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Financing Risk Management in Ultra Micro Islamic Finance: The Role of Joint Liability at PNM Mekaar Syariah Surabaya Branch

Dhea Savira Tryas Ayu
Department of Management, Faculty of Economics and Business, Open University, South Tangerang, Indonesia

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Corresponding author:
Dhea Savira Tryas Ayu

Author's email:
049531392@ecampus.ut.ac.id

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Abstract

Purpose – This study aims to analyze the implementation of financing risk management for ultra micro financing and evaluate the effectiveness of the joint liability system in minimizing Non-Performing Financing (NPF) at the PNM Mekaar Syariah Banyu Urip 2 Unit, Surabaya Branch.

Methodology – Using a descriptive qualitative approach with a case study design, data were collected through indepth interviews with the Unit Head, Account Officers (AO), and Group Leaders selected via strict purposive sampling criteria, alongside a review of Standard Operating Procedures (SOPs) and performance reports (2024-2025). Data analysis followed the interactive model by Miles, Huberman, and Saldana. Validity was tested using source and technique triangulation.

Findings – The results indicate that risk management follows POJK No. 18/POJK.03/2016 stages: identification (5C+1S), measurement (Customer Classification Model), monitoring (Weekly Group Meetings), and control (3R restructuring). Empirical findings reveal that external factors particularly business seasonality dominantly trigger defaults. While the joint liability (tanggung renteng) system backed by Kafalah principles effectively maintains NPF < 1%, business homogeneity within groups creates systemic vulnerability due to a lack of risk diversification.

Implications – This study recommends optimizing the customer to AO ratio, mandating cross sector business diversification in group formation to align with portfolio risk theories, and strengthening socio Islamic character analysis modules.

Originality – This study bridges Sharia risk mitigation frameworks with local socio cultural dynamics at the operational unit level, highlighting business homogeneity as a structural flaw in the joint liability mechanism, which has been under explored in microfinance literature.

Introduction

PT Permodalan Nasional Madani (PNM) is a state owned enterprise (SOE) established by the government to promote the economy of the people. PNM was formed as a specialized financial institution to advance, maintain, and develop Micro, Small, and Medium Enterprises (MSMEs) based on Government Regulation No. 38 of 1999. Since 2021, PNM has officially become a subsidiary of PT Bank Rakyat Indonesia (Persero) Tbk as part of the Ultra Micro SOE Holding, focusing on serving the lowest economic segment. The PNM Mekaar Syariah Banyu Urip 2 Unit, Surabaya Branch, is a service unit focused on the economic empowerment of low income women microentrepreneurs. This unit embodies the commitment PNM to supporting small businesses by providing access to Sharia compliant financing without collateral, while actively offering guidance through a group based system.

However, the expansion of micro credit carries inherent default threats. At the operational level, while the PNM Mekaar Syariah Banyu Urip 2 Unit successfully maintained a low and well controlled NPF ratio in 2025, localized payment friction still occurs. According to risk management theory, financing defaults are driven by internal institutional factors such as loose credit analysis, high staff workloads, and deficiencies in institutional internal control systems (Sudibyo et al., 2026), as well as external customer factors like low financial literacy, business shocks, and economic volatility (Kasmir, 2014; Financial Services Authority, 2016). A persistent operational risk at the Banyu Urip 2 Unit arises when a customer defaults and absconds. Under the joint liability mechanism within the Mekaar program, the repayment obligation shifts to peer group members. If a group refuses to absorb the arrears, subsequent disbursement cycles are frozen. This operational tension underscores the need to critically analyze risk management practices ranging from initial 5C+1S screening to restructuring and joint liability enforcement to guarantee institutional sustainability.

The joint liability mechanism implemented in the Mekaar program reflects the principles of mutual responsibility and risk sharing embedded in Islamic finance. Conceptually, this mechanism aligns with the concept of kafalah (guarantee), whereby group members collectively assume responsibility for financing obligations. This arrangement strengthens social collateral and mitigates information asymmetry in microfinance transactions. While several foundational studies have mapped basic micro financing risks (Nadia et al., 2020; Nuri, 2025; Pane & Marpaung, 2022), empirical evidence on risk management practices at the operational unit level of Sharia microfinance institutions remains limited. Existing studies predominantly examine financing risk and technical efficiency from a centralized or macro-institutional perspective (Rahmanto et al. (2024), and pay limited attention to the integration of Islamic financial principles such as kafalah within risk mitigation mechanisms. Furthermore, little research has explored how business homogeneity among financing group members influences financing risk through the lens of portfolio diversification theory. This study addresses these gaps by examining the implementation of risk management, the role of kafalah based joint liability, and the implications of group business composition in managing non-performing financing at the PNM Mekaar Syariah Banyu Urip 2 Unit.

Therefore, this study aims to identify the specific drivers of non-performing financing at the PNM Mekaar Syariah Banyu Urip 2 Unit, analyze the procedural mitigation stages executed by field officers, and evaluate the structural resilience of the joint liability program. Theoretically, this research bridges Sharia operational concepts with broader economic risk management models. Practically, it yields strategic recommendations for unit managers to improve portfolio quality and safeguard grassroots economic empowerment.

Literature Review

Regulatory and Sharia Framework of Risk Management

The primary regulatory benchmark for this study is Financial Services Authority Regulation (POJK) No. 18/POJK.03/2016, which requires financial institutions to implement four integrated stages of risk management: risk identification, risk measurement, risk monitoring, and risk control. Within Sharia microfinance operations, this regulatory framework is complemented by Islamic principles through the application of the 5C+1S framework (Character, Capacity, Capital, Collateral, Condition, and Sharia compliance) during predisbursement screening (Antonio, 2001). Under this framework, risk identification is conducted through customer assessment and Sharia compliance evaluation, while risk monitoring and control are implemented through periodic supervision, restructuring measures, and joint liability mechanisms.

The Concept of Kafalah in Joint Liability

In Sharia based group financing institutions, risk mitigation frequently relies on Kafalah contracts implemented through joint liability mechanisms, in accordance with DSN-MUI Fatwa No. 131/DSN-MUI/X/2019. In Islamic jurisprudence, Kafalah represents a contract where a guarantor (kafil) merges their responsibility with the debtor (makful 'anhu) in fulfilling an obligation or debt (makful bih) to the creditor (makful lahu). According to Rahmanto et al. (2024), Kafalah serves as a social guarantee mechanism that reduces information asymmetry and strengthens mutual responsibility among financing participants.

In group based ultra micro financing, this manifests specifically as Kafalah bil-Mal (a financial guarantee). The arrangement collectively binds peer group members; while they do not assume the legal ownership of the underlying debt incurred by the defaulting peer, they explicitly accept the formal claim obligation (tathlib) to settle the financial arrears. This structural social guarantee effectively converts lateral peer pressure into systemic financial security, which is logistically evaluated and maintained through Weekly Group Meetings (PKM) acting as an institutional early warning system.

Portfolio Diversification Theory and Business Homogeneity

Modern Portfolio Theory suggests that idiosyncratic risk concentration increases substantially when economic actors rely on highly correlated income streams or operate inside identical business sectors (Markowitz, 1952). In financial economics, spreading capital across assets or business sectors with low or negative correlation coefficients minimizes overall portfolio volatility and cushions the system against localized shocks.

Applying this economic framework to joint liability financing, high business homogeneity among group members acts as a structural amplifier of default risks. When peer group members operate identical enterprises (e.g., seasonal retail or identical local market stalls), they exhibit a high positive correlation of default probabilities. Consequently, a single localized market disturbance, seasonal collapse, or macroeconomic contraction will impact all members simultaneously. This systemic covariate shock destabilizes the joint liability mechanism; because every guarantor (kafil) experiences a simultaneous liquidity crisis, the capacity for internal mutual insurance breaks down, resulting in collective group default. Conversely, promoting cross-sector business diversification within financing groups builds structural resilience by ensuring that group cash flows originate from distinct economic activities with independent risk variables (Figuerola-Ferretti, 2025).

Previous Studies on Financing Risk Management

Previous studies have highlighted various determinants and mitigation strategies for non-performing financing in microfinance institutions. Pane and Marpaung (2022) found that delayed installment payments constitute the primary financing risk at PNM Unit Aksara; however, systematic implementation of risk management effectively reduced financing problems. Similarly, Nadia et al. (2020) reported that internal factors, such as weaknesses in financing analysis, and external factors, including customers business instability, contribute to non-performing financing at PT BPRS Hikmah Wakilah. Their study underscored the importance of 5C analysis and routine monitoring in mitigating financing risk. Focusing specifically on PNM Mekaar Syariah, Nuri (2025) concluded that the joint liability mechanism significantly contributes to reducing non-performing financing rates. Supporting this finding, Wulandari & Kassim (2016) & Martiana et al. (2024) demonstrated that group based financing effectively minimizes moral hazard compared to individual financing schemes.

However, operational challenges remain significant. Ayandele & Chukwuemeka (2023) revealed that excessive staff workloads reduce monitoring quality and increase financing risk. Meanwhile, Figuerola-Ferretti (2025) argued that business diversification among group members is essential for enhancing the effectiveness of joint liability mechanisms. Cahyati et al. (2025), Mardatilla et al. (2025), & Abdullah et al. (2022) further emphasized that Islamic financial literacy plays a critical role in reducing default rates. Collectively, these studies suggest that effective financing risk management in Sharia microfinance institutions depends on the integration of institutional monitoring systems, social collateral mechanisms, business diversification, and customer financial literacy.

Research Methods

This study employed a descriptive qualitative approach with an empirical case study design to obtain an in depth understanding of financing risk management practices in ultra micro Islamic financing institutions. The case study design was selected because it enabled the investigation of financing risk management within its real life operational context, where institutional mechanisms interact closely with the socio economic characteristics of borrowers (Yin, 2018). The research was conducted at the PT Permodalan Nasional Madani (PNM) Mekaar Syariah Banyu Urip 2 Unit, Surabaya Branch, Indonesia. This research site was purposively selected because it serves a large number of ultra micro women entrepreneurs and demonstrated relatively low non-performing financing (NPF) levels during the 2024 until 2025 period despite operating in a dynamic economic environment.

Primary data were obtained from key operational actors selected through purposive sampling. This sampling technique was chosen because it allows researchers to identify informants who possess relevant knowledge, direct experience, and active involvement in financing risk management processes.

Unit Head (1 informant): had served in a managerial position for at least one year and was responsible for supervising financing approval, monitoring, and restructuring processes. Account Officers (3 informants): had a minimum of two years of field experience, managed active customer portfolios, and had direct experience in handling customers with non-performing financing. Group Leaders (3 informants): had served in their roles for at least one financing cycle, regularly participated in Weekly Group Meetings, and had experience in implementing joint liability mechanisms within their groups. Based on these criteria, seven informants were selected, consisting of one Unit Head, three Account Officers, and three Group Leaders.

Data were collected between 2024 and 2025 using multiple qualitative techniques to enhance data credibility through methodological triangulation. Semi structured interviews were conducted using interview guidelines developed based on the study objectives and relevant literature. The interviews focused on the implementation of the 5C+1S framework, financing risk identification and monitoring procedures, the application of the Customer Classification Model (CCM), and the operation of the joint liability mechanism. Non-participant observations were conducted during Weekly Group Meetings (PKM).

The observations focused on interactions among group members, monitoring activities performed by Account Officers, and the implementation of joint liability mechanisms in addressing financing risks. Document analysis was conducted using institutional documents, including Standard Operating Procedures (SOPs), unit performance reports for 2024 until 2025, and internal guidelines related to financing management. Regulatory documents, including Financial Services Authority Regulation (POJK) No. 18/POJK.03/2016 and DSN-MUI Fatwa No. 131/DSN-MUI/X/2019, were also reviewed to provide contextual and regulatory support.

Data analysis followed the interactive model developed by Miles et al. (2014), consisting of three concurrent stages: data condensation, data display, and conclusion drawing and verification. Interview transcripts, observation notes, and documentary evidence were organized, coded, and categorized according to themes related to risk identification, risk measurement, risk monitoring, and risk control. The condensed data were systematically presented using matrices, tables, and thematic summaries to facilitate the identification of relationships and patterns among research findings. Conclusions were developed through continuous interpretation and verification of emerging patterns. The findings were compared with relevant theories, including Modern Portfolio Theory and the concept of Kafalah in Islamic finance, to ensure analytical consistency and conceptual validity.

To ensure data trustworthiness, this study employed source triangulation and methodological triangulation (Denzin, 1978). Source triangulation was conducted by comparing information obtained from the Unit Head, Account Officers, and Group Leaders. Methodological triangulation was performed by cross checking findings from interviews, observations, and documentary analysis.

Furthermore, this study adhered to ethical research principles throughout the research process. Prior to data collection, all informants provided informed consent regarding their participation. Informant confidentiality was maintained through anonymization using coding systems, while sensitive institutional information was presented only in aggregated or percentage based formats to protect organizational confidentiality.

Results and Discussion

Results

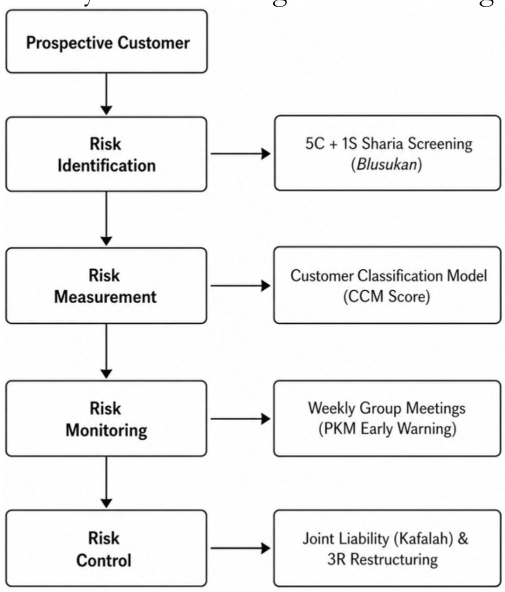
Operationalization of the Sharia Risk Management Framework

Empirical evidence from field observations and semi structured interviews indicates that the PNM Mekaar Syariah Banyu Urip 2 Unit has fully integrated the macro prudential risk management standards mandated by the Financial Services Authority Regulation (POJK) No. 18/POJK.03/2016 into its daily microfinance routines. This synchronization is executed across four progressive operational stages. First, risk Identification (5C+1S Framework): Field credit assessments extend beyond conventional financial metrics to evaluate the socio religious commitment of potential clients. This preliminary screening is performed during the predisbursement phase through intensive on site field verifications (blusukan). An Account Officer (AO), identified as Informant F, highlighted the operational significance of this initial filter:

> "We conduct on site verification (blusukan) to ensure that prospective customers are trustworthy and possess moral integrity, because in unsecured financing, character is the primary collateral."

Second, risk Measurement (Customer Classification Model CCM): The unit utilizes the standardized CCM instrument to process field survey data. The resulting CCM score quantifies the risk profile of each customer and serves as the primary determinant for setting financing limits and repayment tenors, ensuring that credit exposure remains aligned with the actual cash flow capacity of the borrower. Third, routine Monitoring (Early Warning System): The mandatory Weekly Group Meetings serve as a field level early warning system. Rather than acting purely as collection points for installments, AOs utilize these sessions to monitor non-financial indicators, including attendance punctuality, intra group interpersonal dynamics, and observable shifts in local market conditions. Delayed arrivals or a reported drop in daily revenues are flagged as immediate indicators for structural intervention. Four, risk Control (Joint Liability and 3R Restructuring): When a payment delay occurs, the unit activates the joint liability mechanism. If the financial distress persists, the unit deploys the 3R scheme: Rescheduling (altering cash flow timelines), Reconditioning (modifying contract profit margins or charges), and Restructuring (reorganizing the core financing structure). Operational data from 2024 reveals that most early stage delinquencies were resolved through persuasive counseling and collective social pressure within the group before degrading into non-performing financing (NPF).

Figure 1. PNM Mekaar Syariah Financing and Risk Management Process Flow



Determinants and Typologies of Non-Performing Financing

A systematic extraction of the unit level 2025 case logs outlines the core drivers of credit defaults. These risk factors, along with their corresponding institutional mitigation protocols, are categorized into internal and external typologies.

Tabel 1. Risk Factor Matrix and Mitigation Strategies

Factor Category	Specific Indicators	Financing Risk Mitigation Strategies
Internal Factors	**Human Error & Institutional Oversights:** Ineffective oversight and monitoring of the financing pipeline; operational deviations from the Mekaar financing guidelines; miscalculations in repayment capacity assessments; unverified field data; incomplete or poorly documented customer files; a lack of supervisory oversight; and failure to apply the principle of prudence.	**Customer Classification Model (CCM):** Dynamic classification of Mekaar customers to determine precise financing caps.
		Periodic internal audits of customer financing files.
		Optimization of mobile banking technology to improve AO time efficiency and field focus.
External Factors	**Borrower Shocks & Market Volatility:** Poor or untrustworthy customer behavior; natural disasters; disease outbreaks; macroeconomic contractions; death of the breadwinner; post financing over indebtedness; diversion of funds for consumer consumption; and theft or local fraud against customers.	Strict enforcement of the ban on using funds for consumer purposes.
		Micro Insurance Integration: Mandatory registration of business premises damage insurance (*Kartu Tempat Usaha* / KTU) and home insurance (*Rumahku*) via BRINS UMI for all active Mekaar clients.
		Joint Liability Enforcement: Clear initial outreach regarding the binding nature of the joint guarantee.
		3R Restructuring: Proactive adjustments of payment obligations during documented financial distress.

Structural Resilience of Kafalah Based Joint Liability and the Volatility of Business Homogeneity

Despite external market volatility, the historical credit portfolio performance of the Banyu Urip 2 Unit remained resilient, maintaining an NPF ratio well below the 1% safety threshold for consecutive fiscal years.

Table 2. Loan Quality Performance (NPF Ratio)

Period	NPF Category for the Banyu Urip 2 Unit	PNM Corporate Target
2024	< 1% (Very Healthy)	Below the maximum regulatory limit
2025	< 1% (Very Healthy)	Below the maximum regulatory limit

Source: Internal Data Processed by the Banyu Urip 2 Unit (2025)

This performance is sustained primarily by the high social capital embedded within the tanggung renteng (joint liability) framework. This collective enforcement was clearly articulated by the Chairperson of Group M:

> "There is a sense of collective shame if a member falls behind on payments. We remind and help one another to maintain the group's good reputation."

However, field observations uncovered a significant structural vulnerability within this system: financing groups characterized by high business homogeneity (e.g., groups where all members operate identical food stalls within the same local market) showed a higher vulnerability to collective default during market contractions.

Technical Restructuring Matrix and Debt Resolution Strategies

For customers whose accounts deteriorate into non-performing status, the unit applies a structured recovery process based on delinquency duration, tracking accounts across distinct aging brackets (Buckets 1-8) in compliance with the internal directive SK-019/PNM-DIRI/II/24.

Table 3. Collectibility Matrix and Restructuring Measures

Bucket Category	Days Past Due	Performance State Before Rescheduling	Performance State After Rescheduling	Full Installments Paid 3x Consecutively	Full Installments Paid 4x Consecutively
1	1–7 Days	Current (New Policy Guideline)	On Time Recovery	Smooth	Smooth
2	8–14 Days	Current (New Policy Guideline)	On Time Recovery	Smooth	Smooth
3	15–21 Days	Current (New Policy Guideline)	On Time Recovery	Smooth	Smooth
4	22–30 Days	Current (New Policy Guideline)	On Time Recovery	Smooth	Smooth
5	31–40 Days	Under Special Review (Par RNPL)	Under Special Monitoring	Current	Smooth
6	41–50 Days	Under Special Review (Par RNPL)	Under Special Monitoring	Current	Smooth
7	51–60 Days	Less Smooth (Non-Performing Loan)	Substandard Recovery	Under Special Monitoring	Performing
8	> 60 Days	Doubtful / Stalled (Par CKPN)	Less Smooth Recovery	Under Special Attention	Smooth

Post restructuring evaluations indicated high recovery rates. Clients granted margin concessions and extended timelines via the reconditioning pathway showed higher repayment compliance and cooperation compared to those subjected to standard collections. Field notes indicate that borrowers responded more positively because they viewed the adjustments as financial support rather than punitive enforcement.

Discussion

Operationalization of the Sharia Risk Management Framework

The empirical integration of POJK No. 18/POJK.03/2016 within the Banyu Urip 2 Unit demonstrates how formal institutional risk frameworks can be adapted into grass roots microfinance workflows. By overlaying the 5C credit framework with the Sharia compliance dimension, the institution addresses the severe information asymmetry inherent to collateral free ultra micro credit markets.

This operational approach validates the credit framework proposed by Antonio (2001), which argues that in Islamic financing, character and Sharia compliance act as the primary structural barriers against moral hazard. By converting the qualitative moral integrity of borrowers into a functional credit filter, the Banyu Urip 2 Unit mitigates adverse selection from the outset. Furthermore, shifting the monitoring focus from backward looking financial audits to real time behavioral observations during the PKM allows field officers to identify liquidity shocks before formal defaults occur.

Determinants and Typologies of Non-Performing Financing

The empirical findings highlighted in Table 1 reveal a clear imbalance between internal operational errors and external environmental shocks as drivers of non-performing financing. The high vulnerability of the Banyu Urip 2 borrower pool stems directly from their economic profile as daily or seasonal micro merchants. Because their enterprises operate with minimal capital buffers, their cash flows are highly sensitive to sudden shifts in localized public purchasing power. This vulnerability aligns with Kasmir (2014) findings, which note that ultra micro enterprises face higher default rates due to their low tolerance for external economic shocks.

Internally, the operational strain caused by an elevated customer to AO ratio creates a critical vulnerability. When field officers manage a customer volume that exceeds ideal operational thresholds, the depth of their field verifications and the consistency of their monitoring naturally decline. This finding supports the work of Ayandele & Chukwuemeka (2023), who demonstrated that excessive staff workloads in microfinance institutions lead to lower monitoring quality, leaving the institution vulnerable to undetected external shocks.

Structural Resilience of Kafalah Based Joint Liability and the Volatility of Business Homogeneity

The sustained NPF performance shown in Table 2 confirms that social collateral can serve as an effective substitute for physical assets in ultra micro lending markets. In Islamic jurisprudence, this mechanism represents a practical application of the Kafalah bil-Mal (financial guarantee) contract, supported by the DSN-MUI Fatwa No. 131/DSN-MUI/X/2019. The contract contractually binds group members; while they do not assume legal ownership of the underlying debt incurred by a defaulting peer, they accept a formal claim obligation (tathlib) to clear the financial arrears. This structural social guarantee converts peer pressure into financial security, using collective shame and mutual aid to lower institutional enforcement costs.

However, the vulnerability observed among homogeneous groups reveals a structural limitation within this mechanism. When group members operate identical businesses within the same market, their individual default probabilities become highly correlated. From the perspective of Modern Portfolio Theory (Markowitz, 1952), packing an investment pool with assets that have a strong positive correlation coefficient increases exposure to systemic, covariate shocks.

When a sector specific downturn or local demand shock hits a homogeneous group, all members experience a simultaneous liquidity crisis. Because every guarantor (kafil) is exposed to the same economic shock, the internal risk sharing mechanism breaks down, leading to a collective group failure. This finding supports by Figuerola-Ferretti (2025) argument that cross sector business diversification within credit groups is essential to maintaining the structural resilience of joint liability networks.

Technical Restructuring Matrix and Debt Resolution Strategies

The structured rehabilitation pipeline shown in Table 3 demonstrates how standard banking delinquency classifications can be integrated with Islamic financial ethics. By utilizing a gradual escalation process across eight precise time based buckets, the Banyu Urip 2 Unit avoids premature aggressive debt collections, allowing field teams to deploy custom 3R interventions based on the severity of the distress of the borrower.

The high success rate of the reconditioning path underscores the role of behavioral alignment in Sharia compliant credit recovery. Providing relief through adjusted profit margins or relaxed payment structures reflects the Islamic economic principle of ta'awun (mutual assistance). By prioritizing client business survival over punitive penalties, the unit maintains the goodwill and cooperation of the borrower. This cooperative approach reduces collection friction and preserves long term portfolio quality without damaging the social fabric of the target community.

Conclusion

Financing risk management at the PNM Mekaar Syariah Banyu Urip 2 Unit is implemented through a four stage process aligned with POJK No. 18/POJK.03/2016. This includes risk identification via the 5C+1S framework, risk measurement using the Customer Classification Model (CCM), routine field monitoring through Weekly Group Meetings (PKM), and risk control via Kafalah based joint liability and 3R restructuring. The primary causes of non-performing financing are driven by external factors, particularly business seasonality and shifts in local purchasing power, which directly affect micro merchants. The primary internal risk factor is an elevated customer to AO ratio, which limits the capacity of field officers to maintain consistent early detection. The joint liability system has proven highly effective in maintaining portfolio quality, keeping the unit's NPF ratio below 1% for the 2024 until 2025 period. However, its risk sharing capacity declines within groups characterized by high business homogeneity, where correlated economic risks can lead to simultaneous group defaults during sector specific market downturns.

Recommendations

For the PNM Mekaar Syariah Banyu Urip 2 Unit: Rebalance the client to AO ratio to ensure sufficient time for intensive field monitoring. Additionally, establish formal guidelines requiring cross sector business diversification during group formation to insulate the joint liability pool from sector specific market shocks.

For PNM Corporate Management: Expand training curricula for field officers to include advanced character evaluation techniques and standardized socio Islamic risk assessments.

For Future Researchers: Conduct comparative quantitative studies across multiple regional units to statistically isolate the impacts of staff workload and group business composition on micro credit defaults, allowing for broader generalization of these findings.

This study was anchored within a single operational unit in an urban area. Consequently, the specific risk dynamics and customer default behaviors identified may not fully reflect conditions in rural or agriculturally driven regions, which operate under different demographic structures and economic cycles.

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