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Counterparty Credit Risk Management and Profitability of Microfinance Banks in Nairobi City, Kenya

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ABSTRACT

Profitability determines the sustainability of microfinance banks, as it enables them to cover operational costs while ensuring the continued delivery of critical financial services. Regular assessment of profitability enable regulators and stakeholders in detecting emerging risks and making informed strategic decisions aimed at strengthening the sector. Nonetheless, recent trends in Kenya highlight persistent challenges concerning their profitability. The present study examined the influence of counterparty credit risk management on the profitability of microfinance banks. The study was guided by the Merton risk model. Descriptive and inferential methods were employed, with data analyzed using the Statistical Package for Social Sciences (SPSS) and findings presented in tables. The results demonstrated that counterparty credit risk management was strongly and positively associated with profitability ($r = 0.710$; $p = 0.000$). Regression analysis further indicated that counterparty credit risk management explained 50.4% of the variation in profitability, underscoring its central role in improving financial outcomes. The study concluded that effective counterparty credit risk management is vital for sustaining profitability in microfinance banks, as it mitigates financial shocks, protects income streams, and strengthens institutional resilience. It was recommended that microfinance banks enhance their credit evaluation processes to reduce vulnerabilities. They should also embrace diversification and risk-conscious investment strategies that align returns with exposure levels, thereby fostering stable and sustainable profitability over time.

Key Words: Counterparty Credit Risk Management, Profitability, Microfinance Banks.

1. INTRODUCTION

Microfinance banks operate within an environment characterized by persistent volatility, where shifting market dynamics, unpredictable borrower behavior, changing funding structures, and operational complexities continuously threaten institutional stability (Colak, Deniz, Korkmaz, & Yilmaz, 2024). Their exposure is heightened by the sensitivity of their portfolios to movements in interest rates, exchange rates, and asset valuations, all of which can directly erode revenue streams and weaken financial performance (Pattnaik, Ray, & Hassan, 2024). Against this backdrop, financial risk management emerges not merely as a protective mechanism but as a fundamental pillar that enables microfinance banks to safeguard solvency, align with stakeholder expectations, and remain committed to serving underserved populations. The emphasis has increasingly shifted toward building resilience, ensuring that these institutions are equipped to absorb financial shocks, respond to environmental changes, and pursue sustainable growth trajectories without undermining either their developmental mission or regulatory compliance requirements (Hao & Wong, 2021). Within this wider landscape of financial risk management, asset risk captures the possibility of losses or adverse fluctuations in the value of an organization's financial holdings (Hao & Wong, 2021). It encompasses various forces ranging from market disruptions and economic cycles to shifts in monetary policy that collectively shape the performance and stability of assets over time. These uncertainties introduce vulnerabilities that can threaten financial health, making robust and forward-looking risk management strategies indispensable (Omowole, Urefe, Mokogwu, &

Ewim, 2024). By addressing asset risk as an integral part of their broader financial risk management framework, microfinance banks are better positioned to secure long-term stability, reinforce stakeholder trust, and achieve sustainable institutional growth even amid turbulent financial environments.

The management of asset risks fundamentally involves counterparty credit risk management, which is concerned with safeguarding institutions against potential losses that may arise when trading partners or borrowers fail to meet their financial obligations (Pattnaik et al., 2024). Within microfinance banks, this process is particularly critical given the heavy reliance on loan portfolios and external financial engagements that expose them to uncertainties in repayment and contractual compliance. Counterparty credit risk management therefore requires structured systems that ensure potential risks are identified, assessed, and mitigated before they materialize into destabilizing losses. It is not a one-time evaluation but an ongoing process that integrates into broader governance frameworks, enabling institutions to set clear policies on acceptable exposures, establish safeguards against over-concentration, and promote sound diversification of financial relationships. By embedding counterparty credit risk considerations into their overall asset risk management strategies, microfinance banks enhance their ability to protect capital, sustain liquidity, and preserve long-term profitability (Hao & Wong, 2021). Moreover, effective management of such risks reinforces stakeholder confidence and provides a stable foundation for growth, ensuring that microfinance banks remain resilient even when operating in volatile and unpredictable financial environments.

Despite their significant role in deepening financial inclusion and contributing to Kenya's financial sector, the profitability trajectory of microfinance banks has raised considerable concern in recent years, with net earnings exhibiting a consistent downward trend. The Central Bank of Kenya (CBK, 2023) reported that microfinance banks collectively recorded a pre-tax loss of KSh 2.4 billion, a sharp decline compared to the KSh 980 million loss registered in 2022. This deterioration was largely driven by a 3% drop in revenue to KSh 12.8 billion, coupled with a 6% increase in operating expenses that rose to KSh 13.9 billion. More critically, impairment losses on loans surged by an alarming 957%, further weakening financial performance. The simultaneous decline in revenues and escalation of losses underscore deep-rooted profitability challenges within the sector.

However, there is limited empirical research on the link between counterparty credit risk management and profitability in the specific context of microfinance banks in Kenya. Kitheka (2023) examined the effect of financial distress factors on profitability of microfinance banks licensed by the Central Bank of Kenya, and the findings revealed that financial leverage had a positive and significant effect on profitability, non-performing loans exerted a negative and significant effect, whereas liquidity displayed an inverse but statistically insignificant relationship with ROA. Similarly, Mwebi (2023) investigated firm-level factors influencing the financial performance of microfinance banks in Kenya, establishing that firm size had a significant positive impact, while liquidity ratio, deposit ratio, market share, and loan quality did not yield significant effects. Although these studies provide valuable insights into credit risk, financial distress, and firm-level factors shaping profitability and performance, they largely emphasize internal financial metrics and structural characteristics while overlooking counterparty credit risk management. This creates a gap, as the management of counterparties through mechanisms such as credit ratings, spreads, and risk premiums is central to safeguarding loan portfolios, mitigating defaults, and sustaining profitability, yet it has not been adequately addressed in the context of microfinance banks in Kenya. To fill the gaps, the present study examined the influence of counterparty credit risk management on profitability of microfinance banks.

2. OBJECTIVE OF THE STUDY

To assess the influence of counterparty credit risk management on profitability of microfinance banks in Nairobi City, Kenya.

3. LITERATURE REVIEW

Financial assets within microfinance banks are primarily composed of loan portfolios, which represent the main source of income generation, together with supplementary investments in bonds, equities, and other financial instruments that contribute to diversification and support capital growth (Gikundiro & Twesigye, 2024). These assets, while central to the sustainability of microfinance institutions, are continually exposed to diverse risks that directly influence both financial stability and long-term performance. A major concern among these is counterparty credit risk,

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which necessitates structured and deliberate management approaches aimed at assessing, controlling, and mitigating potential financial losses that may occur when counterparties default on their contractual obligations (Scott, Amajuoyi & Adeusi, 2024). A key practice in addressing this risk involves the adoption of discrete counterparty ratings, which enable systematic categorization of financial partners according to their likelihood of default and overall financial resilience. These ratings are informed by a variety of considerations such as financial ratios, repayment patterns, governance structures, and sensitivity to macroeconomic conditions. When integrated within broader risk governance frameworks, these ratings support differentiated management of counterparties by aligning credit exposure limits, collateral requirements, and contract terms to the assessed level of risk (Ogundele & Nzama, 2025). This strategic application of ratings improves selectivity in partner engagement and fosters prudent diversification, thereby safeguarding institutional performance.

In addition to these internal mechanisms, credit spreads serve as vital, market-driven indicators of evolving credit sentiment in financial markets (Du, Gadgil, Gordy, & Vega, 2024). As yield differentials between corporate debt instruments and risk-free benchmarks, credit spreads provide real-time insight into investor confidence regarding borrowers' creditworthiness. Narrow spreads often reflect stability and strong repayment prospects, while sudden widening signals possible stress or deterioration in financial health. For microfinance banks, actively monitoring such signals allows for timely recalibration of lending policies, adjustment of credit limits, and, where necessary, deployment of hedging strategies to mitigate potential defaults (Du et al., 2024). This market-based perspective enhances proactive credit management by ensuring risks are addressed in advance rather than after adverse outcomes. Alongside spreads, risk premiums play an equally critical role by compensating institutions for assuming higher exposure to less secure borrowers. These premiums are incorporated into pricing models, whether through interest rates, transaction charges, or other fee structures, and ensure that increased risk is matched by proportionate returns. In doing so, risk premiums not only balance the trade-off between inclusivity and profitability but also strengthen the resilience and sustainability of microfinance banks. The Merton risk model, formulated by Robert Merton in 1974, provides a quantitative framework to evaluate the probability of credit default by analyzing a firm's market capitalization alongside the dynamics of its liabilities under defined assumptions. This approach deepens insight into the firm's financial health by assessing its ability to fulfill debt obligations and quantifying the likelihood of insolvency (Beytollahi & Zeinali, 2020).

The model posits that organizations carrying higher leverage ratios are more susceptible to credit deterioration and increased default risk. By employing the Black-Scholes-Merton option pricing technique, the model is considered structural because it explicitly connects the probability of default to the composition and value of the firm's assets. It integrates market values of equity, liabilities, and assets, framing default risk as a function of the relative values between these components (Chen & Fu, 2023). Specifically, when the market value of assets surpasses outstanding liabilities, the firm is financially stable; however, if liabilities outweigh assets, the risk of failure escalates. This framework allows for dynamic monitoring of creditworthiness based on real-time market data, thereby supporting risk managers in forecasting potential credit events and making informed decisions to mitigate counterparty risk. The Merton risk model relates to counterparty credit risk management by providing a framework to assess the probability that a borrower or counterparty might default on their obligations (Shaanika, 2024). It does this by modeling the borrower's financial health based on the value of their assets relative to their liabilities. In microfinance banks, this model helps estimate the risk of loan defaults and enables better risk assessment and pricing of credit. By quantifying default risk, microfinance institutions can manage credit exposure more effectively, enhancing overall portfolio stability and reducing potential losses. Figure 1 shows the relation between counterparty credit risk management and profitability of microfinance banks.

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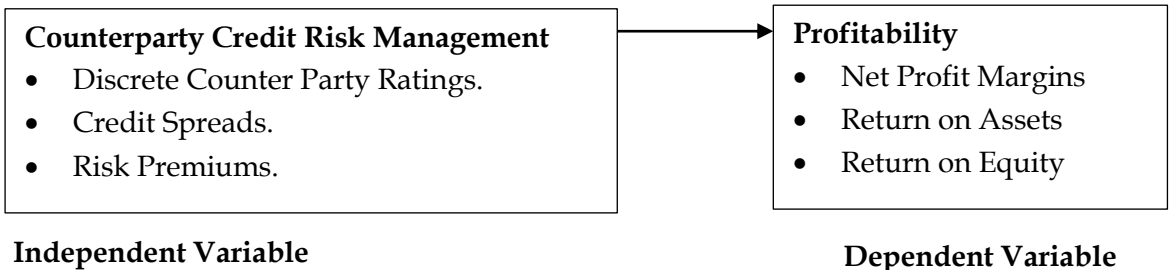

Figure 1: Conceptual Framework

The empirical studies related to counterparty credit risk management and profitability were reviewed. Bello, Amsat, & Rahaman (2021) assessed the risk assets management and profitability of deposit money banks in Nigeria. A purposive sampling method was used to select the banks included in the study. The Pearson correlation analysis showed that the p-value (0.899) exceeded the significance threshold of 0.05, indicating no statistically significant relationship between overall risk asset management and return on investment (ROI) for deposit money banks (DMBs) in Nigeria. Further analysis revealed that substandard loans ($p = 0.968$), doubtful loans ($p = 0.956$), and loss loans ($p = 0.771$) also had no significant effect on ROI, as all values were above the 0.05 significance level. The study concludes that the management of risk assets specifically substandard, doubtful, and loss loans does not necessarily lead to improved financial performance for Nigerian banks. While sound risk asset management can help mitigate systemic and economic disruptions, it does not inherently guarantee increased returns on investment.

Enoch, Digil, and Arabo (2021) undertook a comparative evaluation of the effects of credit risk control on the profitability of micro-finance bank. The findings indicated that microfinance banks should enhance their credit risk control measures to boost profitability. When effectively implemented, such measures help reduce the incidence of payment defaults. Strong credit management plays a critical role in improving financial performance, as well-structured and thorough client appraisal processes enable banks to operate more efficiently and maintain adequate liquidity. Ngenyuko and Dickson (2025) assessed the determinants of credit risk management on profitability among microfinance banks in Tanzania. This study adopted a quantitative methodology with a panel data design spanning from 2014 to 2023, incorporating a census sampling technique to include all licensed microfinance banks operating in Dar es Salaam. The analysis revealed that non-performing loans (NPLs) and leverage had a negative impact on both return on assets (ROA) and return on equity (ROE), whereas capital adequacy ratio (CAR) and the size of microfinance banks showed a positive association with profitability. Consequently, the study recommended strengthening credit risk management by improving capital adequacy and reducing non-performing loans to enhance overall financial performance.

Nadebu (2023) examined the effect of operating leverage on the relationship between liquidity management, credit risk and loan repayment among microfinance Banks. The study utilized secondary balanced panel data extracted from audited annual reports of 12 regulated Microfinance Banks (MFBs) in Kenya. Covering an eight-year period from 2015 to 2022, the dataset comprised 96 observations. The findings revealed that a unit change in liquidity management led to a significant 2.01% increase in loan repayment ($\beta=0.020110$, $p=0.0085$) with an adjusted R^2 of 79.70%. Credit risk management exhibited a negative and significant effect on loan repayment ($\beta=-0.009874$, $p=0.0260$), while operating leverage showed a positive but statistically insignificant relationship ($\beta=-0.004192$, $p=0.9100$) with an adjusted R^2 of 78.51%. Additionally, the interaction term between liquidity management and moderating leverage displayed an inverse significant relationship ($\beta=-0.099417$, $p=0.0109$) with an adjusted R^2 of 79.89%, contributing to an overall computed effect size change in R^2 of 1.36%, equivalent to 3.481%. The results suggest that moderating leverage fully influences the relationship between liquidity management and loan repayment. In conclusion, the interaction between liquidity management and moderating leverage alters the primary relationship between liquidity management and loan repayment. A review of the extant literature revealed both conceptual and contextual gaps. While existing studies advanced foundational knowledge, they often excluded dynamic, forward-looking, and market-

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sensitive dimensions of counterparty credit risk management. Bello et al. (2021) assessed risk asset management and ROI of DMBs, concluding that risk asset management did not influence ROI. However, their risk framework excluded operational dimensions such as cost inefficiencies, fraud exposure, system failures, and governance breakdowns, which significantly affect asset quality. The present research therefore extended the scope by incorporating operational risk management to capture these overlooked factors.

Enoch et al. (2021) investigated credit risk control and profitability of MFBs and provided important insights on credit risk control. However, the study omitted forward-looking indicators such as credit spreads, counterparty-specific risk ratings, and asset-side stress testing. The current study addressed this limitation by incorporating counterparty credit risk management, using discrete ratings and exposure limits to assess borrower risk, thereby ensuring early detection and mitigation of credit defaults. Likewise, although Ngenyuko and Dickson (2025) included leverage and NPLs in their analysis of risk and profitability, they neglected cash flow stress simulations and contingency liquidity frameworks, both of which are essential for asset-side planning. The present study closed this gap by integrating counterparty credit risk management that captured relational and contractual risks arising from borrower–lender interactions and their influence on profitability.

4. METHODOLOGY

The study employed a descriptive research design. This design was used to systematically obtain information that described the phenomenon under study. The target population comprised the 14 microfinance banks licensed by the Central Bank of Kenya and operating in Nairobi City, which formed the unit of analysis. The finance managers, risk managers, credit managers, auditors, and accountants constituted the unit of observation. Accordingly, the total population of interest was 70 respondents. Primary data was gathered through structured questionnaires administered to respondents from all 14 licensed microfinance banks. The research applied both descriptive and inferential methods of data analysis. Descriptive analysis summarized the characteristics of the data set by presenting measures such as means, standard deviations, and percentages. Inferential statistics were used to draw conclusions regarding associations between variables. In the context of the study, correlation and regression analyses were employed. Data analysis was aided by the Statistical Package for Social Sciences (SPSS). Regression analysis was conducted using the model shown below:

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

Where;

Y= Profitability

β_0 - constant

β_1 - Beta Coefficient

X_1 - Counterparty Credit Risk Management

ε - Error of Margin

5. RESULTS

This section presents descriptive and inferential statistics. The results are interpreted and discussed with reference to influence of counterparty credit risk management on the profitability of microfinance banks.

5.1 Descriptive Statistics

The study sought to establish the influence of counterparty credit risk management on Profitability. Descriptive statistics were computed from the primary data collected on a 5-point Likert scale ranging from 1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree (A), and 5=Strongly Agree (SA). The findings are presented in Tables 1 and 2:

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Table 1: Influence of Counterparty Credit Risk Management on Profitability

	N	SA	A	N	D	SD	Mean	Std. Dev
Discrete counterparty ratings guide approval decisions for credit exposure.	52	28.8%	51.9%	19.2%	0%	0%	4.10	0.693
Credit policies guide consistent risk evaluation.	52	38.5%	42.3%	13.5%	5.8%	0%	4.13	0.864
Credit spreads are adjusted to reflect the risk profile.	52	25%	34.6%	25%	3.8%	11.5%	3.58	1.242
Risk premiums increase with the default probability of counterparties.	52	28.8%	36.5%	13.5%	9.6%	11.5%	3.62	1.316
Regular reviews of counterparty credit profiles detect changes in risks.	52	46.2%	38.5%	11.5%	3.8%	0%	4.27	0.819

The research findings revealed that 28.8% of the respondents strongly agreed and 51.9% agreed hence 80.7% at least agreed (Mean = 4.10; Std. Dev. = 0.693) that discrete counterparty ratings guide approval decisions for credit exposure. The results show that 38.5% of the respondents strongly agreed and 42.3% agreed 80.8% in total agreed (Mean = 4.13; Std. Dev. = 0.864) that credit policies guide consistent risk evaluation. However, it was established that 25% of the respondents were unclear (Mean = 3.58; Std. Dev. = 1.242) that credit spreads are adjusted to reflect the risk profile. Similarly, 13.5% had differing views (Mean = 3.62; Std. Dev. = 1.316) that risk premiums increase with the default probability of counterparties. It was revealed that 46.2% of the respondents strongly agreed and 38.5% agreed hence 84.7% at least agreed (Mean = 4.27; Std. Dev. = 0.819) that regular reviews of counterparty credit profiles detect changes in risks. The overall findings indicate that counterparty credit risk management has a direct influence on the profitability of microfinance banks. The strong agreement on the role of discrete counterparty ratings, regular reviews of credit profiles, and consistent credit policies means that effective assessment and monitoring of counterparties enhance the quality of loan portfolios and bond investments, thereby safeguarding interest income and reducing default-related losses. The findings further mean that adjusting credit spreads and aligning risk premiums with default probabilities contribute to profitability by ensuring that the value of financial assets reflects underlying risks. Therefore, profitability in microfinance banks is enhanced through robust counterparty credit risk management, where continuous reviews, reliable ratings, and well-guided policies form the foundation for sustaining stable and predictable financial returns.

Table 2: Profitability of Microfinance Banks

	N	SA	A	N	D	SD	Mean	Std. Dev.
Our institution's revenue has increased for the past 5 years.	52	40.4%	46.2%	13.5%	0%	0%	4.27	0.689
We have consistently met the profit targets.	52	46.2%	42.3%	11.5%	0%	0%	4.35	0.683
We have experienced steady growth in net income over the past five years.	52	30.8%	42.3%	19.2%	7.7%	0%	3.96	0.907
Return on assets (ROA) has increased for the past 5 years.	52	44.2%	40.4%	11.5%	3.8%	0%	4.25	0.813
Asset risks management affect profitability.	52	38.5%	46.2%	11.5%	3.8%	0%	4.19	0.793

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The study findings show that 40.4% of the respondents strongly agreed and 46.2% agreed, hence 86.6% at least agreed (Mean = 4.27; Std. Dev. = 0.689) that their institution's revenue has increased over the past five years. 46.2% strongly agreed and 42.3% agreed, totaling 88.5% (Mean = 4.35; Std. Dev. = 0.683) that profit targets have been consistently met. It was further established that 30.8% strongly agreed and 42.3% agreed, making 73.1% at least agreeing (Mean = 3.96; Std. Dev. = 0.907) that the institutions have experienced steady growth in net income over the past five years. Similarly, 44.2% strongly agreed and 40.4% agreed, totaling 84.6% (Mean = 4.25; Std. Dev. = 0.813) that return on assets (ROA) has increased during the same period. 38.5% strongly agreed and 46.2% agreed, giving 84.7% at least agreeing (Mean = 4.19; Std. Dev. = 0.793) that asset risks management affects profitability. The findings indicate that counterparty credit risk management plays a significant role in determining the profitability of microfinance banks. By carefully evaluating and monitoring the creditworthiness of borrowers and counterparties, these institutions reduce the likelihood of loan defaults and non-performing assets. Effective management of counterparty credit risks not only safeguards their financial stability but also enhances portfolio quality and operational efficiency. As a result, well-managed counterparty credit risks contribute to improved profits and higher returns on assets.

5.2 Inferential Statistics

Inferential statistical analysis was conducted to establish the relationship between counterparty credit risk management and the profitability. It incorporate correlation and regression analysis methods.

5.2.1 Correlation Analysis

The correlation analysis was used to assess the strength and direction of the relationship between counterparty credit risk management and the profitability of microfinance banks. The results of this analysis are presented in Table 3:

Table 3: Correlation Analysis Results

		Profitability
Counterparty Credit Risk Management	Pearson Correlation	.710**
	Sig. (2-tailed)	.000
	N	52

According to the results of the correlation analysis shown in Table 3, it was established that counterparty credit risk management had a positive, strong, and statistically significant relationship with profitability (r = 0.710; p = 0.000). This implied that effective assessment and monitoring of counterparty risks directly enhance the microfinance banks' profitability.

5.2.2 Regression Analysis

To predict profitability of microfinance banks from the counterparty credit risk management, regression analysis was conducted and findings are presented in Table 4:

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710[a]	.504	.494	.34917

a. Predictors: (Constant), Counterparty Credit Risk Management

As illustrated in Table 4, the coefficient of determination (R^2 = 0.504) indicated that the counterparty credit risk management explained 50.4% of the variation in profitability. It was apparent, therefore, that counterparty credit risk management played a crucial role in enhancing the profitability of microfinance banks.

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.183	1	6.183	50.713	.000[b]
	Residual	6.096	50	.122		
	Total	12.279	51			

a. Dependent Variable: Profitability

b. Predictors: (Constant), Counterparty Credit Risk Management

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The F-statistic ($F_{4,47}$ = 50.713; p = 0.000), as shown in Table 5, was established to be statistically significant at 95% confidence level. This meant that the adopted regression model ($Y = \beta_0 + \beta_1 X_1 + \varepsilon$) adequately fitted the data. Consequently, the counterparty credit risk management significantly influences the profitability of microfinance banks.

Table 6: Regression Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.016	.311		6.484	.000
Counterparty Credit Risk Management	.555	.078	.710	7.121	.000

a. Dependent Variable: Profitability

The regression model was expressed as: $Y = 2.016 + 0.555X_1 + \varepsilon$. This means that a one-unit increase in counterparty credit risk management leads to a 0.555-unit increase in profitability. The t-value was 7.121 and the p-value was 0.000. The results confirm significance at the 95% confidence level. This shows that counterparty credit risk management contributes positively to profitability.

6. CONCLUSION

The study concluded that the effective assessment and continuous monitoring of counterparties significantly enhances profitability of microfinance banks. It as deduced that employing discrete counterparty ratings, conducting regular credit profile reviews, and adhering to structured credit policies improve the quality of loan portfolios and reduce the likelihood of defaults. It was further concluded that the adjustment of credit spreads and alignment of risk premiums with counterparty risk profiles ensures that financial assets reflect their true risk-adjusted value, safeguarding expected returns. Moreover, robust counterparty credit management fosters confidence in lending and investment decisions, which in turn supports long-term financial sustainability and strengthens the institution's capacity to absorb potential credit shocks.

7. RECOMMENDATION

The study recommends that the microfinance banks focus more on evaluation of borrowers' financial capacity, refining credit approval frameworks, and systematically reviewing loan performance. The study emphasizes that by ensuring lending decisions are both prudent and responsive to changing market conditions, banks can reduce financial losses and secure steady returns.

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