

# Credit Risk Assessment and Loan Repayment by Youth Enterprise Development Fund Groups in Nakuru County, Kenya

Annah Wambui Njoroge

Student, School of Business and Entrepreneurship  
Jomo Kenyatta University of Agriculture and Technology

Dr. Solomon Ngahu

Lecturer, School of Business and Entrepreneurship  
Jomo Kenyatta University of Agriculture and Technology

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**Abstract:** *The Kenyan government has made significant strides in empowering the youths through initiatives such as the Youth Enterprise Development Fund. Nevertheless, their plans to improve youths' livelihoods have encountered obstacles due to the low recovery of the loans. It is against this challenge that the researcher evaluated the effect of credit risk management strategies on loan repayment by youth enterprise development fund groups in Nakuru County. The objective of the study was to establish the effect of credit risk assessment on loan repayment. The study was guided by credit risk theory. The study adopted a descriptive research design. A simple random sampling was used to select a sample of 68 respondents from the 225 chairpersons of Youth Enterprise Development Fund groups. Data was collected using a questionnaire and analyzed through descriptive and inferential methods. Descriptive findings revealed that credit risk assessment affected loan repayment. The correlation statistical results showed that the correlation coefficient was ( $r=0.550^{**}$ ;  $p=0.000$ ). As per the results, the relationship between credit risk assessment and loan repayment was significant. Therefore, credit risk assessment affected loan repayment by YEDF youth groups. The regression results revealed that the relationship between credit risk assessment and loan repayment was significant ( $\beta=0.419$ ;  $p=0.000$ ) at 95% confidence level. The results imply that loan repayment is affected by the credit risk assessment. The study concludes that credit risk assessment ensures that youth groups are evaluated based on their creditworthiness and ability to repay. The study recommends that YEDF group chairpersons should perform a comprehensive analysis of groups' cash flows to ascertain their capacity to generate steady income for repaying the loans.*

**Keywords:** *Credit Risk Assessment, Loan Repayment, Youth Enterprise Development Fund Groups*

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## 1. Introduction

Credit risk management encompasses the endeavor to reduce potential losses by evaluating borrowers' credit risk (Bhatt, Ahmed, Iqbal, & Ullah, 2023). This undertaking presents an opportunity for lending institutions to attain and maintain financial sustainability. Through credit risk management, identifying the potential risks connected with lending operations are identified (Muñoz-Cancino, Bravo, Ríos, & Graña, 2023). By recognizing and evaluating credit risks, lending institutions can take proactive measures to address and mitigate them before they intensify, ultimately fostering stability. The commencement of credit risk management begins with credit risk assessment, which involves the appraisal of borrowers' creditworthiness before the lending decision (Bhatore, Mohan, & Reddy, 2020). Credit risk assessment constitutes a fundamental procedure within the core activities of lending institutions (Tian, Xiao, Feng, & Wei, 2020). It revolves around analyzing the probability that a borrower might default on their financial commitments, particularly the loan repayment. As such, this evaluation is essential for lenders, as it enables them to make well-informed decisions regarding extending credit to individual persons and business entities.

According to Rehman, Muhammad, Sarwar, and Raz (2019), credit risk assessment serves the primary objective of managing the risks linked to lending activities. Therefore, it ascertains the creditworthiness of borrowers by gauging the level of risk involved and establishes appropriate terms and interest rates for loans. In the context of the Youth Enterprise Development Fund (YEDF), credit risk assessment aims to ensure the effective repayment of funds extended to youth groups. However, the Youth Enterprise Development Fund has encountered significant

difficulties since its inception, particularly in dealing with a high rate of loan defaults among the youth groups (Aberi & Jagiongo, 2018). The high default rates within the Youth Enterprise Development Fund have sparked concerns regarding its credit risk management practices, such as credit risk assessment. Previous studies have not been able to adequately establish the relationship between credit risk assessment and loan repayment. For instance, Maina (2018) conducted a study on the impact of the Youth Enterprise Development Fund's effectiveness on the financial performance of youth-owned enterprises in Kirinyaga County. The findings indicated that factors such as credit access, loan repayment, financial literacy, and financial planning had notable effects on the financial performance of youth-owned enterprises. Similarly, Chebet (2016) explored the factors influencing credit access by youth entrepreneurs in Sotik Sub-County, Bomet County, Kenya. The findings revealed that access to credit was hindered by factors such as the absence of collateral, high-interest rates, cumbersome application procedures, and a lack of education and entrepreneurial knowledge. These studies predominantly focused on aspects like credit access and financial performance, leaving a significant gap in the examination of credit risk assessment. To address the existing research gap, the researcher examined the effect of credit risk assessment on loan repayment by youth enterprise development fund groups in Nakuru County.

## **2. Objective of the Study**

The objective of the study was to determine the effect of credit risk assessment on loan repayment by youth enterprise development fund groups in Nakuru County.

## **3. Literature Review**

Credit risk assessment involves a systematic procedure for evaluating various elements that potentially contribute to credit defaults (Chang, Chang, & Wu, 2018). Lending institutions usually align their credit risk assessment processes with the size, nature, and complexity of their lending activities. By doing so, they establish a system for classifying loans based on credit risk and determining timely loan loss provisions. These provisions are essential to absorb anticipated credit losses within the loan portfolio, relying on prudent credit judgment and reasonable estimates (Wachira, 2017). Credit risk assessment incorporates a comparative analysis of the loan and the borrower's repayment capacity. Accurate assessment of operational capacity, with minimal room for error, is crucial. However, the failure to establish precise operational levels results in the provision of loans to youth enterprises with inadequate repayment capacity, ultimately leading to low repayment rates (Muñoz-Cancino et al., 2023). Cash flow projections for borrowers are a vital component of credit risk assessment (Seck, 2017). Cash flows represent the flow of funds into and out of a business, with favorable situations showing an upward trend in incoming funds compared to outgoing funds. Therefore, cash flow projections help to assess credit risk by demonstrating the enterprise's ability to repay the loan on time. For well-established youth group enterprises, credit history also plays a significant role in credit risk assessment (Chang et al., 2019). Credit history provides a report and credit rating, indicating whether the enterprise has a history of repaying loans as agreed. In the case of existing youth enterprises, credit scores are crucial in credit risk assessment. Wachira (2017) opined that the failure to identify past credit defaults through credit history may contribute to credit risks and lower loan repayments for the Youth Enterprise Development Fund in Kenya.

According to Giudici, Hadji-Misheva, and Spelta (2019), collateral serves as a safety net for lenders in the event of loan default, allowing them to seize the borrower's assets to recover them. Conversely, lenders of unsecured loans cannot claim the borrower's assets, which increases the risk of financial losses. Lack of collateral poses challenges to the Youth Enterprise Development Fund, as highlighted by Ochido (2016) since it leaves the fund with no recourse when youth enterprises default on their loans. The core concept of credit risk theory revolves around the assessment of the likelihood of defaults. The default probability is established by scrutinizing historical data and financial indicators related to the relevant organization. Within credit risk management, the concept of 'loss given default' takes precedence among lenders. This notion is based on recovery rates and debt recovery mechanisms. Credit risk theory underscores the significance of credit ratings for both individual borrowers and firms. These ratings enhance the assessment of credit risk associated with diverse borrowers and can influence loan amounts and interest rates. The theory further introduces techniques suitable for effective credit risk management, such as diversifying credit exposures, employing default swaps, and utilizing hedging strategies (Giudici et al., 2019). In accordance with credit risk theory, the primary objective of credit risk assessment is to achieve the highest possible risk-adjusted rate of return while keeping credit exposure within acceptable bounds (Zhao, Li, Wang, & Ma, 2021). Lenders are tasked with managing credit risks related to firms operated by groups of individuals as well as the risks inherent to individual borrowers. A well-structured credit risk assessment model is imperative for lenders to make informed lending decisions concerning the provision of credit to youth enterprises. The theory of credit risk elucidates the credit risk assessment. Predicting the likelihood of default falls within the purview of credit risk assessment as employed by the Youth Enterprise Development Fund. The conceptual framework as shown in Figure 1 illustrates the relationship between credit risk assessment and loan repayment.

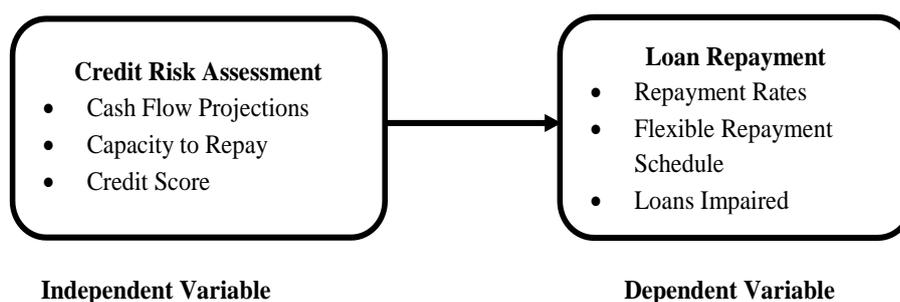


Figure 1: Conceptual Framework

An empirical review of existing studies related to credit risk assessment was done to identify gaps that the current study sought to fill. A research study by Aberi and Jagongo (2018) sought to establish the relationship between loan default and the performance of youth enterprise development fund in Dagoretti South Constituency, Nairobi County, Kenya. They applied a cross-sectional descriptive survey research design using a quantitative approach to data collection, analysis, and reporting through some elements of a qualitative approach. Findings revealed that loan defaults among youth enterprises were influenced by Poor business performance, domestic problems, and illiteracy among the participants. These factors contributed to the diversion of the borrowed funds by the youths to a large extent. Kung'u (2018) carried out a study of factors that affect the accessibility of youth enterprise funds among youth entrepreneurs in Nairobi. Descriptive findings showed that lending conditions influenced access to youth enterprise funds. Regression analysis findings showed a positive relationship between lending conditions and access to youth enterprise funds ( $\beta = .491, t = 5.954, p < .05$ ). The relationship between regulatory framework and access to YEDF was positive and significant ( $\beta = .549, t = 4.572, p < .05$ ) implying that financial regulations determined whether the youths were able to obtain loans. Chebet (2016) investigated factors influencing access to credit by youth entrepreneurs in Sotik Sub-County Bomet County, Kenya. Findings implied that access to credit was influenced by a lack of collateral, high-interest rates, cumbersome application procedures, and lack of education and entrepreneurial knowledge. Catherine (2019) researched on credit risk management and financial performance of the Bank of Africa. The findings showed that credit evaluation establishes benchmarks for effective credit risk management. Consequently, was inferred that credit evaluation delineates a bank's viability and financial success. The adjusted R Square value stood at 0.978, signifying that alterations in client appraisal, credit risk control, and risk diversification accounted for a 97.8% variation in the bank's performance at a 95% confidence level.

After a comprehensive review of previous empirical research studies, the researcher identified research gaps and aimed to address them. The past studies fell short in establishing a direct link between credit risk assessment and the loan repayment of YEDF youth groups. For instance, Aberi and Jagongo (2018) found that loan defaults among YEDF groups resulted from factors such as poor business performance, domestic challenges, and limited literacy among young entrepreneurs. However, their study did not encompass essential credit risk elements like cash flow projections and credit score analysis, which have been incorporated into the current research. A study by Kung'u (2018) primarily focused on analyzing credit access rather than delving into the intricacies of loan repayment. The present study builds upon Kung'u's (2018) work by thoroughly examining credit risk assessment as a crucial component within the framework employed by the Youth Enterprise Development Fund. Chebet (2016) investigated the challenges faced by youth enterprises in accessing credit, highlighting issues such as the absence of collateral, high-interest rates, cumbersome application procedures, and a lack of education and entrepreneurial knowledge. The current study expands upon this knowledge by elucidating the extent to which loan repayment is influenced by comprehensive credit risk assessment, including an analysis of the borrower's repayment capacity.

#### 4. Methodology

The current study adopted a descriptive research design. According to (Quinlan, Babin, Carr, and Griffin, 2019) descriptive research design allows the researcher to collect adequate data on the issue under the study and allows for a simplified interpretation. This design enabled the researcher to identify the attributes of the YEDF youth groups in terms of how they repay the loans. The descriptive research design further enabled the researcher to describe the credit risk assessment and loan repayment by YEDF youth without manipulation. The target population of the current study was the 225 YEDF youth groups in Nakuru County. The unit of observation was the 225 chairpersons of the YEDF youth groups. A simple random sampling was used to select a sample of 68 respondents from the 225 chairpersons of Youth Enterprise Development Fund groups. Data was collected using

structured questionnaires. Data was coded and analyzed with the aid of Statistical Package for Social Sciences (SPSS) version 24. Descriptive statistics such as percentages, means, and standard deviations were used to describe the effect of credit risk management strategies on loan repayment by youth enterprise development fund groups. Inferential statistics employed correlation and regression to establish the relationship between credit risk assessment and loan repayment. The following linear regression model below was used in the study.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where:

Y = Loan Repayment

$\beta_0$  = Constant

$\beta_1$  = Beta Coefficient

$X_1$  = Credit Risk Assessment

$\varepsilon$  = Error Term

## 5. Findings and Discussions

The descriptive and inferential findings of the study are discussed in this section. Out of the 68 issued questionnaires, 48 were fully filled and returned. This led to 70.6% response rate that was sufficient for the study.

### 5.1 Descriptive Findings and Discussions

The study sought to determine the effect of credit risk assessment on loan repayment by Youth Enterprise Development Fund groups in Nakuru County. The findings are presented in Table 1.

**Table 1: Effect of Credit Risk Assessment on Loan Repayment**

	n	SA 5	A 4	I 3	D 2	SD 1	Mean	Std. Dev.
The credit risk profiles of group members are reviewed regularly.	48	47.9%	31.3%	18.8%	2.1%	0%	4.25	0.838
The cash flows of the group members are analyzed regularly.	48	43.8%	37.5%	8.3%	8.3%	2.1%	4.13	1.024
Cash flow projections guide the setting of credit terms.	48	10.4%	56.3%	33.3%	0%	0%	3.77	0.627
The loan assessment considers the credit score.	48	37.5%	43.8%	16.7%	2.1%	0%	4.17	0.781
The evaluation of ability to repay considers the stability and consistency of group members' income level.	48	18.8%	14.6%	45.8%	20.8%	0%	3.31	1.014
Seasonal variations and uncertainties are considered in credit risk assessment process.	48	16.7%	35.4%	29.2%	12.5%	6.3%	3.44	1.109
Debt to income ratio guides the credit risk assessment.	48	16.7%	35.4%	37.5%	8.3%	2.1%	3.56	0.943
The credit utilization rates of group members are assessed regularly.	48	41.7%	31.3%	16.7%	10.4%	0%	4.04	1.010

The findings in Table 1 show that 47.9% of the respondents strongly agreed and 31.3% agreed, hence 79.2% at least agreed (mean=4.25; std.dev.=0.838) that YEDF regularly updates the credit risk profiles of youth groups. 18.8% were indifferent while only 2.1% disagreed. This means that credit risk profiles are regularly updated and this affect the loan repayment. 43.8% of the respondents strongly agreed and 37.5% also agreed, thus 81.3% agreed (mean=4.13; std.dev.=1.024) that they regularly analyze the cash flows of the youth groups. On the same statement, 10.4% were in disagreed while 8.3% had differing views on the analysis of the cash flows. The regular update on credit risk profiles allows YEDF to assess youth groups' current financial status. This is vital in identifying any changes in income and other relevant factors that influence their ability to repay the loan. As such, the updating of credit risk profiles influences the loan repayment by the youth enterprise development fund groups. 56.3% of the respondents concurred that cash flow projections guide the setting of credit terms. Moreover, 81.3% of the YEDF group chairpersons at least agreed (mean=4.17; std.dev.=0.781) that the loan assessment considers the youth groups' credit score. However, 16.7% disagreed and only 2.1% disagreed with the same assertion. Credit scores play a significant role in assessing credit risk through evaluating the likelihood that youth

groups can default on a loan obligation. Therefore, this influences the loan repayment rates among the youth groups. 18.8% strongly agreed, 14.6% agreed and 45.8% of the respondents had differing views (mean=3.31; std.dev.=1.014) that the evaluation of the ability to repay considers the stability and consistency of youth groups' income level. They were also indifferent to the assertion that seasonal variations and uncertainties are considered in the credit risk assessment process. Additionally, 41.7% of the group chairpersons strongly agreed (mean=4.04; std.dev.=1.010) that the credit utilization rates of youth groups are assessed regularly. Credit utilization rates are pivotal in assessing the creditworthiness of the youth groups. Overall, the findings established that credit risk assessment affects loan repayment by youth enterprise development fund groups in Nakuru County. The findings related to the findings of Aberi and Jagongo (2018) on the relationship between loan default and the performance of youth enterprise development fund in Dagoretti South Constituency. Their findings revealed that loan defaults among youth enterprises were influenced by poor business performance. Under the current study, the consistency of groups' income is analyzed in credit risk assessment. The business performance depends on the consistency of groups' income, which was a key determinant of loan repayment.

**Table 2: Loan Repayment**

	n	SA 5	A 4	I 3	D 2	SD 1	Mean	Std. Dev.
YEDF provide sufficient information about the repayment expectations to the youth groups.	48	54.2%	33.3%	8.3%	4.2%	0%	4.38	0.815
The loan repayment options suits the financial capability of the youth groups.	48	16.7%	50%	33.3%	0%	0%	3.83	0.694
Flexible repayment schedule are offered to the youth groups.	48	50%	35.4%	6.3%	4.2%	4.2%	4.23	1.036
The financial progress of the youth groups is monitored regularly.	48	41.7%	39.6%	12.5%	6.3%	0%	4.17	0.883
Proactive measures are taken in following up with delinquent youth groups.	48	35.4%	50%	14.6%	0%	0%	4.21	0.683
YEDF offers grace periods to accommodate reasonable repayment delays.	48	31.3%	45.8%	16.7%	6.3%	0%	4.02	0.863
Periodic reviews are conducted to establish the loan repayment progress by youth groups.	48	50%	29.2%	14.6%	6.3%	0%	4.23	0.928

The findings in Table 2 indicate that 54.2% strongly agreed and 33.3% agreed, thus 87.5% of the respondents at least (mean=4.38; std.dev.=0.815) that YEDF provides sufficient information about repayment expectations to the youth groups. Only 4.2% disagreed on the sufficiency of the information. Provision of sufficient information to the YEDF groups can enhance loan repayment outcomes. When these groups are well-informed about the terms of their loans, and the repayment process, they are more likely to manage their loans responsibly. 66.7% of the group chairpersons at least agreed (mean=4.23; std.dev.=1.036) that flexible repayment schedules are offered to the youth groups. However, 33.3% of the group chairpersons were unclear on the offering of flexible repayment schedules. 41.7% of the respondents strongly concurred (mean=4.17; std.dev.=0.883) that the financial progress of the youth groups is monitored regularly. This enables lenders to assess youth groups' ability to meet their repayment obligations and take necessary actions to prevent delinquency. The respondents admitted (mean=4.21; std.dev.=0.683) that proactive measures are taken in following up with delinquent youth groups. Further, 45.8% of the respondents agreed (mean=4.02; std.dev.=0.863) that YEDF offers grace periods to accommodate reasonable repayment delays. The respondents also concurred (mean=4.23; std.dev.=0.928) that periodic reviews are conducted to establish the loan repayment progress by youth groups. According to the descriptive research findings, credit risk assessment affected the loan repayment by youth enterprise development groups.

**5.2 Inferential Findings and Discussions**

The inferential analysis comprised the correlation and regression analysis. There were conducted to establish the relationship between the credit risk assessment and loan repayment.

**5.2.1 Correlation Analysis Findings and Discussions**

The correlation analysis was done to determine the strength and direction of relationship between the credit risk assessment and loan repayment. Findings are presented in Table 3.

**Table 3: Correlation between Credit Risk Assessment and Loan Repayment**

		Loan Repayment
Credit Risk Assessment	Pearson Correlation	.550**
	Sig. (2-tailed)	.000
	n	48

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results in table 3 shows that the relationship between credit risk assessment and loan repayment was significant ( $r=0.550^{**}$ ;  $p=0.000$ ) at 1% significance level. The positive correlation coefficient implies that an increase in credit risk assessment lead to increase in YEDF loan repayment rates. Effective cash flow projections are vital in improvement of credit risk assessment and the loan repayment. Further, a proper assessment of the capacity to repay and credit score of the YEDF groups determine the loan repayment. As per the correlation analysis results, credit risk assessment affected the loan repayment by YEDF groups in Nakuru County.

### 5.2.2 Regression Analysis Findings and Discussions

Regression analysis was conducted to establish the relationship between the credit risk assessment and loan repayment. Findings are presented in Tables 4, 5 and 6.

**Table 4: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.550 <sup>a</sup>	.302	.287	.29898

a. Predictors: (Constant), Credit Risk Assessment

The model summary shows that the correlation coefficient and coefficient of determination were  $R=0.550$  and  $R^2=0.302$  respectively. This implies that credit risk assessment explained 30.2% of variation in loan repayment. The result means that loan repayment was affected by the credit risk assessment.

**Table 5: ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.782	1	1.782	19.936	.000 <sup>b</sup>
	Residual	4.112	46	.089		
	Total	5.894	47			

a. Dependent Variable: Loan Repayment

b. Predictors: (Constant), Credit Risk Assessment

The results in Table 5 shows that the F-value ( $F=19.936$ ;  $p=0.000$ ) was significant at 95% confidence level. The result implies that the overall regression model was significant. Therefore, credit risk assessment affected loan repayment.

**Table 6: Regression Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.544	.363		7.017	.000
	Credit Risk Assessment	.419	.094	.550	4.465	.000

a. Dependent Variable: Loan Repayment

The regression model was interpreted as;  $Y=2.544 + 0.419X_1 + \epsilon$ . According to the results in Table 6, 1 unit change in credit risk assessment led to 0.419 unit change in loan repayment. The relationship between credit risk assessment and loan repayment was significant ( $\beta=0.419$ ;  $p=0.000$ ) at 95% confidence level. As a result, it was concluded that credit risk assessment affected the loan repayment.

## 6. Conclusion

The study concludes that credit risk assessment ensures that youth groups are evaluated based on their creditworthiness and ability to repay. The findings revealed that analysis of cash flows enable lender to increase the understanding of the level of risk associated with each group. This information informs lending decisions in terms of appropriate loan amounts, terms, and interest rates. Cash flow projections guide the structuring of repayment schedules to align with the borrower's income patterns, which enhance loan repayment. According to

the research results, the youth groups' credit scores are considered in the process of loan assessment. When credit terms are derived from precise cash flow projections, the interests of lenders and youth groups harmonize, cultivating a collaborative and mutually advantageous lending relationship. The high default rates on YEDF loans are attributable to ineffective credit risk assessment. This means that loans are being extended to youth groups who are actually high-risk resulting in low repayment rates.

## **7. Recommendation**

The study recommends that YEDF group chairpersons should perform a comprehensive analysis of groups' cash flows to ascertain their capacity to generate steady income for repaying the loans. This assessment can yield valuable insights into the repayment feasibility. Additionally, they should tailor loan terms and repayment schedules to match the cash flow patterns of youth groups' businesses. This will increase likelihood of youth groups being able to make timely repayments.

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