techniques significantly impact loan recovery rates and total profitability. Examples of these techniques include thorough borrower assessments and systematic loan monitoring. MFIs that use thorough credit evaluation processes can more accurately determine the creditworthiness of prospective borrowers, reducing the likelihood of default, claim (Lyani, 2022). In addition to

improving the institution's financial stability, this proactive strategy creates a lending portfolio that is more dependable.

Microfinance Institutions (MFIs) have played a significant role in advancing financial inclusion and increasing access to financial services in Africa. According to a study conducted by the Consultative Group to Assist the Poor (CGAP), African MFIs' average return on assets (ROA) in 2018 was 1.5%, higher than the 0.9% global average. In addition, African MFIs' gross loan portfolio grew by 12% in 2018, suggesting that their influence and outreach have expanded. This indicates that MFIs are making significant progress toward fulfilling their social mission of giving financial services to African populations that are underserved (CGAP, 2019). All the same, MFIs in Africa also deal with issues that may affect how well they operate. For example, poor infrastructure, insufficient institutional capacity, insufficient regulatory frameworks, and restricted access to financing.

Small-scale loans are given to those who are deemed unbankable. Ever since Muhammed Yunus (2020) founded the Grameen Bank in 1983 to provide banking services to the poor, microfinance and microcredit have become increasingly integrated into sustainable finance. With about 130 million clients, the microfinance market is already established and is predicted to grow at an estimated compound annual growth rate (CAGR) of more than 15% by 2020. "Millions of low-income individuals in developing countries still lack access to financial services," despite the fact that many MFIs have demonstrated remarkable success in engagement. Many MFIs are financed primarily by donations or subsidies because they are not financially sustainable and need the money to continue operating.

The financial performance of MFIs is directly impacted by operational efficiency, especially in a market as competitive as East Africa. MFIs that implement technology-driven credit management solutions reported a 35% decrease in operating costs. By reinvesting these savings in client services and product development, the number of clients served increased by 40%. Customer satisfaction and retention were greatly enhanced by the ability to process loans more quickly, with an average disbursement time of just three days instead of ten days. Microfinance deals with lending a small amount of capital to poor entrepreneurs to create a mechanism to alleviate poverty by providing the poor and destitute with resources available to the wealthy on a small scale. According to (Anyanwu, 2024), MFIs provide capital to the poor and combat poverty at an individual level. Thus, such institutions should continuously provide financial services to the poor.

Rwanda's microfinance industry began in 1975 and expanded rapidly in the late 1990s due to increased donor funding and government support. However, instability led to reforms starting in 1995, especially after the collapse of nine MFIs in 2006, which affected 150,000 depositors. In response, the government adopted a National Microfinance Policy and passed Law no.40/2008 to strengthen the sector and safeguard public deposits, followed by regulatory guidance (BNR No.02/2009). To boost financial inclusion, the Umurenge SACCO program was launched in 2009. As a result, access to formal financial services improved significantly from 21% in 2008 to 68% in 2016 supporting Rwanda's broader goal of becoming a financial and economic hub by 2020.

1.1 Problem Statement

Effective credit management may secure appropriate returns while minimizing operational risk. According to the Central Bank of Rwanda Annual Supervision Report 2016, the number of non-performing loans made by MFIs has increased over the past ten years, indicating a high degree of financial risk. This has had a negative impact on the profitability of these institutions; for instance, loan default reached 7% in 2014(National Bank of Rwanda,2014). In addition to affecting the MFIs' survival and viability, this tendency makes it more difficult for them to fulfill their primary purpose, which was to close the funding gap in the larger financial and extend credit to the unbanked rural population.

According to the 2019-2020 National Bank of Rwanda (BNR) annual report, three-quarters of the total assets were loans made to members. Average gross non-performing loans NPL (2018), for licensed MFIs were 8.8% and then decreased to 7.2% in 2009 (BNR Press release,2018), the quality of loans has been difficult; this is in contrast to the AMFI prudential guidelines which state that the amount of non-performing debts should not exceed 5%. This extremely high NPL level emphasizes the importance of the MFI subsector implementing credit policies to reduce credit risk. (Ugirase, 2011) conducted research on the impact of credit management practice on the financial performance of SACCOs, while Karekezi (2014) examined the variables influencing microfinance credit risk management practices in Rwanda. Therefore, microfinance institutions (MFIs) play a significant role in Rwanda's financial sector by providing underserved populations access to credit.

However, many MFIs, particularly savings and credit cooperatives (SACCOs), face challenges with credit management that can impact their financial stability, as highlighted. Poor credit management practices, such as inadequate loan appraisal, monitoring and recovery processes, can lead to higher loan default rates, affecting

profitability and sustainability; in Rwanda, the performance of SACCO in general and Umurenge SACCOs in Rulindo district, particular, has shown fluctuations, and there is a need to examine how credit management practices contribute to its financial performance. Identifying these factors can provide valuable insights into improving credit management and enhancing financial performance within SACCOs in Rwanda. Thus, this study aimed to examine credit management and financial performance with a particular emphasis on Umurenge SACCOs in Rulindo district.

This study sought to achieve the following Research objective:

i. To evaluate the effect of loan appraisal on the financial performance of Umurenge SACCO in the Rulindo district.

2. Literature Review

This section presents a review of the key concepts underpinning the study, including credit, management, credit management, financial performance, microfinance institutions, and the effect of credit management on financial performance.

Concept of credit

Credit is an essential financial instrument that enables businesses to stimulate demand and enhance sales by allowing customers to acquire goods or services with deferred payment. Horne (2018) emphasizes that firms can only benefit from offering credit if the profitability resulting from increased sales exceeds the additional costs associated with managing receivables. Brealey et al. (2023) define credit as a process whereby possession of goods and services is allowed without immediate payment, under an agreement to pay at a later date. Therefore, credit serves both as a marketing strategy and a financial risk that must be carefully managed.

In the context of microfinance institutions (MFIs), credit plays a pivotal role in providing financial services to underserved populations. Microfinance, as described by Schreiner and Colombett (2021), is an effort to increase poor people's access to small loans and deposits that banks have neglected. The World Bank further defines microfinance as small-scale financial services such as credit and savings for individuals involved in various activities at the local levels of developing countries, both rural and urban (Robinson & Marguerite, 2021). Through credit, MFIs empower individuals to engage in income-generating activities, thereby contributing to poverty alleviation.

Credit Management

Credit management is a critical function in any organization, ensuring that customers will pay for the products delivered or services rendered (Brealey & Myers, 2023). It involves strategies and policies adopted by a firm to maintain an optimal level of credit and its effective management. This aspect of financial management encompasses credit analysis, credit rating, credit classification, and credit reporting. Effective credit management is vital for the success of commercial banks and other financial institutions, as the quality of credit decisions significantly impacts the quality of the credit portfolio and, consequently, the institution's stability (Nzotta, 2024).

The primary objectives of credit management are to safeguard the company's investment in debtors and optimize operational cash flows. Policies and procedures must be implemented to grant credit to customers, collecting payments, and limiting the risk of non-payments. A well-structured credit management system helps in minimizing exposure to bad debts, over-reserving, and bankruptcies, thereby ensuring the financial health of the institution. In competitive markets, businesses may be tempted to extend more credit to increase sales; however, this practice is risky unless it can be ensured that the additional profits from higher sales will surpass the higher costs of credit (Edwards, 2023).

Financial Performance

Financial performance refers to the ability of an organization to effectively utilize its resources to generate income, meet obligations, grow, and respond to market opportunities and challenges. Stoner (2003) defines financial performance as an organization's capacity to operate efficiently, generate profit, and respond to both internal and external stimuli. Sollenberg and Anderson (2019) emphasize that performance is measured by how well a firm uses its resources to achieve its objectives, while Hitt (2016) attributes poor performance in many firms to mismanagement and underutilization of assets.

Financial performance is typically evaluated using indicators such as profitability (e.g., Return on Assets, Net Profit Margin), liquidity, solvency, and operational efficiency. These indicators provide insight into a firm's financial health and its ability to sustain operations and growth over time. In the context of microfinance institutions, financial performance is crucial as it reflects the institution's ability to remain operationally sustainable, attract funding, and meet the demands of its client base (Athanasoglou & Brissimis, 2023).

Microfinance Institutions

Microfinance institutions (MFIs) are organizations that provide financial services to individuals and small businesses who lack access to conventional banking and related services. According to Schreiner and Colombett (2021), microfinance is an effort to increase poor people's access to small loans and deposits that banks have neglected. The World Bank defines microfinance as small-scale financial services such as credit and savings for individuals involved in various activities at the local levels of developing countries, both rural and urban (Robinson & Marguerite, 2021).

MFIs generate income through loans and various financial services by charging interest, charges, fines, and fees. Additionally, financial revenue encompasses earnings from various other sources, including income from investments. The financial operations of an MFI also produce various costs, including general operational costs, borrowing expenses, and provision expenses for the possible financial impact of loans that are not paid. Successful organizations generate a favorable net profit, indicating effective financial performance (Terry, 2025).

Financial Performance of Microfinance Institutions

The financial performance of microfinance institutions is a comprehensive evaluation of their financial condition, including aspects such as assets, liabilities, equity, revenues, expenses, and profitability. It is often assessed using standard financial ratios and accounting metrics to evaluate how effectively an organization utilizes its resources to generate income. In the context of microfinance institutions, financial performance is crucial because it reflects the institution's ability to remain operationally sustainable, attract funding, and meet the demands of its client base (Athanasoglou & Brissimis, 2019).

Financial performance in banking is highly influenced by credit risk and capital adequacy, given that a significant portion of banking assets are tied to credit. Effective credit management practices can mitigate credit risks, thereby enhancing the financial performance of microfinance institutions. Institutions that implement robust credit management systems, including credit policies, credit appraisal, and customer relationship management, are better positioned to achieve financial sustainability and meet their social objectives.

Effects of Credit Management on Financial Performance

Credit management is the method by which organizations collect and control payments from customers. Myers and Brealey (2023) describe credit management as methods and strategies adopted by a firm to ensure that they maintain an optimal level of credit and its effective management. It is an aspect of financial management involving credit analysis, credit rating, credit classification, and credit reporting. Effective credit management will lower the capital that is locked with debtors and reduce the possibility of incurring bad debts.

According to Edwards (2024), unless a seller has built into his selling price additional costs for late payment or is successful in recovering those costs through interest charges, any overdue account will affect his profit. In some competitive markets, companies may be tempted by the prospects of increased business if more credit is extended; however, this practice is risky unless it can be ensured that the additional profits from higher sales will outweigh the increased costs of credit or that those costs can be recovered through higher prices. Therefore, implementing effective credit management strategies is essential for enhancing the financial performance of microfinance institutions.

2.2 Theoretical Review

This section explores the theoretical foundations underpinning the relationship between credit management and the financial performance of microfinance institutions (MFIs). Theoretical frameworks are essential for providing a structured approach to analyzing the challenges and strategies involved in lending, especially in contexts characterized by high levels of uncertainty and limited financial transparency.

Asymmetric Information Theory

The concept of information asymmetry was first formally introduced by George Akerlof in his seminal paper "The Market for Lemons" in 1970. Akerlof illustrated how markets could break down when sellers have more information about a product's quality than buyers, leading to adverse selection of a situation where bad-quality products drive out good-quality ones (Briella, 2024). This idea was later expanded beyond product markets to the field of finance and credit, where lenders often have less information about borrowers than the borrowers have about themselves. The theory has since evolved and been widely applied in understanding financial markets, contract theory, and the economics of lending, particularly within the domain of credit risk and financial intermediation.

Information asymmetry refers to situations where one party in a financial transaction possesses more or better information than the other. In credit markets, this typically manifests as lenders not having full knowledge of a borrower's ability or willingness to repay a loan. This gives rise to two critical problems: adverse selection (where lenders cannot distinguish between high-risk and low-risk borrowers before issuing credit) and moral hazard (where borrowers may change their behavior after receiving a loan in ways that increase the lender's risk). According to Matar and Sayour (2020), these information gaps significantly influence financial decision-making and are central to understanding the inefficiencies in lending systems, especially in less-regulated or developing markets.

The relevance of Information Asymmetry Theory to this study lies in its ability to explain the critical role of loan appraisal in the financial performance of microfinance institutions such as Umurenge SACCO in the Rulindo district. This theory highlights the imbalance of information between borrowers and lenders, where borrowers typically possess more knowledge about their financial situation, intentions, and capacity to repay loans than the lending institution. In such contexts, ineffective loan appraisal can lead to adverse selection, where high-risk individuals are granted loans, and moral hazard, where borrowers engage in risky behavior post-disbursement due to lack of monitoring. For MFIs operating in rural or informal economies, this risk is heightened due to the absence of credit histories, collateral, and financial transparency

2.3 Empirical Literature

This section presents empirical studies that have explored the relationship between credit management practices and the financial performance of microfinance institutions (MFIs), particularly in the context of loan appraisal, credit risk management, and financial sustainability. Empirical literature plays a crucial role in providing evidence on the effectiveness of various credit management strategies and their direct impact on the financial outcomes of MFIs. Studies conducted in both developed and developing economies offer valuable insights into how MFIs can improve their financial performance through effective credit management, with a particular focus on risk assessment and loan approval processes.

Loan appraisal and financial performance of microfinance institutions

Several studies have highlighted the importance of robust loan appraisal mechanisms in enhancing the financial performance of MFIs. For example, a study by Kessy and Urio (2015) on Tanzanian MFIs found that effective credit risk management, which includes thorough loan appraisal processes, significantly contributed to reducing default rates and improving the profitability of these institutions. The study emphasized that MFIs that implemented detailed borrower assessments and employed stringent credit scoring methods had lower delinquency rates and were more financially stable. Similarly, a study by Ouma, Abomadi, and Ochieng (2018) in Kenya confirmed that MFIs that utilized effective credit appraisal techniques were able to better manage credit risks, resulting in improved financial performance and increased outreach to underserved populations. These findings underscore the critical role of loan appraisal in ensuring that only creditworthy borrowers are granted loans, thereby reducing the likelihood of default and improving the overall financial stability of MFIs.

In Rwanda, a study by Nkurunziza (2017) explored the effect of credit management practices on the financial performance of Umurenge SACCOs. The research found that SACCOs with more robust loan appraisal systems had significantly lower default rates, which translated into better financial performance. Nkurunziza argued that the key to effective credit management in these SACCOs was the ability to assess borrowers' repayment capacity accurately and to monitor loans closely after disbursement. The study recommended the adoption of advanced credit risk management techniques, including the use of technology to assess and monitor loans, to enhance the financial performance of SACCOs in Rwanda. These empirical findings highlight the importance of continuous innovation in credit appraisal processes and the need for SACCOs to adapt to changing economic conditions to ensure long-term financial sustainability.

Empirical studies also show that financial performance is not solely determined by loan appraisal processes but is influenced by a combination of factors, including institutional capacity, governance, and external economic conditions. For instance, a study by Nwankwo and Ijeoma (2016) found that while loan appraisal processes were crucial, the overall governance structure and management practices in MFIs also had a significant impact on financial outcomes. The study emphasized the importance of efficient management, transparency, and accountability in ensuring that credit management systems led to sustainable financial results. Additionally, research by Mwangi (2019) indicated that external factors, such as regulatory frameworks and the economic environment, could either enhance or hinder the effectiveness of credit management practices. These studies suggest that while loan appraisal is a critical component of credit management, it must be complemented by strong institutional and external support systems to maximize the financial performance of MFIs.

3. Methodology

The research design served as a structured plan for addressing the research questions (Orodho & J.A., 2008). This study used a descriptive research design, which aimed to gather data on the existing conditions of credit management practices and their impact on the financial performance of microfinance institutions in Rwanda, particularly focusing on Umurenge SACCOs in Rulindo district. Descriptive research was particularly useful for understanding the current status without influencing or manipulating the variables. According to Creswell (2008), this method allowed for a detailed examination of the effects of credit management practices on financial performance.

The study population referred to the total group of individuals from which the sample was drawn (Cooper & Schindler, 2003). For this research, the target population included staff members from 17 Umurenge SACCOs in Rulindo district, totaling 221 respondents. The participants included 12 managers, 17 accountants, 17 credit officers, 17 loan recovery officers, 58 staff from credit analyst committees, 51 staff from supervision committees, and 34 cashiers. This diverse representation ensured a comprehensive understanding of credit management practices at various levels within SACCOs.

Sampling involved selecting a representative portion of the population for the study (Babbie, 2010). In this study, random sampling was used to select 11 SACCOs out of the 17 in Rulindo district. A total of 143 respondents were chosen to participate in the study, ensuring that each position within the SACCOs, including managers, accountants, credit officers, loan recovery officers, staff from credit analyst committees, supervision committees, and cashiers, was adequately represented. This sampling approach ensured that the findings were broadly applicable within the context of Rulindo district's SACCOs.

Data for the study were collected from both primary and secondary sources. Primary data were gathered using questionnaires, which were designed to capture specific information about the credit management practices in the SACCOs. The questionnaire included both closed and open-ended questions, covering aspects such as loan appraisal, credit risk assessment, and credit monitoring practices. A Likert scale was used for responses to quantify opinions and attitudes. Secondary data, such as financial statements and annual reports from 2018 to 2023, were also analyzed to assess the financial performance of SACCOs.

Ensuring the reliability and validity of the data was critical to the success of the research. Reliability referred to the consistency of the research tool, and in this study, Cronbach's Alpha was used to test internal consistency (Carmines & Zeller, 2019). A pre-test was conducted using a small sample from the target population to refine the questionnaire and ensure content validity. The reliability and validity checks helped ensure that the research instruments accurately measured the intended variables, such as credit management practices and financial performance.

The data collected from the questionnaires and secondary sources were carefully processed to ensure accuracy and coherence. The responses were organized and cross-checked to eliminate inconsistencies. Descriptive analysis, including frequency distributions and percentages, was performed on the survey data to present a clear overview of respondents' perceptions and practices. Secondary data were processed by extracting relevant financial indicators, such as after-tax profits, total assets, and operating expenses, to assess the financial performance of SACCOs.

Data analysis involved classifying, summarizing, and interpreting the collected data to answer the research questions. Descriptive statistics, such as mean and standard deviation, were used to analyze survey responses. Additionally, inferential statistics, including regression analysis, were conducted to explore the relationships between credit management practices and financial performance. The regression model, incorporating factors such as loan appraisal, credit risk assessment, and credit monitoring, helped quantify the impact of these variables on financial outcomes. Pearson correlation analysis was also used to determine the strength and direction of the relationship between these variables.

The study faced several limitations that could have affected its findings. These included challenges in obtaining relevant and up-to-date data, concerns over respondent confidentiality, and the potential for non-responses to survey questions. Financial constraints also posed a challenge in covering the transportation costs required for fieldwork. Moreover, external factors such as adverse weather conditions could have disrupted data collection activities. These limitations were acknowledged to ensure transparency and the proper contextualization of the study's findings.

Ethical considerations played a crucial role in the study to ensure the integrity of the research process. Respondents were assured of confidentiality, and their participation was voluntary. The research adhered to ethical guidelines, ensuring that personal information was not disclosed without consent. All responses were collected anonymously, and respondents were informed of their right to withdraw from the study at any time without

consequence. These ethical measures were important to foster trust and transparency, ensuring that the study adhered to the highest standards of academic integrity.

4. Results and Discussion

In this section, the findings of the research are presented and discussed in relation to the research objectives, providing an analysis of how credit management practices affect the financial performance of Umurenge SACCOs in Rulindo District. The data collected from questionnaires and secondary sources were analyzed and interpreted to answer the research questions. The results are organized according to the study variables, including loan appraisal, credit risk assessment and control, credit collection and recovery practices, credit terms, and credit monitoring. In the case study of Umurenge SACCOs in Rulindo district, descriptive and inferential statistics were used to discuss the study's findings. The study targeted a population size of 143 respondents, from which 143 filled in the

questionnaire, making the response rate 100%. This response rate was satisfactory for drawing conclusions for the study.

4.1 Descriptive Statistics of Loan Appraisal

This section presents an analysis of the research objective and delves into the perceptions of respondents based on the survey questions. Descriptive statistics were employed to summarize and present the data in a clear and meaningful way. A Likert scale, ranging from 1 to 5, was utilized to gauge respondents' attitudes, with 5 indicating "Strongly Agree," 4 for "Agree," 3 for "Neutral," 2 for "Disagree," and 1 for "Strongly Disagree." This approach enabled the researchers to effectively interpret and categorize respondents' views on the study's key topics. The results of the descriptive analysis are provided in Table 1 below.

Table 1: Level of agreement of Loan appraisal

Statement	N	Mean	Std. Deviation
Loan appraisal is a viable strategy for credit management	143	3.75	1.310
The SACCO has competent personnel for carrying out loan appraisal	143	3.77	1.335
Loan appraisal considers the character of the customers seeking credit facilities.	143	3.68	1.182
Aspects of collateral are considered while appraising loans	143	3.91	1.247
Failure to assess customers capacity to repay results in loan defaults	143	3.77	1.268
Overall		**3.58**	**1.281**

Source: Field data, 2025

Table 1 presents the descriptive statistics on the level of agreement regarding stakeholder participation in project initiation, specifically focusing on loan appraisal as a strategy for credit management within Umurenge SACCOs. The responses were gathered from 143 respondents, and the mean and standard deviation values for each statement provide insights into the perceptions of stakeholders regarding loan appraisal processes.

The first statement, "Loan appraisal is a viable strategy for credit management," had a mean score of 3.75 with a standard deviation of 1.310. This indicates that respondents generally agree that loan appraisal is an important tool for credit management, but there is some variability in opinions. Similarly, the statement "The SACCO has competent personnel for carrying out loan appraisal" had a mean score of 3.77 and a standard deviation of 1.335, suggesting a favorable perception of the competency of personnel in charge of loan appraisal, though there is still a degree of variation in responses.

Regarding the statement, "Loan appraisal considers the character of the customers seeking credit facilities," the mean score was 3.68 with a standard deviation of 1.182,

indicating a moderate agreement that character is taken into account during loan appraisals. The statement "Aspects of collateral are considered while appraising loans" received a slightly higher mean score of 3.91 with a standard deviation of 1.247, reflecting strong agreement that collateral plays a significant role in the loan appraisal process. On the issue of loan defaults, the statement "Failure to assess customers' capacity to repay results in loan defaults" had a mean score of 3.77 and a standard deviation of 1.268, suggesting that respondents acknowledge the importance of assessing repayment capacity to prevent defaults. The overall mean score for the statements related to loan appraisal was 3.58, with a standard deviation of 1.281, indicating a moderate agreement that loan appraisal is an important element of credit management, though with some variation in individual perspectives.

These findings suggest that while there is general agreement among the respondents on the importance of loan appraisal, opinions vary regarding specific aspects of the process, such as personnel competency and the role of collateral. The variability in responses highlights potential

areas for improvement in the loan appraisal practices at Umurenge SACCOs, particularly in ensuring a more consistent and thorough approach to evaluating loan applicants.

4.2 Inferential Statistics

This section presents the results derived from inferential statistics tests, such as the correlation coefficient and multiple linear regression analysis, to examine the relationship between independent variables and dependent variables in this research study.

Diagnostic Tests

In order to ensure the validity and reliability of the regression model and its results, it is essential to assess whether the data meets the key assumptions required for regression analysis. These assumptions include normality of the residuals, the absence of multicollinearity, and the presence of homoscedasticity. This section presents the results of various diagnostic tests conducted on the data, focusing on the assumptions underlying the regression model.

Table 2: Tests for normality

Variable	Kolmogorov-Smirnova	Statistic	df	Sig.	Shapiro-Wilk	Statistic
Loan Appraisal	0.436	42	0.000	0.582	42	0.000

a. Lilliefors Significance Correction

Table 2 presents the results of normality tests conducted on the loan appraisal variable using both the Kolmogorov-Smirnov and Shapiro-Wilk tests. For the Kolmogorov-Smirnov test, the statistic is 0.436 with a p-value of 0.000, and for the Shapiro-Wilk test, the statistic is 0.582 with a p-value of 0.000. Both p-values are less than the significance level of 0.05, indicating that the data for loan appraisal do not follow a normal distribution. This suggests that the loan appraisal variable is not normally distributed, which may need to be considered when conducting further statistical analysis.

Table 3: Tests for Multicollinearity

Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		-2.918	0.006		
	Loan appraisal	0.798	6.123	0	0.17	5.876

Table 3 presents the results of multicollinearity tests for the regression model, which examines the relationship between loan appraisal and the financial performance of Umurenge SACCOs. The Beta coefficient for loan appraisal is 0.798, indicating a positive and significant relationship with financial performance. The t-statistic for loan appraisal is 6.123 with a p-value of 0.000, suggesting that the variable is statistically significant. Regarding multicollinearity, the tolerance value for loan appraisal is 0.17, and the Variance Inflation Factor (VIF) is 5.876. These values suggest that there is no severe multicollinearity, as the tolerance is above the threshold of 0.10 and the VIF is below the critical value of 10. This indicates that the regression results are reliable and that loan appraisal is not highly correlated with other predictor variables, supporting the validity of the model.

Correlation Analysis

Correlation analysis was conducted to examine the relationships between the variables involved in the study, particularly focusing on the impact of loan appraisal, credit risk assessment, credit collection and recovery practices, and credit monitoring on the financial performance of Umurenge SACCOs. By measuring the strength and direction of associations between these variables, the analysis aimed to provide insights into how each factor influences the financial outcomes of the SACCOs. The following table indicates Pearson correlation between variables.

Table 4: Correlation between independent variable and dependent variable

		Loan Appraisal	Financial Performance
Loan Appraisal	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	143	
Financial Performance	Pearson Correlation	.776**	1
	Sig. (2-tailed)	.000	
	N	143	143

Source: Field data, 2025

The correlation analysis was conducted to examine the relationship between loan appraisal and financial performance in Umurenge SACCOs. The Pearson correlation coefficient was used to measure the strength and direction of the association between the two variables. As shown in Table 2, there is a strong positive correlation ($r = 0.776$) between loan appraisal and financial performance, which is statistically significant ($p = 0.000$). This suggests that effective loan appraisal practices have a significant and positive impact on the financial performance of SACCOs. The stronger the loan appraisal process, the better the financial outcomes for the institution, highlighting the importance of robust credit management practices in improving financial sustainability.

Regression analysis

Regression analysis was conducted to evaluate the effect of loan appraisal on the financial performance of Umurenge SACCOs. The study focused on loan appraisal as the key independent variable, with financial performance being measured using Return on Assets (ROA) and Return on Equity (ROE). The goal was to understand how loan appraisal practices influence the financial outcomes of the SACCOs. By performing regression analysis, the study aimed to quantify the relationship between loan appraisal and the financial performance indicators, thus providing insights into the extent to which loan appraisal practices contribute to the SACCOs' profitability and efficiency.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.724[a]	.524	.510	.47588

a. Predictors: (Constant), Loan appraisal

The model summary table presents the results of the regression analysis conducted to assess the impact of loan appraisal on the financial performance of Umurenge SACCOs. The R value of 0.724 indicates a strong positive correlation between loan appraisal and financial performance, while the R Square value of 0.524 suggests that 52.4% of the variation in financial performance (as measured by ROA and ROE) can be explained by loan appraisal practices. The Adjusted R Square value of 0.510 accounts for the number of predictors in the model, indicating that approximately 51% of the variation in financial performance is explained by loan appraisal when adjusted for the sample size. The standard error of the estimate is 0.47588, which indicates the average distance that the observed values fall from the regression line, providing an estimate of the accuracy of the model's predictions.

Table 6: ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.402	4	8.600	37.977	.000[b]
	Residual	31.252	138	.226		
	Total	65.654	142			

a. Dependent Variable: Loan Appraisal
b. Predictors: (Constant), Financial Performance

Table 6 presents the ANOVA results for the regression model examining the effect of financial performance on loan appraisal. The table shows that the regression model is statistically significant, with an F-value of 37.977 and a significance level (p-value) of 0.000, which is well below the conventional threshold of 0.05. This indicates that the model as a whole reliably predicts the dependent variable, loan appraisal. The regression sum of squares is 34.402, while the residual sum of squares is 31.252, resulting in a total sum of squares of 65.654. These results confirm that financial performance significantly contributes to explaining the variation in loan appraisal practices within Umurenge SACCOs.

Table 7: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.126	.355		.356	.722
	Loan Appraisal	.210	.074	.206	2.854	.005

a. Dependent Variable: Financial Performance

Table 7 presents the regression coefficients for the relationship between loan appraisal and financial performance in Umurenge SACCOs. The unstandardized coefficient (B) for loan appraisal is 0.210, indicating that a one-unit increase in loan appraisal is associated with a 0.210 increase in financial performance, holding all else constant. The standard error of 0.074 suggests a relatively low level of variability around the coefficient estimate. The standardized Beta coefficient is 0.206, showing a moderate positive effect of loan appraisal on financial performance. The t-value of 2.854 and the corresponding significance level (p = 0.005) confirm that the relationship is statistically significant at the 0.01 level. This implies that effective loan appraisal practices have a meaningful and positive impact on the financial performance of SACCOs.

4.3 Discussion of Findings

The objective of this study was to evaluate the effect of loan appraisal on the financial performance of Umurenge SACCOs in Rulindo District. The findings indicated that loan appraisal is widely regarded by SACCO staff as a critical element of credit management. Respondents acknowledged that proper assessment of loan applicants is essential for maintaining loan quality and minimizing default risks. These insights reflect the view that loan appraisal serves not only as a credit screening tool but also as a foundation for ensuring creditworthiness and institutional sustainability. This is consistent with the assertions of Gitman and Zutter (2022), who argue that effective credit screening improves overall financial performance by reducing bad debt.

The data further suggested that loan appraisal practices in SACCOs commonly include evaluations of borrowers' character, collateral, and capacity to repay. These core principles of credit appraisal are fundamental to determining whether a borrower qualifies for financial assistance. The perception that inadequate assessment can lead to loan default reinforces the importance of a structured and systematic appraisal process. According to Brealey, Myers, and Allen (2024), institutions that thoroughly evaluate these dimensions of borrower risk are more likely to maintain healthy loan portfolios and strong financial performance.

A strong relationship was observed between loan appraisal practices and the financial performance of SACCOs. Institutions that employ robust loan appraisal techniques are better equipped to identify creditworthy clients, reduce exposure to high-risk borrowers, and allocate credit more effectively. This supports the theoretical foundation provided by Akerlof's (2020) asymmetric information theory, which explains that in the absence of proper borrower screening, financial institutions face risks such as adverse selection and moral hazard, both of which can severely affect profitability and operational sustainability.

Further analysis supported the idea that loan appraisal significantly contributes to financial health by enhancing loan recovery, minimizing default rates, and improving financial planning. In microfinance institutions where clients often lack formal credit histories or collateral, the loan appraisal process acts as a critical control point for mitigating potential losses. These findings are in line with the work of Ledgerwood (2023), who emphasized the need for rigorous credit assessment procedures in microfinance to ensure institutional viability and to support long-term growth.

Overall, the study reinforces the notion that loan appraisal is not merely a procedural requirement but a strategic function that directly affects the financial performance of SACCOs. When executed effectively, it enhances resource

allocation, strengthens client relationships, and contributes to organizational sustainability. As noted by Anyanwu (2024), comprehensive appraisal processes not only protect the lender's financial interests but also promote responsible borrowing, which is crucial for achieving the developmental goals of microfinance institutions.

5. Conclusion and Recommendations

This section summarizes the key findings of the study, draws conclusions based on the analysis, and presents practical recommendations aimed at improving loan appraisal practices and, in turn, enhancing the financial performance of Umurenge SACCOs in Rulindo District.

5.1 Conclusion

In conclusion, the study found that loan appraisal plays a critical role in shaping the financial performance of Umurenge SACCOs in Rulindo District. Effective loan appraisal practices, such as evaluating the borrower's creditworthiness through assessment of character, capacity, and collateral, were shown to contribute to improved financial outcomes. These practices help SACCOs minimize credit risk, reduce loan defaults, and promote better resource allocation. The findings support the view that institutions that rigorously assess loan applications are more likely to maintain financial stability and achieve sustainable growth. Therefore, strengthening loan appraisal mechanisms is essential for enhancing operational

efficiency and ensuring long-term financial viability in microfinance institutions.

5.2 Recommendations

Based on the study findings, the following recommendations are made:

1. Umurenge SACCOs should adopt a more rigorous and standardized loan appraisal procedure that thoroughly evaluates borrowers' creditworthiness, including character, capacity to repay, and availability of collateral. This will help reduce the risk of loan defaults and improve financial performance.
2. Continuous professional development and capacity-building programs should be provided to credit officers and other personnel involved in loan processing. This will ensure that staff are well-equipped with the necessary skills to assess loan applications effectively and make informed credit decisions.
3. Incorporating digital systems and credit scoring technologies can enhance the accuracy and efficiency of loan appraisals. Automating parts of the process will reduce human error and allow for quicker, data-driven decisions.
4. Loan appraisal should not be a one-time activity. SACCOs should develop mechanisms for regular follow-up on loan performance, ensuring that borrowers use funds appropriately and that repayments are made on time.

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