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MODEL OF MICROFINANCE FINANCING QUALITY DETERMINANTS BASED ON SOCIAL AND FINANCIAL ASPECTS: A CASE STUDY OF PT. PNM BOGOR AND ITS SURROUNDING AREAS (BOGOR CITY, BOGOR REGENCY, AND DEPOK)

Ade Ananto Terminanto[1], Heirunissa[2], Yoghi Citra Pratama[3], Ade Suherlan[4]
[1]Faculty of Economics and Business, Syarif Hidayatullah State Islamic University Ciputat, Jakarta
[2]STIE GICI, Management Study Program, Bogor, Indonesia
[3]Faculty of Economics and Business, Syarif Hidayatullah State Islamic University Ciputat, Jakarta
[4]Western Sydney University, School of Social Sciences, Sydney, Australia
Correspondence email: [1]adeanantoterminanto@uinjkt.ac.id

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ABSTRACT

This study aims to analyze the influence of social and financial aspects on financing quality at PT PNM in the Bogor and Depok regions. The novelty of this research lies in its recommended social strategy for reducing Non-Performing Loan (NPL) levels. Using primary data from 106 respondents and secondary data, this study applies descriptive analysis methods and SEM-PLS. The results show that social aspects have a significant positive effect on financial aspects. Both social and financial aspects have been shown to have a significant negative effect on the potential for NPL. Social factors such as discipline, group solidarity (joint responsibility), and socio-economic stability of customers determine the smoothness of installments. Financially, the ability to manage business finances and effective risk management are key to maintaining portfolio quality. The study concludes that a strategy combining social and financial approaches is crucial for PT PNM to improve financial performance. It is recommended that PT PNM strengthen its mentoring program, customer education, and regular monitoring system for early risk detection. Mitigation strategies through the implementation of 3R (Rescheduling, Reconditioning, Restructuring) and intensive mentoring need to be optimized to adjust payment obligations to the real conditions of customers in the field.

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh aspek sosial dan keuangan terhadap kualitas pembiayaan di PT PNM wilayah Bogor dan Depok. Kebaruan penelitian ini terletak pada rekomendasi strategi aspek sosial untuk menekan tingkat *Non-Performing Loan* (NPL). Menggunakan data primer dari 106 responden serta data sekunder, penelitian ini menerapkan metode analisis deskriptif dan SEM-PLS. Hasil penelitian menunjukkan aspek sosial berpengaruh positif signifikan terhadap aspek keuangan. Baik aspek sosial maupun keuangan terbukti berpengaruh negatif signifikan terhadap potensi NPL. Faktor sosial seperti kedisiplinan, solidaritas kelompok (tanggung renteng), dan stabilitas sosial-ekonomi nasabah menjadi penentu kelancaran angsuran. Secara finansial, kemampuan pengelolaan keuangan usaha dan manajemen risiko yang efektif merupakan kunci menjaga kualitas portofolio. Penelitian menyimpulkan bahwa strategi kombinasi pendekatan sosial dan keuangan sangat krusial bagi PT PNM untuk meningkatkan kinerja keuangan. Disarankan agar PT PNM memperkuat program pendampingan, edukasi nasabah, serta sistem monitoring berkala untuk deteksi dini risiko. Strategi mitigasi melalui penerapan 3R (*Rescheduling, Reconditioning, Restructuring*) dan pendampingan intensif perlu dioptimalkan untuk menyesuaikan kewajiban pembayaran dengan kondisi riil nasabah di lapangan.

INTRODUCTION

The number of micro, small, and medium enterprises (MSMEs) in Indonesia is projected to reach approximately 65 million units by 2024. MSMEs contribute significantly to the national economy, accounting for approximately 61% of Indonesia's gross domestic product (GDP) and employing approximately 97% of the country's workforce, equivalent to approximately 117 million workers. This demonstrates that MSMEs are the backbone of Indonesia's significant economy. Financial institutions, both banks and non-banks, act as intermediaries, collecting funds from individuals and channeling them back to improve community welfare (BRI Microfinance Outlook, 2024). However, MSMEs face several key challenges that hinder their growth, including limited capital, marketing difficulties, limited access to raw materials, inadequate technology, suboptimal organizational structure, and weak management. Therefore, support from various parties, particularly financial institutions, both banks and non-banks, is essential as intermediaries to accumulate funds and channel them back to MSMEs to improve community welfare and strengthen MSME competitiveness in domestic and global markets. Problems faced by MSMEs include capital, marketing, raw materials, technology, organization, and management. This suggests that various parties, including financial institutions, need to provide additional support (Singh et al., 2018). To ensure direct access and support for this sector, regulations such as Bank Indonesia Circular Letter No. 10/2019 on the provision of credit and financing to MSMEs are crucial.

Furthermore, certain financial institutions, such as PT Permodalan Nasional Madani (PNM), support the growth and empowerment of small and medium enterprises (MSMEs). This is part of the effort to achieve a desired democratic economy. Recent data shows that PT Permodalan Nasional Madani (PNM) has disbursed Rp 45.35 trillion in PNM Mekaar financing as of August 2024, a 1.9 percent annual increase compared to the previous year. Outstanding PNM Mekaar financing was recorded at Rp 43.6 trillion as of August 2024, an 11.9 percent yearly increase. The number of PNM Mekaar customers as of that period reached approximately 14.71 million, with customers predominantly located on the island of Java, and the trade sector was the largest. As of December 31, 2024, total financing disbursement by PNM and its subsidiaries (including PNM Mekaar) reached IDR 73.93 trillion, with over 15.4 million customers, demonstrating significant growth and the broad reach of the PNM Mekaar program in Indonesia (antaranews.com, 2024).

However, the main obstacle in microfinance portfolios is typically the unbankable market segment. As a result, neither Prudential Financial nor non-bank financial institutions are targeted for funding (Aiba et al., 2022). This contradicts PNM's objectives and the way financial institutions provide capital and financing to the community. Therefore, solutions are needed to enable MSMEs and underprivileged communities to gain access to financial institutions that can improve their quality of life. Non-compliant loans (NPLs) are defined as loans that are not repaid by the borrower, either due to missed payments or default (Belloti et al., 2021). In other words, when a borrower fails to repay a loan in accordance with the agreed terms, the loan is considered non-performing. Non-performing loans (NPLs) are loans that are in default or have a significant risk of default, typically defined as those in which the borrower fails to pay principal or interest within a specified period.

Factors influencing the quality of Non-Performing Loans (NPLs) at PT. PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok) consist of internal and external factors. Internal factors include customer discipline and awareness in paying installments, the quality of financing risk management, including strict selection of prospective customers, good credit analysis, and regular monitoring and evaluation of disbursed loans. The inability of customers to manage their finances is also a major cause of the increasing risk of problematic financing. External factors include unstable economic conditions in customers' businesses and the broader social and macroeconomic environment, as well as natural disasters that affect repayment capacity. Research at other PNM units shows that customers' poor understanding of financing contracts, vulnerable family economic conditions, and a joint liability system that sometimes leads to conflict between members are factors contributing to the quality of problematic financing. Effective mitigation strategies include intensive mentoring, financial education, and the implementation of the 3R strategy (Rescheduling, Reconditioning, Restructuring), which helps adjust payment obligations to suit the customer's circumstances. This holistic approach has been proven to reduce NPL levels in various PNM units. Journal references and related case studies highlight the importance of comprehensive risk management and a humanistic social approach in addressing non-performing loans (NPLs), including business development, education, and persuasive collection strategies that maintain good customer relationships. These internal and external factors need to be managed synergistically to improve the quality of the financing portfolio at PNM Bogor and in the surrounding area.

Based on the background outlined, this study aims to examine the influence of social and financial factors on NPL quality at PT. PNM Bogor and the surrounding area. The novelty of this research lies in the recommendation of alternative social strategies to address NPLs at PT. PNM. The social policy model also applies a strict selection of prospective customers and regular monitoring of the financing portfolio, thereby proactively minimizing NPL risk. Overall, this social strategy emphasizes a humanistic approach and customer empowerment through education, mentoring, and relief tailored to real-world conditions, thereby helping to reduce NPL rates at PT. PNM, particularly in the Bogor and surrounding areas.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Based on Presidential Decree No. 61 of 1988, a non-bank financial institution is a business entity in the financial sector that directly or indirectly collects funds by issuing securities and channeling them to the public to finance investments. Conversely, a financing institution is a business entity that carries out financing activities in the form of providing funds or capital goods without directly attracting funds from the public. Insurance, pawnshops, pension funds, mutual funds, and financing institutions are some of the businesses included in non-bank financial institutions (NBFIs).

Wiwoho (2014) states that non-bank financial institutions are all organizations operating in the financial sector that directly or indirectly collect funds, primarily through the issuance of securities and distribution to the public, primarily to finance corporate investments in an effort to increase prosperity and social justice. Multi-purpose financing companies are a type of financing company whose primary activity is providing consumer finance facilities for the procurement of goods and/or services for public consumption needs (Kasmir, 2015). This company offers various multi-purpose financing products, such as investment financing, working capital financing, and other consumer financing (Rivai et al., 2018). The multi-purpose financing offered by multi-purpose financing companies can be used for various consumer needs, such as vehicle purchases, home renovations, education costs, travel, electronic goods procurement, or other consumer needs (Hidayat, 2018). Multi-purpose financing companies play a crucial role in providing access to financing for people who need funds to meet their consumer needs.

In general, the financing scheme offered by multi-purpose financing companies involves three parties: the financing company, the debtor (consumer), and the goods or services provider (Ismail, 2016). The financing company provides financing to the debtor to purchase goods or services from the goods or services provider. The debtor then repays the financing company in installments over a specified period with additional interest or yield (Darmawi, 2017). To carry out their operational activities, multi-purpose financing companies obtain funds from various sources, such as equity capital, bank loans, bond issuance, or other funding sources. Companies must also ensure compliance with applicable rules and regulations, such as the Financial Services Authority Regulation (POJK) concerning the Implementation of Financing Company Business.

Sastradipoera (2004) explains that credit is the provision of money or debt (equivalent to money) based on a loan agreement between a bank and another party. The borrower is required to repay the debt within a specified period with a predetermined amount of interest. Finally, Law Number 7 of 1998 defines credit as the provision of debt and money equivalent to money based on a loan agreement or agreement between a bank and another party, where the borrower is required to repay the debt with interest, a fee, or profit sharing within a specified period. Considering these various definitions, credit can be defined as the provision of funds or debt instruments equivalent to such debt to a debtor (borrower). Based on the loan agreement, the debtor is required to repay the debt and interest or other fees within a specified period.

In managing credit risk, financing companies need to classify the quality of the credit or financing provided to debtors. This credit quality classification is useful for identifying potentially problematic loans and taking appropriate preventative or corrective action (Kasmir, 2015; Purwoko & Suhardjono, 2017). According to Financial Services Authority Regulation (POJK) No. 35/POJK.05/2018, credit or financing quality is classified as current, special mention, substandard, doubtful, and loss.

This classification is based on timely principal and/or interest payments or profit sharing, as well as the debtor's business prospects (Rivai et al., 2018): (1) If principal, interest, or profit-sharing payments are made on time and the debtor's business prospects are good, the credit or financing is classified as current. (2) If there are arrears in principle, interest, or profit-sharing installments, but not more than 90 days, and the debtor's business prospects are still good, the credit or financing is classified as special mention. (3) If there are arrears in principle, interest, or profit-sharing installments for more than 90 days, but not more than 180 days, the credit or financing is considered substandard. (4) A loan or financing is classified as doubtful if there are arrears in principle, interest, or profit-sharing installments for more than 180 days, but not more than 270 days. (5) A loan or financing is classified as problematic if the principal, interest, or profit-sharing installments are in arrears for more than 270 days.

The financing industry is one of the sectors vulnerable to credit risk. Credit risk is the possibility of losing money because the counterparty does not fulfill its promises (Knewtson and Qi, 2019). In the context of finance companies, credit risk can arise from various sources, such as the inability of debtors to repay installments or repay loans on time. Effective credit risk management is crucial for finance companies to maintain business continuity and minimize losses. According to Anghelache and Bodo (2018), credit risk management encompasses several stages: risk identification, risk measurement, risk monitoring, and risk control. Credit risk identification involves assessing debtor characteristics, such as business profile, credit history, and repayment capacity. Finance companies must also consider external factors, such as economic conditions and government regulations, that can impact credit risk (Lee et al. 2021).

Credit risk can be measured using various methods, such as financial ratio analysis, credit scoring, and default probability models (Xiong 2020). Credit risk monitoring involves regular monitoring of the credit portfolio and identification of debtors who have the potential to experience payment difficulties (Anghelache and Bodo 2018); Jilu et al 2020). Credit risk control can be carried out through various strategies, such as portfolio diversification, setting credit limits, adjusting interest rates, and using collateral or guarantees (Jilu et al 2020).

Financial companies also need to have clear policies and procedures for managing credit risk, as well as ensuring adequate segregation of duties in the credit granting and monitoring processes. Non-performing loans are one of the main risks faced by financial institutions, including finance companies. High levels of non-performing loans can negatively impact a company's financial performance, such as reduced profitability and disrupted cash flow. Therefore, managing non-performing loans is crucial to minimize the risk of loss.

Several strategies that financial companies can implement to manage non-performing loans are as follows (Van Greuning and Bratanov, 2020; Saunders et al., 2021; Darmawi, 2017; Karim, 2015; Rivai et al., 2018): *First*, rescheduling is a strategy for managing non-performing loans by extending the installment period or reducing the installment amount. This is expected to make it easier for debtors to meet their obligations and prevent non-performing loans. *Second,* reconditioning is a strategy for handling non-performing loans by changing some or all of the loan terms to make them less burdensome for debtors. For example, companies can lower interest rates or provide late fee waivers. *Third,* restructuring is a strategy for addressing problem loans by changing some or all of the credit terms, including adding credit facilities or converting some or all of the loan into company equity. This strategy is implemented if the debtor has good business prospects and is able to meet its obligations after restructuring. *Fourth*, a combination of strategies. In some cases, finance companies can combine several strategies to address problem loans, such as rescheduling, reconditioning, and restructuring. This combination aims to provide a more comprehensive and effective solution for debtors in overcoming payment difficulties (Supriyono, 2019). *Fifth*, liquidation of collateral is a last resort for companies to minimize losses from problem loans.

Finance companies must ensure that the collateral liquidation process is carried out in accordance with applicable laws and regulations. Companies must also consider aspects such as accurate collateral assessment, a transparent auction process, and addressing potential social impacts. Although collateral liquidation is a last resort, finance companies must still consider the long-term impact on their reputation and relationships with debtors. Selecting the right strategy for handling non-performing loans is crucial to ensuring effective credit risk management and minimizing potential losses for the finance company. Companies need to conduct an in-depth analysis of the debtor's condition, business prospects, and repayment capacity, as well as considering applicable legal and regulatory aspects.

RESEARCH METHOD

This research uses a quantitative approach with the causality method. The analysis used in this study is descriptive statistical analysis to explain the existing phenomena and the characteristics of the research object. The population in this study is key people and stakeholders who are truly connected to PT. PNM, namely key people from the PT. PNM branches in Bogor, Depok, and Bogor Regency. Therefore, the sampling method used was purposive sampling. The research data were obtained through primary data from a questionnaire survey using Google Forms from 106 respondents directly involved in microfinance at PT. PNM Bogor and the surrounding area. Secondary data were obtained from a literature review to support, complement, and refine the primary data from internal sources and from various sources, including reports and other published data. The primary focus of respondents was people directly involved with PT. PNM Bogor and the surrounding area, whether as branch leaders, managers, AOs, analysts, consultants, vendors, or customers.

For qualitative situational and descriptive analysis, data collection was obtained through expert justification, involving several parties including branch managers, consultants or vendors, and customers of PT. PNM Bogor and its surrounding areas. The research design or plan used descriptive and quantitative approaches. The analysis used is descriptive analysis to explain existing phenomena and existing conditions, while the quantitative method used is Structural Equation Modeling-Partial Least Square (SEM-PLS) analysis as a statistical approach. SEM-PLS is used to analyze the influence of social and financial aspects on NPL quality at PT. PNM Bogor and its surrounding areas.

The social aspect has several indicators, including customer lifestyle (X1_1), group influence or commitment (X1_2), customer mentoring by the AO and branch manager (X1_3), regular/routine monitoring or meetings (X1_4), customer savings discipline (X1_5), guarantees between group members (joint and several liability) (X1_6), customer honesty and character (X1_7), recommendations from the local community (RT/RW) (X1_8), the role of the AO (X1_9), customer compliance with credit agreements

(X1_10), appropriate use of funds by customers (X1_11), customer ability to run a business (X1_12), the joint and several liability system (X1_13), the extent to which joint and several liability is an appropriate solution (X1_14), and joint and several liability leads to more disciplined customers (X1_15). Meanwhile, the financial aspect indicators include the customer's type of business (X2_1), length of business (X2_2), customer financial factors (X2_3), completeness of customer credit documentation (X2_4), reasonableness of customer payment sources (X2_5), customer capital (X2_6), and the availability and accuracy of customer financial information (X2_7).

The research framework illustrates that this study consists of dependent and independent variables. Referring to the framework and research objectives, an operational framework model was developed. This operational framework illustrates the relationship between the Social Aspect, Financial Aspects, and Financial Performance (potential NPL).

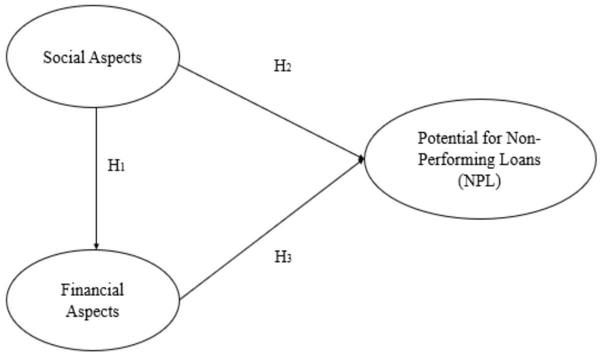

Figure 1. Operational Framework

Based on the operational framework in Figure 1, the following hypotheses are summarized:
H1: Social Aspects Influence the Financial Aspects of PT. PNM Bogor and its Surrounding Areas (Bogor City, Bogor Regency, and Depok).
H2: Social Aspects Influence the Potential for Non-Performing Loans (NPLs) at PT. PNM Bogor and its Surrounding Areas (Bogor City, Bogor Regency, and Depok).
H3: Financial Aspects Influence Non-Performing Loans (NPLs) at PT. PNM Bogor and the Surrounding Areas (Bogor City, Bogor Regency, and Depok).

RESULT AND DISCUSSIONS

Descriptive Analysis

Credit/Financing Quality (using NPL as a proxy)

Figure 2 shows that 51.2% of respondents stated that the potential for NPL is 20-40%, or low. 41.5% of respondents stated that the potential for NPL is 20%, or very low. 7.3% of respondents stated that the potential for NPL is 40% to 60%.

Social Aspects

The social aspect in this study consists of eight indicators, each representing customer social aspects suspected of influencing NPL. Based on the survey results, 70.7% of respondents agreed that the joint liability system can minimize credit risk. Furthermore, the joint liability indicator makes customers more disciplined and responsible, thereby reducing credit risk, with 68.3% agreeing. Meanwhile, the indicator that customer savings discipline contributes to credit risk mitigation (NPL) was agreed by 65.9% of respondents. The questionnaire results, presented in graphical form, are shown in Figure 3.

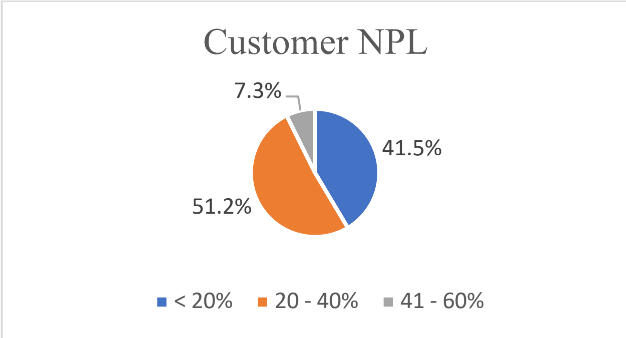

Figure 2. Customer NPL

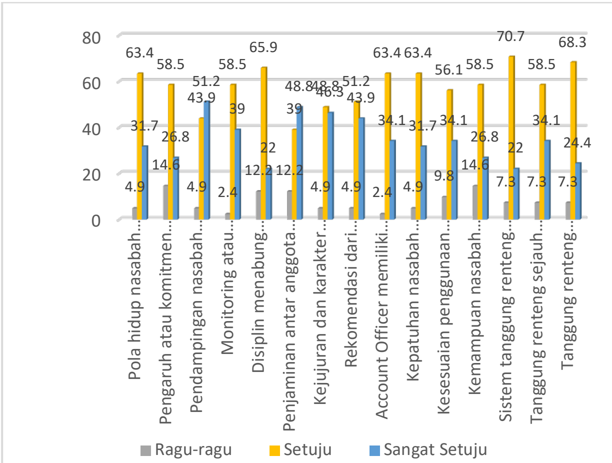

Figure 3. Questionnaire results based on social aspects (in %)

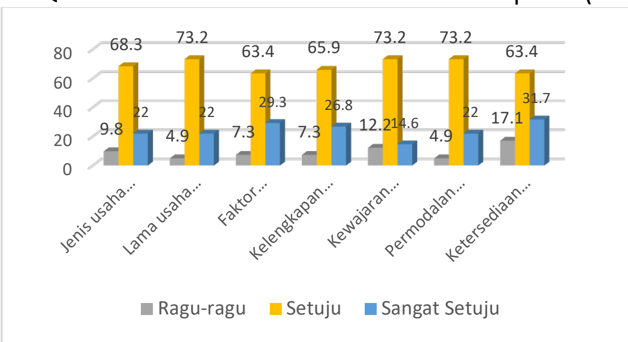

Figure 4. Questionnaire results based on financial aspects (in %)

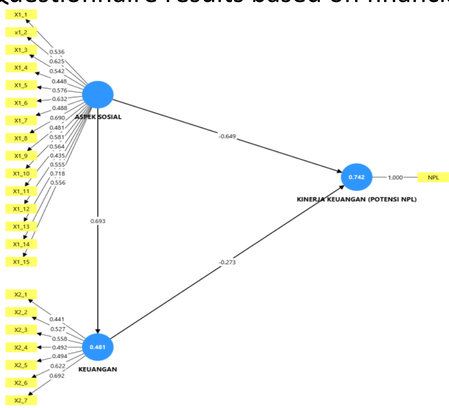

Figure 5. SEM-PLS Output

Financial Aspects
The financial aspect in this study consists of seven indicators, each of which represents customer financial aspects that can influence NPL. Based on the survey results, respondents agreed with several indicators regarding the financial aspect, including the length of time a customer has been in business impacting credit risk (NPL); the reasonableness of customer payment sources contributes to assessing credit risk (NPL); and customer capital is a factor that should be considered in analyzing credit risk (NPL), with 73.2% responding to each. The questionnaire results, presented in graphical form, can be seen in Figure 4.

Convergent Validity Test
Validity testing for reflective indicators can be conducted using the correlation between indicator scores and their construct scores. Measurements using reflective indicators indicate changes in an indicator within a construct when other indicators within the same construct change. The following are the calculation results using the smart PLS computer program. This study used three latent variables: social aspects, financial aspects, and non-performing loans (NPL). The exogenous latent variables, which serve as independent variables, are the Social Aspect and Financial Aspect variables. The endogenous latent variable, which serves as the dependent variable, is NPL Potential (Figure 5).

The analysis results for the initial exploration stage identified valid indicators and items as variable measures, with a loading factor value of >0.5. A loading factor value of 0.50 or higher is considered sufficiently valid to explain the latent construct (Hair *et al*., 2010).

Reliability Test
The analysis results using Smart PLS in Table 1 show that the AVE value for the constructs used is greater than 0.50, and the Composite Reliability value for the constructs used is greater than 0.7. Thus, all variables can be declared to have high reliability.

Inner Model Evaluation (Structural Model)
The inner model test was conducted to determine whether the relationships between latent variables, namely exogenous and endogenous constructs, could provide answers to questions regarding the previously hypothesized relationships between latent variables. The following are the results of the inner model test for R-square. This inner model test, or structural test, was assessed using three values from the SmartPLS data processing conducted previously: R-square, Prediction Relevance (Q^2), and Goodness of Fit (Gof) values. The following are the results of the inner model test for R-square. The model's R-square value was then compared with the AVE value shown in the Fornell-Larcker table (Table 3). The AVE value for each variable was greater than its R-square value (Hair *et al*., 2010). This indicates that the AVE value met the requirements for model reliability. The R-square value was then compared with the AVE value shown in the Fornell-Larcker table.

The f^2 value is used to determine whether the endogenous latent variable is strongly influenced by the exogenous latent variable. An f^2 value of 0.02 indicates a small influence, a value of 0.15 indicates a medium influence, and a value of 0.35 indicates a large influence of the exogenous latent variable (Ghozali and Latan, 2015). The f^2 output results are shown in Table 4.

Table 1. SmartPLS Algorithm Output

Variable	*Cronbach's alpha*	*Composite reliability (rho_a)*	*Composite reliability (rho_c)*	*Average variance extracted (AVE)*	Description
Social Aspects	0,846	0,853	0,875	0,822	Reliable
Financial Aspects	0,816	0,830	0,750	0,805	Reliable

Table 2. R-square Values

Variable	*R-square*	*R-square adjusted*
Financial Aspects	0,481	0,476
Potential NPL	0,742	0,737

Table 3. Fornell-Larcker Criterion Values

Variable	Social Aspects	Financial Aspects	Potential NPL
Social Aspects	0,567		
Financial Aspects	0,693	0,552	
Potential NPL	-0,838	-0,723	1,000

Table 4. F-squared Value Results

Variable	Social Aspects	Financial Aspects	Potential NPL
Social Aspects		0,926	0,847
Financial Aspects			0,150
Potential NPL			

Predictive Revelance (Q^2)

Q^2, known as the Stone-Geisser R^2, is intended to describe the model's predictive capability when its value is above 0. This value is obtained using the formula (Hussein, 2015):

$$Q^2 = 1-(1-R1^2)(1-R2^2)...(1-Rp^2)$$

Where $R1^2$, $R2^2$, ...Rp^2 are the R-squares of the exogenous variables in the model equation. If $Q^2 > 0$ indicates the model has predictive relevance, and if $Q^2 < 0$ indicates the model lacks predictive relevance (Ghozali and Latan, 2015). Based on this formula, the calculation for Q^2 is 1 - (1 – 0,476)(1 – 0,737), yielding a result of 0.8621. Thus, it is concluded that it has predictive relevance. This statement also implies that the exogenous latent variable is good as a latent variable capable of explaining the endogenous variables in the model.

***Goodness of Fit Index* (GoF)**

Based on the results of the model fit analysis, it is known that there is a good match between the saturated model and the estimated model, indicating a good match between Ha and Ho. As presented in Table 5, the SRMR meets the good fit criteria because its value is less than or equal to 0,10. Similarly, the value of pada_ULS is considered to meet the criteria because it is greater than the Cut-Off Value of 0,05 (2,400 > 0,05). d_G has a value less than the Cut-Off Value of 0,05 (0,891 > 0,05), indicating a good model fit. The Normed Fit Index (NFI) output value is 0,548 < 0,90, indicating a marginal model fit. Because the majority of model fit criteria are met, the resulting model can be considered good. The output results are as follows:

Table 5. Model Fit Test Results

GOF	*Cut off Value*	*Saturated Model*	*Estimated Model*	Description
SRMR	SRMR ≤ 0,100	0,093	0,093	Good: *good fit*
d_ULS	d_ULS > 0,05	2,400	2,400	Good: *good fit*
d_G	d_G > 0,05	0,891	0,891	Good: *good fit*
Chi-square	Should be smaller than Df	449,068	449,068	Good: *good fit*
NFI	NFI ≥ 0,90	0,548	0,548	Marginal fit

Table 6. Loading Values for All Constructs

Latent Variable	Indicator	Loading Value	Description
Social Aspects	X1_1	0,636	Meets convergent validity
	X1_2	0,625	Meets convergent validity
	X1_3	0,642	Meets convergent validity
	X1_4	0,748	Meets convergent validity
	X1_5	0,776	Meets convergent validity
	X1_6	0,632	Meets convergent validity
	X1_7	0,788	Meets convergent validity
	X1_8	0,690	Meets convergent validity
	X1_9	0,681	Meets convergent validity
	X1_10	0,681	Meets convergent validity
	X1_11	0,764	Meets convergent validity
	X1_12	0,735	Meets convergent validity
	X1_13	0,755	Meets convergent validity
	X1_14	0,718	Meets convergent validity
	X1_15	0,756	Meets convergent validity
Financial Aspects	X2_1	0,641	Meets convergent validity
	X2_2	0,727	Meets convergent validity
	X2_3	0,758	Meets convergent validity
	X2_4	0,792	Meets convergent validity
	X2_5	0,794	Meets convergent validity
	X2_6	0,622	Meets convergent validity
	X2_7	0,692	Meets convergent validity
Potential NPL	Potential NPL	1,000	Meets convergent validity

The output in Table 6 indicates that most of the loading factors for the research indicators have met convergent validity, as they have positive values, even >0,50.

Structural Model Evaluation (Inner Model)

Each relationship was tested using the Bootstrapping simulation method on the sample. This test aims to minimize the problem of disharmony in the research data. The results of the Bootstrapping test using the PLS values are shown in Figure 6.

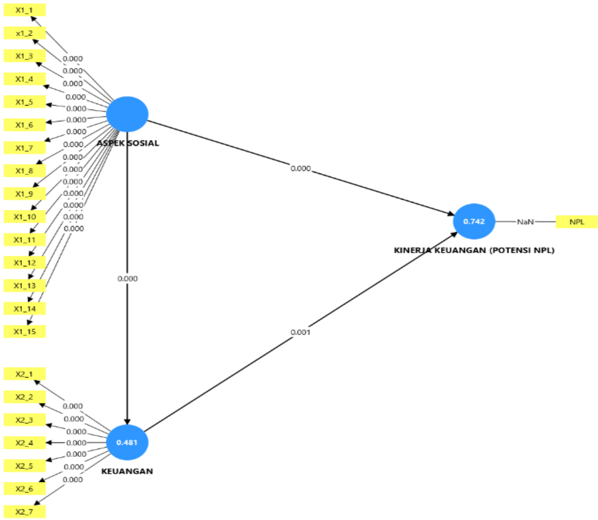

Figure 6. Bootstrapping Output (t-value)

Based on the results of the SEM-PLS analysis using Smart PLS 4.0, as shown in Figures 2 and 3, the direct and total effects are implicitly explained. The detailed description is explained as follows. Table 7 shows that the direct relationships between the formative latent variables are all significant (t-statistics > 1,640 or p-values < 0,10), with path coefficients of 0,10 and 0,10, respectively.

The structural equation model for Social Aspects, Financial Aspects, and Financial Performance (Potential NPL) is:

Financial Aspects = 0,693 * Social Aspects + ε

Financial Performance (Potential NPL) = -0,649 Social Aspects – 0,273 Financial Aspects + ε

Table 8 shows that the indirect relationships between the formative latent variables are all significant (t-statistic > 1,640 or p-value < 0,10), with respective path coefficients.

The structural equation model for Social Aspects, Financial Aspects, and Financial Performance (Potential NPL) is:

Financial Performance (Potential NPL) = -0,190 Social Aspects + ε

Table 9 shows that the specific relationships between the formative latent variables are all significant (t-statistics > 1.640), with respective path coefficient values.
The structural equation model for the Social Aspect, Financial Aspect, and Financial Performance (Potential NPL) is:

Financial Performance (Potential NPL) = -0,190 Social Aspect * Financial Aspect + ε

Based on the analysis of the total effect of exogenous variables on tax morale (endogenous variables), the highest total effect is found in the Social Aspect variable, at 0,693 (Social Aspects → Financial Aspects). The total effect of each variable can be seen in Table 10.

The significance of the predictive model in the structural model testing can be seen from the t-statistic value of the independent variable on the dependent variable, as well as the direct influence value (path coefficient) in Table 11, which shows the results of the structural model hypothesis testing in the study. Where based on the results of the hypothesis testing it is known that all three hypotheses are accepted.

Table 7. Path Coefficients for Direct Effects on Latent Variables

Direct Effect	Original sample (O)	T statistics (|O/STDEV|)	P values
Sosial Aspects -> Financial Aspects	0,693	15,750	0,000
Sosial Aspects -> Financial Performance (Potential NPL)	-0,649	8,345	0,000
Financial Aspects -> Financial Performance (Potential NPL)	-0,273	3,334	0,001

Table 8. Path Coefficients of Indirect Effects on Latent Variables

Indirect Effect	Original sample (O)	T statistics (|O/STDEV|)	P values
Sosial Aspects -> Financial Performance (Potential NPL)	-0,190	2,993	0,003

Table 9. Path Coefficients for Specific Relationships on Latent Variables

Specific Relationships	Original sample (O)	T statistics (|O/STDEV|)	P values
Sosial Aspects→ Financial Aspects → Financial Performance (Potential NPL)	-0,190	2,993	0,003

Table 10. Path Coefficients for the Total Effect on Latent Variables

Relationship/Direct Effect	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Sosial Aspects -> Financial Aspects	0,693	0,710	0,044	15,750	0,000
Sosial Aspects -> Financial Performance (Potential NPL)	-0,838	-0,844	0,032	26,367	0,000
Financial Aspects -> Financial Performance (Potential NPL)	-0,273	-0,265	0,082	3,334	0,001

Table 11. Hypothesis Testing Results

Hypothesis	Path (Relationship)	t-value 10% (≥1.640)	Effect		Hypothesis Conclusion
			Direct	Total	
H_1	Social Aspects → Financial Aspects	15,750	0,693	0,693	**Accepted**
H_2	Sosial Aspects → Financial Performance (Potential NPL)	26,367	-0,838	-0,838	**Accepted**
H_3	Financial Aspects → Financial Performance (Potential NPL)	3,334	-0,273	-0,273	**Accepted**

Hypothesis Testing

The hypothesis testing in this study included direct and total effects. The results are shown in Table 11 below.

Hypothesis 1: Social Aspects Influence the Financial Aspects of PT. PNM Bogor and its Surrounding Areas (Bogor City, Bogor Regency, and Depok)

The analysis results show that social aspects can influence the financial aspects of PT. PNM Bogor and its Surrounding Areas (Bogor City, Bogor Regency, and Depok) with a t-value of 15.750 > 1.640, thus concluding that **Hypothesis 1 is accepted**. PT Permodalan Nasional Madani (PNM), including in the Greater Bogor area, has a business model that inherently links social aspects to its financial performance. As a state-owned enterprise focused on empowering Micro, Small, Medium Enterprises, and Cooperatives (MSMEs), particularly the ultra-micro segment through programs such as PNM Mekaar, social aspects are not only part of corporate social responsibility (CSR) but also core to the business strategy for achieving financial sustainability.

Social aspects support income and growth in the following forms (Nugraheni, 2024): *First,* financing distribution and improving customer welfare by providing access to business capital financing to underprivileged communities, particularly women in ultra-micro businesses. In the Greater Bogor area, the more empowered communities are, the greater the distribution of financing (loans), which becomes a productive asset and a source of interest income/profit sharing for the company. *Second,* the PNM Mekaar model uses a shared responsibility (group) system, which represents strong social capital. This social aspect fosters a sense of responsibility and solidarity among members, which directly contributes to better loan repayment rates (collectibility/NPL). Smooth loan repayment is a key foundation for the company's financial health. *Third*, PNM's efforts to improve financial literacy and inclusion for the ultra-micro segment have socially created a broad and loyal customer base. The success of customers who "upgrade" (improve their welfare) is evidence of PNM's social impact, which in turn strengthens the company's image and reputation, making it easier for PNM to reach a wider market and sustain business growth.

On the other hand, the impact of social aspects on cost efficiency can include: (1) reducing credit risk, where the strong social ties and group-based supervision in the PNM Mekaar model act as social security. This effectively reduces individual credit risk, meaning the company does not need to allocate as high a credit loss allowance (CKPN) as conventional financial institutions with physical collateral. (2) focusing on social empowerment and ongoing customer assistance can reduce costs arising from customer business failures (which could potentially lead to bad debts). Training and mentoring activities (Modal Insan Madani) are social investments that mitigate future financial risks.

The sustainability aspect and stakeholder trust of PT. PNM Bogor and the surrounding areas can ensure compliance with sustainable finance (ESG) principles, as PNM's commitment to the principles of Profit, People, and Planet (3P) aligns with global demands. Positive social impact (the People pillar) increases trust from shareholders (especially as a state-owned enterprise), investors, and regulators. This trust is important for capital acquisition, such as bond issuance or funding from governments/international institutions at more competitive costs. Furthermore, government support and synergy with state-owned enterprises (SOEs) have enabled PNM's role as an agent of socio-economic development, enabling it to receive full government support, such as through the Ultra Micro Holding synergy (with BRI and Pegadaian). This financial support provides significant operational and capital advantages (Qalbi and Anwar, 2020).

As a financial institution focused on micro-services, PNM plays a role in improving community welfare through inclusive access to financing and business capacity building programs. Social programs such as business capital assistance for MSMEs, entrepreneurship training, health programs, and disaster relief directly improve the quality of life and productivity of the community. This has a positive impact on PNM's financial aspects, as improved welfare and business capacity of partners leads to improved credit portfolio performance, reduced risk of non-performing loans, and increased company revenue from financial services. Flagship programs like PNM Mekaar, for example, provide loans to underprivileged women, which not only improves the economic well-being of these groups but also strengthens loyalty and financial inclusion, ultimately supporting the financial stability and growth of PNM's business. Furthermore, business development and mentoring for micro-enterprises help foster the sustainability of partner businesses, thereby improving cash flow continuity and PNM's operational effectiveness. Purwaningsih (2022) discusses the role of PNM Mekaar Syariah in improving the community's economy through significant utilization of business capital. This study confirms that PNM's social interventions directly improve family economic conditions and create social balance that supports PNM's financial performance.

Hypothesis 2: Social Aspects Influence the Potential for Non-Performing Loans (NPLs) at PT. PNM Bogor and its Surrounding Areas (Bogor City, Bogor Regency, and Depok)

The analysis results show that social aspects can influence the NPLs of PT. PNM Bogor and its Surrounding Areas (Bogor City, Bogor Regency, and Depok) with a t-value of 26,367 > 1,640, thus concluding that **Hypothesis 2 is accepted**. Although PNM Mekaar's business model is built on the strength of social capital (a system of shared responsibility), several socio-economic factors can inherently increase the potential for non-performing loans (KPR), which is a negative indicator of financial performance. Social aspects play a significant role in determining credit quality and KPR potential in microfinance institutions such as PT. PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok). However, certain social factors can negatively impact KPR potential, including (Putra and Kusuma, 2022), among others: people who lack understanding of credit products, requirements, and loan consequences are more likely to default, thus increasing the potential for KPR. Social conflict, economic crises, and natural disasters can disrupt customers' repayment capacity, leading to increased KPR. Furthermore, the habit of violating certain rules or social norms related to financial and debt management can lead to customers being undisciplined in repaying installments. People who lack adequate social support or have limited access to information, economic training, and public facilities may experience difficulties in managing loans.

At PT. PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok), AOs play a crucial social role as companions and debt collectors. Being too close to customers can backfire. The negative impact is that the AO's emotional closeness to the customer's dire socio-economic situation can lead to laxity in collection or delays in reporting problem loans. Mistakes in the initial social evaluation by the AO (lack of thoroughness in analyzing the customer's social situation) are also internal factors contributing to NPLs. These social factors can lead to high levels of late payments and increased NPLs, which in turn impact the financial stability of PT. PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok). This social aspect must be managed strategically through financial education and increased public literacy (Akbar *et al.*, 2021). In short, social factors such as customer discipline in paying installments, understanding the financing agreement, and the family's socio-economic condition significantly determine the smooth repayment of loans. Non-performing loans (NPFs) are often caused not only by individual economic factors but also by social dynamics within the group. Lack of discipline and low awareness of financing risks lead to an increase in non-performing loans. Furthermore, the joint liability system implemented in group financing schemes also has complex social impacts. Social solidarity, a sense of shame among members, and social pressure (intervention) from the group leader and other members serve as effective oversight mechanisms. Members experiencing difficulties are assisted or reminded by their group, thereby reducing the rate of delinquency. If social conflict arises or solidarity within the group weakens, this system collapses. A member who deliberately defaults can burden other members. If the group is dysfunctional, the risk of collective NPF increases dramatically (Fadhil and Ropei, 2022).

Social pressure to meet consumptive needs, or even cultural factors such as major celebrations, often cause financing funds to be diverted from business capital to consumption needs, directly increasing the risk of default. Conflict between group members due to failure of one party to pay can exacerbate the NPL risk. Unstable socioeconomic conditions, such as declining business income and a predominance of consumer needs over productive ones, trigger irregular payments (Nurhayati and Santoso, 2023). Trust between members and the existence of strong social networks can act as a buffer during economic downturns, for example, by lending funds to cover installments. Conversely, a loss of social trust can accelerate the occurrence of non-performing loans (NPF) (Nailiyah, 2024).

Terminanto *et al*., (2024) stated that microfinance plays a crucial role in alleviating poverty and promoting development in Indonesia because its scope extends beyond financial intermediation to include social intermediation. In practice, the function of social intermediation is often more prominent than financial intermediation. This is because microfinance is closely tied to local wisdom that has been practiced by communities for generations. Initially, various microfinance services, products, and schemes were limited to the distribution of micro-scale funds to those in need, known as credit or microfinance. Over time, microfinance has also encompassed microinsurance and credit guarantee schemes, primarily aimed at mitigating the risk of non-performing loans.

Effective mitigation strategies involve a social approach in the form of financial education, sustainable business mentoring, and the implementation of a strengthened joint liability system to build solidarity among customers. A persuasive approach to collection and financing restructuring through the 3R method (rescheduling, reconditioning, and restructuring) also helps maintain financing quality and reduce the risk of non-performing loans (NPL). Research and reports from PNM indicate that social aspects must be managed seriously and integrated with financial aspects for microfinance to be sustainable and NPL risk to be effectively reduced in PT. PNM Bogor and the surrounding areas (Bogor City, Bogor Regency, and Depok).

Hypothesis 3: Financial Aspects Influence Non-Performing Loans (NPLs) at PT. PNM Bogor and the Surrounding Areas (Bogor City, Bogor Regency, and Depok)

The analysis results show that financial aspects can influence the NPLs of PT. PNM Bogor and the Surrounding Areas (Bogor City, Bogor Regency, and Depok) with a t-value of 3.334 > 1.640, thus concluding that **Hypothesis 3 is accepted**. In the context of PNM Mekaar, NPL measures the percentage of non-performing loans (default) of total disbursed loans. The negative influence of internal financial aspects means that the company's own financial condition or policies can contribute to an increase in NPL. Financial aspects negatively impact the potential for Non-Performing Loans (KPR) at PT. PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok) related to a number of internal and external factors that weaken the customer's ability to fulfill their obligations. Damayanti (2023) mentions these factors include: (a) Weak financing feasibility analysis: If the credit analysis process is inaccurate or incomplete, PT. PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok) is at risk of providing credit to borrowers who do not meet the financial strength to repay, thereby increasing the risk of non-performing loans (KPR). (b) Inaccurate assessment of customer repayment capacity: The customer's inability to generate sufficient cash flow to cover installments can lead to non-performing loans. (c) Lack of financing monitoring and evaluation: If supervision of the use of funds and installment payments is not optimal, the risk of non-performing loans also increases. (d) Low liquidity and capital factors of customer companies: Limited capital or liquidity of customers makes them vulnerable to financial difficulties when facing economic downturns, potentially leading to default. (e) Macroeconomic changes that impact customers' income and financial stability, such as inflation and declining purchasing power, make repayment more difficult. (f) Interest and fee policies that burden customers can also lead to increased bad debts if the financial burden exceeds the customer's repayment capacity.

PNM Mekaar customers are ultra-micro businesses whose income is highly vulnerable to market and economic conditions such as seasonality, competition, and raw material prices. A sharp decline in business revenue, for example, due to a lack of buyers or crop failure, directly reduces a customer's capacity to pay weekly installments. Significant financial factors include the debtor's ability to manage their business's liquidity and cash flow, enabling them to meet installment obligations on time. Inability to manage customers' business finances often leads to delays or even defaults, which impacts the quality of financing. Many ultra-micro customers have low levels of financial literacy (Kurnia Sari, 2025).

Customers often mix business funds with personal/consumption funds. When funds are short, PNM installments become a secondary priority after daily needs, leading to delays (Prastiwi *et al*., 2021). Furthermore, suboptimal implementation of financing feasibility analysis, including evaluation of the 5Cs (Character, Capacity, Capital, Collateral, and Condition), can lead to credit disbursement to debtors with a high risk of default. One cause of NPF is the misuse of loan funds (financing) for their original purpose (business capital). Funds are diverted to urgent consumer needs (school fees, medical treatment, or home repairs), thus not generating the planned income to repay installments (Nailiyah, 2024). Weak financial risk management, a lack of regular monitoring and evaluation of the financing portfolio, and the ineffectiveness of mitigating strategies such as restructuring (3R) can also increase the risk of NPL. A financial education approach for customers and increased accuracy in credit analysis are key to maintaining a healthy financing portfolio. Damayanti's (2023) research on credit analysis for managing non-performing loans at PT PNM ULaMM Nglegok Unit showed that implementing sound credit analysis was able to control NPLs below the threshold set by the authorities. Furthermore, Arif Ar (2023) also emphasized the importance of education and counseling to reduce the risk of default at PT PNM Mekaar. PNM's annual report (2024) and the OJK report (2024) indicate that strict financial management is crucial in maintaining financing quality and controlling NPLs.

CONCLUSION

To improve social assistance and customer education, PT. PNM Bogor and the surrounding areas require intensified customer assistance and education programs, particularly regarding social aspects such as payment discipline, understanding of loan agreements, and strengthening group networks. A strong social approach can improve customer creditworthiness, ultimately reducing NPL risk. Prudent risk management and a real-time portfolio monitoring system will help identify problematic financing risks early. Financing flexibility strategies, including the implementation of the 3R strategy (rescheduling, reconditioning, and restructuring), must be selectively selected based on customer social and financial evaluations to ensure financing is more adaptive to their business and social conditions, preventing default.

The key innovation in this research is the integration of two aspects often separated in conventional banking analysis. Researchers not only examine financing quality through financial ratios (such as Non-Performing Loans or NPLs) but also integrate social capital (trust, group norms, and social networks) as key determinants of financing quality for Mekaar (PT. PNM) customers. This innovation demonstrates that in the underprivileged segment, social relationships between customers serve as a more effective "implicit guarantee" than physical collateral.

This research employs a highly specific case study approach in a heterogeneous region. Focusing on Bogor City, Bogor Regency, and Depok, it creates a unique comparison between customer behavior in dense urban areas (Depok/Bogor City) and regency areas with distinct sociological characteristics. This allows PNM to implement a more localized risk management strategy rather than a one-size-fits-all approach. Furthermore, this research develops a new model for predicting financing quality. It places variables such as group involvement (Group Lending Model) and business mentoring as determinants of financing quality. The impact is to provide a new perspective that the success of microfinance is not just about giving money, but about how strong the mentoring and social ecosystem is built around it.

Social factors such as customer discipline, understanding of loan agreements, group solidarity within a joint liability system, and the stability of customers' socioeconomic conditions have been shown to influence smooth installment payments. Meanwhile, financial aspects, particularly business financial management capabilities, comprehensive creditworthiness, and effective risk management, are key to maintaining the quality of the financing portfolio. This research indicates that a combined social and financial strategy should be implemented by PT PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok) to improve financial performance and reduce the level of Non-Performing Loans (NPLs). Continuous mentoring, financial education, and the implementation of the 3R strategy (Rescheduling, Reconditioning, and Restructuring) are highly effective in managing the risk of problematic financing and maintaining strong customer relationships. Overall, this model of financing quality determinants is crucial as a basis for strategic decision-making to improve the sustainability of microfinance at PT. PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok).

The findings of this study suggest that PT. PNM Bogor and its surrounding areas (Bogor City, Bogor Regency, and Depok) need to strengthen their customer mentoring and education programs to ensure social aspects are met. Furthermore, the development of a regular monitoring and evaluation system for customer financial conditions should be enhanced to detect financing risks early. The implementation of financing flexibility strategies, such as restructuring through the 3Rs (Rescheduling, Reconditioning, and Restructuring), should be tailored to customer capabilities. Management also needs to improve internal training, particularly for marketing teams and credit analysts, to better understand the unique characteristics of microfinance customers. Synergy with various external stakeholders is highly recommended to strengthen the sustainability of microfinance programs.

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