Assessing the Effect of Credit Risk Identification on Loan Performance in Credit-Only Microfinance Institutions in Central Kenya

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ABSTRACT

Credit-only microfinance institutions play an important role in expanding access to credit among underserved households, micro-entrepreneurs and small businesses in Kenya. However, persistent loan defaults and declining portfolio quality continue to threaten their financial sustainability, particularly because many borrowers operate in informal markets with limited financial records and unstable income streams. This study examined the effect of credit risk identification on loan performance among credit-only microfinance institutions in Kirinyaga, Nyeri, Murang'a and Kiambu counties in Central Kenya. The study was anchored on Information Asymmetry Theory, which explains how limited borrower information can increase adverse selection and moral hazard in lending. A descriptive and explanatory research design was adopted. Data was collected from credit managers, junior credit officers and field credit officers using structured questionnaires and interviews. Quantitative data was analyzed using descriptive statistics and simple linear regression, while qualitative responses were analyzed thematically. Credit risk identification had a positive and statistically significant relationship with loan performance. Specifically, credit risk identification explained 41.2% of the variation in loan performance, with regression results indicating a significant positive coefficient, $B = 0.735$, $p < .001$. Results suggest that borrower screening, verification of loan application information, background checks, use of Credit Reference Bureau reports and assessment of borrower credit history are important in improving repayment performance and reducing default risk. Effective credit risk identification is a critical determinant of loan performance among credit-only microfinance institutions. There is need for these institutions to strengthen borrower appraisal systems, improve credit information sharing, train credit officers continuously and adopt data-driven tools for early identification of risky borrowers.

Keywords: Credit Risk Identification, Loan Performance, Microfinance Institutions, Non-Performing Loans, Borrower Screening, Central Kenya.

INTRODUCTION

Microfinance institutions play an important role in promoting financial inclusion, especially in developing economies where many low-income households, small-scale traders and micro-entrepreneurs remain underserved by formal banking institutions (Armendáriz and Morduch, 2022). In Kenya, credit-only microfinance institutions (COMFIs) provide credit facilities to individuals and small businesses that often lack adequate collateral, formal financial records or stable income documentation required by conventional banks (Central Bank of Kenya, 2024). Through this role, COMFIs contribute to enterprise growth, household welfare and access to finance among populations that would otherwise depend on informal credit sources. However, their ability to sustain this contribution depends greatly on the quality of their loan portfolios and the effectiveness of their credit risk management practices.

Credit risk remains a major concern for lending institutions because it reflects the possibility that borrowers may fail to meet their repayment obligations as agreed. The challenge is particularly serious among

COMFIs because they mainly lend to clients operating in informal and semi-formal sectors, where income streams are often irregular, business records may be incomplete and financial literacy levels vary across borrowers (Karlan et al., 2022). Since COMFIs do not mobilize customer deposits in the same way as deposit-taking financial institutions, persistent loan defaults can quickly weaken liquidity, reduce lending capacity and threaten institutional sustainability (Ledgerwood et al., 2022). Effective credit risk identification is therefore essential in protecting portfolio quality and strengthening loan performance.

Credit risk identification enables lending institutions to recognize borrower-specific, business-related and environmental risks that may affect repayment ability. These practices help lenders distinguish between low-risk and high-risk borrowers and reduce the likelihood of lending to clients with hidden repayment weaknesses. In lending relationships, information asymmetry may lead to adverse selection, where risky borrowers are approved because lenders cannot fully observe their true risk profile before loan disbursement.

As a result, lenders cannot depend only on conventional financial statements or collateral-based appraisal. Instead, they may combine formal mechanisms such as Credit Reference Bureau reports and repayment histories with informal mechanisms such as field visits, community information, business observation and borrower interviews (Adusei and Tweneboah, 2023). This combination improves the lender's understanding of borrower behavior, repayment capacity and potential default risk before credit is granted.

Loan performance is commonly assessed through indicators such as repayment rates, default levels, portfolio at risk, loan recovery rates and non-performing loans (Microfinance Information Exchange, 2024). Strong loan performance enables COMFIs to maintain liquidity, recycle lending capital and continue serving financially excluded clients. Poor loan performance, on the other hand, increases provisioning costs, reduces profitability, weakens portfolio quality and limits the institution's capacity to extend new credit (Ledgerwood et al., 2022). Since loan performance is influenced by the quality of decisions made at the loan origination stage, credit risk identification becomes a strategic function rather than a routine administrative procedure.

Empirical studies have shown that effective borrower screening and credit information sharing improve repayment outcomes and reduce default risk. Bassem (2022) observed that institutions with stronger borrower screening practices experienced lower default exposure than those relying on minimal verification. Studies in microfinance contexts also indicate that business appraisal, background checks and site visits strengthen portfolio quality by helping lenders identify borrower risks before disbursement (Adusei and Tweneboah, 2023; Okoth and Mwangi, 2023).

Despite this evidence, most studies on credit risk and loan performance in Kenya have focused on commercial banks and deposit-taking microfinance institutions, with limited attention to credit-only microfinance institutions. This creates a gap because COMFIs operate under a distinct lending model, serve borrowers with different risk profiles and face unique sustainability challenges due to their dependence on loan recoveries and external funding. This study examines the effect of credit risk identification on loan performance among credit-only microfinance institutions in Kirinyaga, Nyeri, Murang'a and Kiambu counties in Central Kenya.

RESEARCH METHODOLOGY

Research Design

This study adopted a descriptive and explanatory research design to examine the effect of credit risk identification on loan performance among credit-only microfinance institutions in Central Kenya. The descriptive design enabled the study to describe existing credit risk identification practices, including borrower screening, background verification, use of Credit Reference Bureau reports, credit history review and verification of loan application information. The explanatory design was appropriate because the study tested whether credit risk identification significantly predicted loan performance. A mixed-methods approach was used, where quantitative data supported statistical analysis, while qualitative responses provided contextual explanations.

Study Area

The study was conducted in Kirinyaga, Nyeri, Murang'a and Kiambu counties in Central Kenya. These counties were selected because they have active credit-only microfinance institutions and vibrant economic activities in agriculture, trade and small enterprises that rely on microfinance credit. The target population comprised 37 credit-only microfinance institutions operating in the study area. Since the number of institutions was small and manageable, the study adopted a census approach in which all the 37 COMFIs were included. From each institution, three respondents were purposively selected from the credit management function: a credit manager, a junior credit officer and a field credit officer. This produced a total target population of 111 respondents.

Table 1: Target Population Distribution Across Counties

County	Number of COMFIs	Target Respondents
Kirinyaga	8	24
Murang'a	8	24
Kiambu	12	36
Nyeri	9	27
Total	37	111

Source: AMFI-K (2022)

Data Collection Instruments

Data was collected using questionnaires and interviews. The questionnaire contained both closed-ended and open-ended items and was used as the main instrument because it allowed standardized data to be collected from credit management staff across the selected COMFIs. The instrument covered demographic information, credit risk identification practices and loan performance indicators. Interviews with credit managers were used to obtain additional institutional insights on how borrower risk was identified before loan approval and how these practices related to loan performance.

Validity and Reliability

Validity of the research instruments was established through content and construct validity. Content validity was ensured by aligning the questionnaire items with the study objective, relevant literature and the key constructs of credit risk identification and loan performance. Construct validity was assessed through a pilot study conducted among credit-only microfinance institutions outside the study area. Reliability was tested using Cronbach's alpha coefficient, with a threshold of 0.70 and above considered acceptable for internal consistency.

Data Collection Procedures and Analysis

Formal authorization was obtained from the university and approval was granted by the National Commission for Science, Technology and Innovation before data collection. Questionnaires were distributed personally using the drop-and-pick method, allowing respondents adequate time to complete them. Quantitative data was coded and analyzed using SPSS (version 27). Descriptive statistics, correlation analysis and simple linear regression were used to determine the effect of credit risk identification on loan performance. The regression model was specified as $LP = \beta_0 + \beta_1 CRI + \varepsilon$, where LP represents loan performance, β_0 is the constant term, β_1 is the regression coefficient, CRI represents credit risk identification and ε is the error term. Qualitative data from interviews and open-ended responses was analyzed thematically.

Ethical Considerations

Ethical considerations were observed to protect respondents and ensure research integrity. Approval was obtained from the relevant institutional authorities and the National Commission for Science, Technology and Innovation. Respondents were informed about the purpose of the study, their voluntary participation and their right to withdraw at any stage without penalty. Informed consent was obtained before participation, while confidentiality and anonymity were maintained by excluding identifying information from the report.

RESULTS AND DISCUSSION

Response Rate and Respondent Characteristics

A total of 111 questionnaires were distributed to respondents drawn from credit-only microfinance institutions in Kirinyaga, Murang'a, Kiambu and Nyeri counties. Of these, 108 questionnaires were duly completed and used for analysis, while 3 were incomplete and excluded. This represented a response rate of 97%. The high response rate was attributed to personal administration of the questionnaires and the drop-and-pick method.

Table 2: Questionnaire Response Rate

Response Category	Frequency	Percentage
Questionnaires distributed	111	100
Questionnaires returned and analyzed	108	97
Incomplete questionnaires	3	3
Total	111	100

Source: Field Data (2025)

Respondent characteristics showed that most respondents were within the active working-age group and were therefore suitably placed to provide information on credit operations in COMFIs. Gender distribution was relatively balanced, with 56 of 108 (52%) respondents being male and 52 of 108 (48%) female. In terms of job category, junior credit officers formed the largest group (45 of 108, 42%), followed by field credit officers (37 of 108, 34%) and credit managers (26 of 108, 24%). This distribution ensured that the study captured operational, field-level and managerial perspectives on credit risk identification and loan performance.

Table 3: Demographic Characteristics of Respondents

Characteristic	Category	Percentage
Gender	Male	52
	Female	48
Age Group	18 to 25 years	10
	26 to 35 years	40
	36 to 45 years	31
	46 to 55 years	13
	Above 56 years	6
Respondent Category	Credit Managers	24
	Junior Credit Officers	42
	Field Credit Officers	34
Years of Experience	Less than 1 year	9
	1 to 5 years	29
	6 to 10 years	36
	11 to 15 years	19
	Above 15 years	7
County Distribution	Kirinyaga	12
	Murang'a	24
	Nyeri	27
	Kiambu	37

Source: Field Data (2025)

Credit Risk Identification Practices

Table 4 presents descriptive findings on credit risk identification practices among credit-only microfinance institutions in Central Kenya. The findings show that borrower credit history as a key factor in loan approval recorded the highest mean score (M = 4.25, SD = 0.88). This was followed by effective use of Credit Reference Bureau reports (M = 4.18, SD = 0.98), verification of information provided in loan application forms (M = 4.16, SD = 0.96), and training of credit officers to identify risk indicators (M = 4.15, SD = 0.97). Use of data analytics to identify risk patterns had the lowest mean score (M = 3.99, SD = 1.07).

Table 4: Descriptive Statistics for Credit Risk Identification Practices

Credit Risk Identification Practice	Mean	SD
Borrower credit history is a key factor in loan approval	4.25	0.88
Effective use of Credit Reference Bureau reports	4.18	0.98
Information in loan application forms is thoroughly verified	4.16	0.96
Credit officers are trained to identify risk indicators	4.15	0.97
Clear and consistent process for identifying credit risks	4.07	0.97
Background checks on borrowers are conducted	4.02	1.00

Credit Risk Identification Practice	Mean	SD
Use of data analytics to identify risk patterns	3.99	1.07

Source: Field Data (2025)

Results indicate that COMFIs placed strong emphasis on borrower screening and verification before loan approval. The high mean scores for borrower credit history, Credit Reference Bureau reports and verification of loan application information suggest that both internal and external sources of borrower information were important in credit decisions. However, the relatively lower mean score for the use of data analytics suggests that technological integration in credit risk identification remained less developed. The findings are consistent with Information Asymmetry Theory, which argues that improved access to borrower information reduces uncertainty and adverse selection in lending decisions (Akerlof, 1970).

Loan Performance Outcomes

Table 5 presents descriptive findings on loan performance among credit-only microfinance institutions in Central Kenya. Improvement in loan repayment rates had the highest mean score (M = 4.20, SD = 0.89), followed by reduction in loan defaults (M = 4.14, SD = 0.94), improvement in portfolio quality (M = 4.11, SD = 0.96), increase in loan recovery rates (M = 4.08, SD = 0.99), and reduction in non-performing loans (M = 4.04, SD = 1.01).

Table 5: Descriptive Statistics for Loan Performance

Loan Performance Indicator	Mean	SD
Improvement in loan repayment rates	4.20	0.89
Reduction in loan defaults	4.14	0.94
Improvement in portfolio quality	4.11	0.96
Increase in loan recovery rates	4.08	0.99
Reduction in non-performing loans	4.04	1.01
Improvement in loan portfolio performance	3.98	1.03
Growth in quality lending outcomes	3.95	1.06

Source: Field Data (2025)

The findings suggest that respondents generally perceived loan performance among COMFIs to be favorable. The relatively high mean scores for repayment rates, default reduction, recovery rates and portfolio quality indicate that the institutions had made progress in managing loan outcomes. However, the lower scores for overall portfolio performance and growth in quality lending outcomes suggest that portfolio quality still required improvement.

Effect of Credit Risk Identification on Loan Performance

The objective of the study was to examine the effect of credit risk identification on loan performance among credit-only microfinance institutions in Central Kenya. To test this hypothesis, simple linear regression analysis was conducted with credit risk identification as the predictor variable and loan performance as the dependent variable. The model summary results indicated a positive relationship between credit risk identification and loan performance. The correlation coefficient was $R = 0.642$, suggesting a moderate positive relationship between the variables. The coefficient of determination was $R^2 = 0.412$, indicating that credit risk identification explained 41.2% of the variation in loan performance.

Table 6: Model Summary for the Effect of Credit Risk Identification on Loan Performance

Model	R	R^2	Adjusted R^2	Std. Error of Estimate
1	0.642	0.412	0.398	0.765

Predictors: (Constant), Credit Risk Identification. Dependent Variable: Loan Performance. Source: Field Data (2025)

Table 7: ANOVA Results

Source	Sum of Squares	Df	Mean Square	F	Sig.
Regression	24.56	1	24.56	41.76	< .001
Residual	35.12	106	0.33		
Total	59.68	107			

Source: Field Data (2025)

The regression coefficient results indicated that credit risk identification had a positive and statistically significant effect on loan performance (B = 0.735, β = 0.642, t = 6.462, p < .001). This implies that an increase in credit risk identification practices was associated with an increase in loan performance among COMFIs. The confidence interval for the coefficient ranged from 0.509 to 0.961 and did not include zero, further confirming the statistical significance of the relationship.

Table 8: Regression Coefficients

Variable	B	Std. Error	Beta	t	Sig.	Lower	Upper
Constant	1.621	0.190	—	8.531	< .001	1.246	1.996
Credit Risk Identification	0.735	0.114	0.642	6.462	< .001	0.509	0.961

Dependent Variable: Loan Performance. Source: Field Data (2025)

The null hypothesis was therefore rejected, and the study concluded that credit risk identification has a statistically significant effect on loan performance among credit-only microfinance institutions in Central Kenya. The findings suggest that effective borrower screening, background verification, review of borrower credit history, use of Credit Reference Bureau reports and verification of loan application information improve loan performance by reducing information asymmetry in lending decisions.

CONCLUSION

Credit risk identification has a positive and statistically significant effect on loan performance among credit-only microfinance institutions in Central Kenya. Institutions that emphasized borrower credit history, Credit Reference Bureau reports, background verification, verification of loan application information and clear risk identification procedures reported stronger loan performance outcomes. The findings further indicate that credit risk identification reduces uncertainty in lending decisions by improving access to borrower information before loan approval. This strengthens borrower selection, reduces exposure to high-risk clients and supports better repayment outcomes. The relatively lower mean score for the use of data analytics suggests that technological integration in borrower risk identification remained limited, pointing to an important improvement area.

RECOMMENDATIONS

There is need for management of credit-only microfinance institutions to strengthen borrower screening and verification before loan approval. This should include consistent review of borrower credit history,

effective use of Credit Reference Bureau reports, background checks and thorough verification of information provided in loan application forms.

There is also need for continuous training of credit officers on credit risk identification, focusing on detecting early warning signs of default, identifying over-indebted borrowers, verifying borrower information and interpreting credit reference data. Credit-only microfinance institutions should also invest in simple and practical data analytics tools to support early detection of borrower risk patterns. Finally, these institutions should standardize their credit risk identification procedures across branches and lending teams to reduce subjective lending decisions and improve fairness, accountability and reliability in borrower appraisal.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The study was limited to credit-only microfinance institutions in Kirinyaga, Murang'a, Kiambu and Nyeri counties in Central Kenya, which may limit the generalizability of the findings to COMFIs operating in other regions. The study also relied mainly on self-reported data from credit management staff, which may be affected by response bias. Future studies should incorporate objective loan portfolio data, such as actual repayment records, default rates, portfolio at risk and non-performing loan ratios. Finally, the study used a cross-sectional design; future research should consider longitudinal designs to assess how changes in borrower screening, Credit Reference Bureau use, data analytics and verification procedures influence loan performance over time.

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