

# Uncovering the Key Drivers of Microfinance Repayment Challenges: A Regional Study of Microfinance Operations in India

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## Abstract

Repayment default remains a key challenge in the field of microfinance, threatening the sustainability of lending models designed to support low-income borrowers. This study examines the intricacies and potential impact of the problem by collaborating with a mid-sized Indian microfinance company to investigate the underlying root causes of borrower default in India. Through structured and detailed interviews with three Regional Heads (RHs) and fifteen Relationship Managers (RMs) responsible for borrowers in Bangalore, Maharashtra, and Tamil Nadu (India), the study captures field-level insights into the financial and behavioral factors that contribute to missed payments. Furthermore, to evaluate the potential impact of artificial intelligence in replicating human expertise, the study compares these field insights with simulated responses generated by four popular large language models (LLMs): ChatGPT-4o, Claude 3.7 Sonnet, Perplexity, and Llama 4. The comparison reveals that while LLMs successfully identify many of the key drivers of default reported by the RH/RMs, they fall short in capturing certain context-specific nuances. The findings contribute to the broader debate on whether AI will complement or substitute human roles, particularly in sectors requiring localized knowledge, and interpersonal understanding.

## Keywords

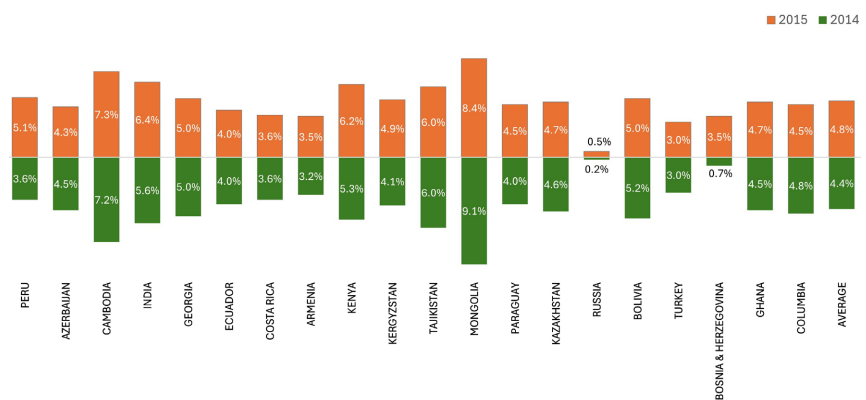
Microfinance, Loan Repayment, Loan Defaults, Lenders, Borrowers, Credit, LLM

## 1. Introduction

Microfinance, the provision of small loans and financial services to low-income

individuals, has become a critical tool in combating poverty and promoting entrepreneurship. This service is typically offered to people who would not otherwise have access to mainstream financial services: it allows individuals and businesses to take on reasonable loans safely using ethical lending practices, and it is prominent in several developing nations (World Bank Group, 2012). In approximately one decade, microfinance has increased tenfold in India, with the portfolio valued at Rupees 5 Lakh crores in 2023 (*What Is the JLG Model for Micro Finance in India?*, n.d.). However, microfinance faces challenges in ensuring timely loan repayments from low-income borrowers, hindering it as a tool for poverty alleviation.

Many people living below the poverty line do not make sufficient income to afford to take out loans from larger financial institutions. Approximately 2.5 billion people across the world are “unbanked”, meaning that they don’t have access to traditional banking systems; additionally, 75% of the world’s poor do not have a bank account. In the absence of access to formal banking services, low-income individuals often rely on informal support systems such as friends or family. However, when those avenues are exhausted, many turn to predatory lenders or loan sharks, who charge exorbitant interest rates. These exploitative practices trap borrowers in cycles of debt, leaving them worse off than before. In contrast, microfinance institutions offer a safer, structured alternative. They provide affordable credit along with essential financial services like savings accounts, insurance, and business training. Unlike loan sharks, microfinance institutions typically charge interest rates ranging from 20% to 30%, which, while higher than traditional banks, are significantly lower and far less exploitative than informal lenders (*Finance and Development*, 2007). More importantly, microfinance loans come with transparency, legal protections, and support systems that empower borrowers rather than exploit them. For entrepreneurs in developing regions, microfinance can mean the difference between being trapped in debt and building a sustainable income stream. Microfinance loans in key global microfinance markets could be a key driver behind real GDP growth in the nations (Figure 1).



Recreation from Sources: IMF World Economic Outlook Database, responsAbility

**Figure 1.** Real GDP growth in key microfinance markets (*Why the Microfinance Model Won’t Solve the Global Poverty Crisis*, n.d.).

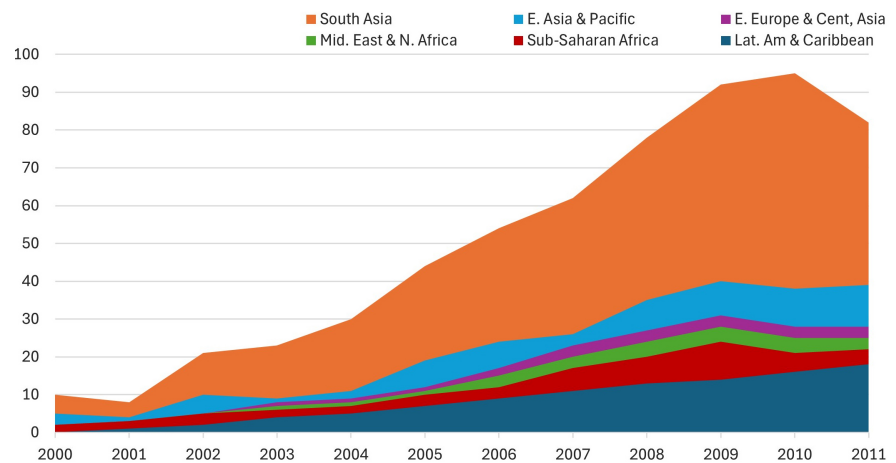
The loans offered have specific repayment plans associated with them, and interest is also charged similar to other conventional lenders. Some lenders require collateral on loans, which can be used as a type of insurance in case that the borrower defaults. However, many borrowers cannot afford to set aside collateral, so in that situation a group of borrowers take out the loan together and assume the joint responsibility of repaying the loan. This concept is known as Joint Liability Group (JLG) in the Indian microfinance landscape. In JLGs, individuals who are having trouble paying back their loans can rely on other group members, if necessary, and they can build a good credit history together. JLG is a clever microfinance offering that substitutes the need for traditional collateral by utilizing social collateral, a system where borrowers are jointly responsible for each other's debts. If one member defaults, the other members of the group are expected to step in and repay the debt, creating a strong incentive for borrowers to ensure that everyone in the group repays their loans. This peer pressure, combined with the desire to maintain social ties and avoid damage to one's reputation, effectively replaces the need for individual collateral, such as property or assets.

Additionally, JLG offers risk management to the lender in much the same way traditional collateral does. Since the risk of default is spread across the group, the lender's overall risk also decreases. Group members often monitor each other's financial behavior, providing informal screening and reducing the likelihood of potential defaults. Over time, as borrowers demonstrate a consistent repayment history, the lender builds trust in the group, which can lead to access to larger loans. This communal responsibility not only lowers the financial risk for lenders but also promotes social cohesion and economic empowerment within the borrower group, making group lending a highly effective and sustainable model in microfinance. In many cases, microfinance institutions also offer money management lessons to the borrowers, helping them understand the details of the loan they are planning to undertake, and once educated, borrowers are able to apply for loans that are most suitable for them.

The concept of microfinance first gained international recognition in the 1970s, largely due to the efforts of Muhammad Yunus in Bangladesh, who created the Grameen Bank. Not only did the bank help provide loans to borrowers in need, but it also encouraged its borrowers to subscribe to a platform that helped those in poverty find ways to improve their lives. The goal of the platform was to make financial and credit services more accessible to borrowers by focusing on social capital, providing easy access to credit, empowering borrowers through financial education, and incrementally augmenting loan sizes. Other microfinance institutions around the world work closely with organizations such as the World Bank, while other smaller organizations operate in a multitude of nations across the world (Kagan, 2024).

In India, microfinance institutions are prevalent, and they have become powerful tools in the fight against poverty in the nation. Borrowers typically come from lower-income backgrounds, and the repayment period for the loans that

they take out is typically short, typically ranging around 10 - 11 months but occasionally being as short as 6 months for personal or emergency loans (*Microfinance Repayment Schedules in West Bengal, India/IPA*, n.d.). In these circumstances, collateral is not required by lenders, and the biggest goal is to generate income that will, in turn, allow borrowers to pay back the loans they take out. Other borrowing structures, such as a Self Help Group or rural cooperatives, also benefit from microfinance institutions (Testbook, 2023). Due to their popularity given the aforementioned benefits, the microfinance market size has been expanding globally over the years, especially in the developing economies (Figure 2).



Recreation from ConversableEconomist: "The Status of Microfinance" (January 29, 2014)

**Figure 2.** Millions of outstanding microloans, 2000-11. (Conversable Economist, 2014)

However, the repayment of these microfinance loans by their borrower has increasingly become a growing problem. Borrowers have been struggling to pay back their debt because they don't make enough income to pay back the debt, and they are unable to increase their income because they do not have the monetary means to support the income boost. This paper aims to examine how microfinance impacts underserved communities in India, and the key drivers behind microfinance loan repayment defaults, that can be attributed to certain tendencies amongst borrowers and lenders, including a lack of financial literacy, a lack of regulation, and ensnarement in a poverty trap. Additionally, it also explores how artificial intelligence, specifically large language models (LLMs), could offer meaningful insights on the same questions that human RH/RMs at microfinance institutions answered. By comparing AI-generated responses with those of real-world microfinance managers, this research also aimed to evaluate the potential of AI as a tool for analyzing and understanding complex financial systems like microfinance.

## 2. Literature Review

There are many opportunities in microfinance, ranging from broad financial ser-

vices to creating custom solutions for each borrower. The paper “Microfinance: an overview” by Muhammad Meki and Simon Quinn, published in the *Oxford Review of Economic Policy*, details the services, including loans, savings, insurance, and digital credit that can be provided through microfinance institutions, showing that lending is not the only option available at these organizations. Custom solutions can be created based on the microfinance framework and tailored to meet different needs.

However, there are also some issues and challenges associated with microfinance institutions. Foremost, over-indebtedness is caused by borrowers taking on too much debt, and keeping loans affordable is tough while simultaneously covering costs. Moreover, regulation gaps are caused by governments struggling to keep control over who receives loans, leading to issues like predatory lending and loan misuse. Both regulation gaps and over-indebtedness can lead to some borrowers simply not paying back their loan at all because they do not have the means to do it. Possible solutions include using flexible repayment options, or performance-based repayment systems in which borrowers repay their loans based on their economic performance at a certain time (paying back more when they earn more money, and vice versa) (Meki & Quinn, 2024).

Additionally, technology such as AI can make microfinance more accessible for many borrowers. The paper “ChatGPT vs Social Surveys: Probing Objective and Subjective Silicon Population” by Muzhi Zhou, Lu Yu, Xiaomin Geng, and Lan Luo exemplifies the potential for AI models for tasks such as analyzing credit risk and optimizing loan distribution. The “mechanical transformer” analogy utilized in the paper, which is applicable to AI systems, is similar to the system of microfinance institutions; therefore, similar reasoning can be used to understand loan repayment patterns and how money “flows” in microfinance systems. Technology is a key tool, or can be a key tool, in managing repayment because it makes it easier to collect the payments while minimizing costs (Zhou et al., 2024).

Finally, a large part of loan defaults and missing payments can be tied back to psychology and borrowers’ mentality. The book *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty* by Abhijit V. Banerjee and Esther Duflo illustrates the dilemma that arises when lower-income constituents are subsidized and given money or loans to improve their economic situation. They mention the example of a study in which poor, hungry people were given money to invest in food. However, with the extra money, they chose to invest in *more expensive* food rather than more food overall, which would have benefited them more by providing extra calories and giving them the nutrition that they truly needed. This connects to many instances of poor people taking out microfinance loans but not using them for the right purposes. These “hunger traps”, and similar “health traps”, cause people to get further trapped in the vicious cycle of poverty, thus leading to a reduced ability to repay loans and regain control over one’s financial situation (Banerjee & Duflo, 2012).

### 3. Study Context and Analysis

#### 3.1. Methodology

For this paper, we conducted interviews with three regional heads of Indian microfinance institutions from Maharashtra, Tamil Nadu, and Bangalore, as well as 15 relationship managers at the institutions. The interviews helped provide insight into the repayment challenges faced by low-income borrowers in different parts of India. Each interview lasted roughly half an hour, and the interviewees were asked questions designed to explore the employees' experiences with borrowers' behaviors, their repayment patterns, and strategies employed by their respective companies to mitigate loan repayment issues. The RMs were selected to provide a ground level perspective on the implementation of microfinance in India. After interviewing the relationship heads and managers, we asked the same questions to four different AI LLMs: ChatGPT 4-o, Claude, Llama 4, and Perplexity. We used the AI responses to compare how AI interpretations of the repayment issues aligned with the experiences shared by the human employees. Comparing the two added a depth of analysis by highlighting different facets of the repayment challenges in microfinance in different areas of India.

#### 3.2. Field Study Analysis

To learn more about the issue of microfinance loan defaults and the primary drivers behind it, we interviewed Regional Heads (RHs) and Relationship Managers (RMs) at an Indian microfinance loan entity. The company plays a role in extending microfinance solutions to underserved communities and helps deliver various financial services.

Shantu Baloji, an RM at the company, revealed that a major force behind struggles with loan repayment is unreliable income source. In India, a lot of the microfinance loans are taken out by people working in the agriculture industry whose primary source of income is heavily seasonal, dependent on the annual harvesting cycle. For instance, many agricultural borrowers can only produce in a certain season of the year due to extrinsic factors that are completely out of their control, such as the monsoon cycle. This extreme reliance of their income on external factors makes it very difficult for them to pay back their loans at a reliable cadence. He pointed out that borrowers typically have a harder time paying back loans in March and early May due to seasonal changes, and during rainy times in coastal areas because the rain causes people to stop farming (Baloji, 2025). Bheerappa V. Awaji, another RM at the company, corroborates this, stating that seasonal borrowers depend heavily upon other external factors to determine their ability to provide for themselves and support themselves by taking out loans (Awaji, 2025).

Providing savings accounts to borrowers through microfinance institutions, particularly in agriculture-dependent communities, is an effective way to address the seasonality of income generation. In agricultural economies, income is often concentrated during harvest periods, which can create cash flow issues for borrowers when loan repayments are due during non-harvest seasons. By offering

savings accounts, microfinance institutions enable borrowers to deposit their surplus income during peak income-generating seasons, creating a financial buffer for lean months. This approach allows borrowers to accumulate savings over time and ensure that they have the necessary resources to successfully meet the loan repayment schedule, even during their non-income generating months. Additionally, it promotes financial discipline and encourages saving for the future, providing a safety net against unforeseen challenges. Overall, this strategy not only helps smooth out the financial strain caused by seasonal fluctuations, but also builds long-term financial stability for these borrowers.

Baloji went on to explain that financial literacy, or a lack thereof, in India plays a major role in loan repayment. Financial literacy is the understanding and knowledge of how to manage personal finances, enabling them to make informed decisions and manage financial challenges. Financial literacy is not high among the broader borrowing population in India, so as a result, borrowers do not fully know what the loan repayment entails when they initially take it on. Due to a lack of financial knowledge, they often do not fully understand the underlying terms of the loan, such as the interest rates, repayment schedules, and long-term effects of taking out the loans. Only about 27% of the Indian adult population is considered financially literate, and only 4.2% have advanced financial literacy levels (Kelkar, 2024). This lack of financial knowledge further manifests in many additional adverse effects, such as poor financial management, inadequate savings for emergencies and retirement, and reduced economic growth.

A lack of financial literacy, coupled with lender negligence, is a key factor in why borrowers default on the loans that they take out. Baloji explained that the Reserve Bank of India (RBI), requires that modest income borrowers must have an income greater than three lakh Rupees to be deemed eligible for a loan and, if they are eligible, they still are limited to a maximum of three loans per year. Despite these regulations, many borrowers are still onboarded and given many loans even though they do not meet the criteria to receive it. A lack of background checks and proper loan eligibility screening causes microfinance companies to enable borrowers to take on more debt than they can handle. Moreover, the borrowers do so unknowingly because of their lack of financial literacy and comprehensive knowledge about what they are getting into when they take on a loan. Consequently, the borrower suffers because defaulting on payments and missing repayment dates adversely impacts their credit history and prevents them from taking on more loans in the future, further hindering their economic growth.

Furthermore, many borrowers default on payments because of other external factors, such as political figures and the government itself. Baloji describes how social media and political figures often promote the idea that not paying back loans is doable because there are no consequences for doing so. For example, during the Andhra Pradesh microfinance crisis of 2010, political pressure and social media influence led to borrowers defaulting en masse, causing a major drop in repayment rates from 95% to below 20% in some areas, reduced financial access

for the poor, and billions of dollars in losses for the loan providers. In this scenario, the borrower was also impacted because their creditworthiness and eligibility for loans in the future drops dramatically, causing them to fall into a debt trap, and simultaneously the lender is also harmed because they lose their loan principal and interest due to the borrower default. In such a scenario, the borrower can neither afford to pay back the loan, nor give any other form of repayment because they were not required to present collateral for loans. The system does not benefit borrowers or lenders, and it is one of the root causes behind a large part of loan defaults.

Finally, group influence can also drive loan repayment defaults. Awaji reveals that certain “ringleaders”, dominant or persuasive figures in a community or microfinance group, can convince a group to default together, assuring them that there will be no consequences for doing so. This group solidarity makes it safer for individuals to refuse to repay, since the consequences are shared and diluted. Additionally, ringleaders often frame repayment as unfair or exploitative, making default seem like an act of social justice, or protest. Their influence convinces people to default on their loans, even if they have the ability to pay it back.

However, there are solutions to help bridge this growing problem in India. Baloji suggests that microfinance institutions offer financial literacy workshops to teach borrowers about what they are investing in, and advise them on what they should be investing in. Through these workshops, borrowers are taught how to augment their income through smarter financial decisions, which will simultaneously also help lenders because borrowers bolstering their income sources will allow them to pay back loans more efficiently. Shivakumar M, an RM in Bangalore, states that Center Group Training is done by field officers of RMs like himself, helping borrowers understand the terms of the loan, such as repayment dates and applicable interest. A Group Recognition Test is also required to cross-check how much the borrowers know about the loans they are receiving, and to make sure that information gets accurately relayed from the lenders to the borrowers. By improving financial literacy among their borrowers, microfinance companies help ensure the repayment of the loans that they put out. Income generation activity using the money from the loans encourages the borrowers to pay back their loans because of the benefits they receive from doing so. Helping borrowers understand the requirements of their loans and building a positive relationship between lenders and borrowers helps incentivize borrowers to pay back on time (Shivakumar, 2025).

Quality portfolio sourcing, ensuring that all loans are properly utilized for the right reasons, can help improve repayment as well. Similar to the problem cited in the book *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty* (referenced above), many borrowers do not spend the money that they get from the loans on ways to improve their economic situation. However, company oversight over borrower spending habits can help ensure that borrowers are truly benefited from the loans. With stronger oversight, targeted loan distribution,

and an emphasis on borrower accountability, microfinance institutions can move closer to fulfilling their original mission: empowering individuals to break the cycle of poverty through sustainable financial support.

### 3.3. LLM Analysis

In addition to conducting interviews with RHs and RMs, this research also explored the use of multiple artificial intelligence (AI) large language models (LLMs) including *Perplexity AI*, *Open AI ChatGPT 4-o*, *Anthropic Claude 3.7 Sonnet*, and *Meta Llama 4*, to simulate expert answers to the same set of questions that were asked of the RHs and RMs. The goal was to compare AI-generated insights to those of the human RH/RMs, and assess the depth of understanding given by both.

The AI LLMs recognize that borrowers working in manual labor jobs, such as agriculture workers, coastal fishers, and weavers, face the greatest challenges in loan repayment due to seasonal work and climate unpredictability. They also recognize that financial instability is often worsened by medical emergencies and pandemic-induced disruptions. In cases involving laborers or migrant workers, the irregular nature of their income makes loan repayment particularly volatile. Additional burdens such as rising fuel and housing costs, a lack of family support system, and over-indebtedness were also flagged as major repayment barriers. Women in Self-Help Groups (SHGs) were identified as extremely vulnerable because they face societal constraints, such as the need to put money aside for dowries, and they also have limited financial literacy. Small business owners and borrowers juggling multiple loans were also recognized as high-risk groups due to unpredictable income and financial overextension.

The LLMs further noted that the danger zone for loan repayment is 3-6 months after the loan was disbursed. Like the human RMs stated, repayment rates tend to dip during off-seasons, particularly for agricultural loans, or loans tied to seasonal goods like festival merchandise. Moreover, social events, like weddings or festivals, often cause borrowers to redirect loan funds toward household consumption rather than the intended investment purpose, creating a gap between income and loan obligations. Financial shocks, especially unplanned medical expenses, can derail even the most committed borrowers. Over-indebtedness in borrowers, caused by taking out several loans without having the means to pay them back, makes it hard to stay on top of payments. Urban borrowers usually have trouble repaying, especially during supply chain disruptions, such as factory shutdowns or climate events like heatwaves and monsoons — with Karnataka cited as an example of how extreme weather can halt repayment activity entirely.

The AI models further pointed out that most borrowers understand the practical aspect of loans, such as the loan amount they will receive, the payment schedule, and due dates. However, their knowledge does not typically extend to more complex concepts like interest calculation, insurance premiums, and processing fees. Many borrowers, especially in rural areas, also do not understand the idea of

credit bureaus and credit history, which can be a leading cause behind missing payments. As the borrowers do not understand that defaulting on loans has negative consequences such as developing a poor credit score, they continue to default. More industrialized areas are associated with higher financial literacy and a better understanding of financial concepts. Misconceptions about joint liability are especially common; many participants, particularly women, incorrectly assume that their fellow group members will cover their repayments in case of financial distress, without fully understanding their reciprocal obligation to do the same. Additionally, language and literacy barriers in different parts of India hinder borrowers' understanding of the loans they are receiving. A general lack of financial literacy means borrowers frequently misunderstand the difference between flat interest rates and declining balance structures, and few are aware of loan features like grace periods.

Beyond financial illiteracy, the AI models identified psychological and social factors that also affect borrowers' repayment behavior. Borrowers often perceive enforcement systems as weak, which reduces their incentive to repay, especially if they observe others defaulting without facing consequences. In joint liability groups, one borrower's failure to repay can trigger a ripple effect, leading others to follow suit. Community influencers sometimes encourage non-repayment, and feelings of injustice—where borrowers believe the loan terms are unfair or that they have not received the promised support—can fuel deliberate withholding of payments as a form of protest. Political factors also play a role: when key political figures suggest potential loan waivers, borrowers frequently hesitate to repay, waiting to see if they might benefit from policy changes. The competition between different lenders can create selective repayment patterns, with borrowers prioritizing only the loans they perceive as most important or urgent.

The AI LLMs also pointed out strategies for improving repayment rates, many of which aligned with those suggested by the human RMs. Peer accountability through joint liability groups creates a responsibility to pay back loans, and technology, such as SMS alerts sent out 2 - 3 days before payments are due and voice messages for those less literate, is vital for reinforcing payment timelines. Offering restructuring options, like short payment holidays and extended loan terms, can prevent defaults. Moreover, creating a relationship with the borrower through regular visits and a genuine interest in the borrowers' businesses can improve understanding and commitment. Financial literacy workshops coupled with repayment meetings improve repayment behavior, and early payment discounts can motivate timely or even advanced loan repayment. Grace periods during crises can also minimize defaults while preserving borrower trust.

In cases of potential default, both AI models and RMs emphasized early intervention, beginning with phone calls and group meetings. If repayment issues persisted, arranging one-on-one meetings allowed lenders to understand the borrower's personal circumstances and discuss tailored solutions. Tools like simple repayment calendars and encouragement of partial payments were suggested to

ease financial pressure on borrowers. If these measures failed, formal notices would be the final step before escalation.

Finally, the LLMs suggested creating income-aligned repayment schedules to help borrowers because it would allow them to pay back more of their loan when they are more financially successful and stable. Establishing emergency financial buffers from the loan disbursement could give borrowers a safety net during unexpected crises. A tiered interest rate system - where interest decreases as borrowers demonstrate reliability - could offer both motivation and reward for responsible repayment. Furthermore, additional measures like integrated microinsurance, particularly for healthcare, would help ensure that borrowers do not have to divert funds from their loans away from their intended purpose. Enhanced customer support and sustained relationship-building with borrowers helps address issues early-on.

### **3.4. Key Differences between LLMs and Human RMs**

Although the AI LLM responses encompassed a lot of key information regarding microfinance in India, and despite many of their key insights being similar to those of the human RMs, the human RMs still provided a layer of nuanced understanding that the AI LLMs could not provide. For instance, the RMs mentioned how company negligence can fuel over-indebtedness, since they onboard many customers who do not meet the requirements to take on a new loan. Additionally, the RMs describe how social media can promote the idea that not paying back loans will result in no consequences, thus motivating borrowers to default.

While most of the AI LLMs were able to provide insights that were contextualized by the geographical location of the borrower (Bangalore, Maharashtra, and Tamil Nadu), however it was noteworthy that Llama 4 LLM was unable to properly differentiate its insights based on the regional difference, and shared similar responses for each of the regions. Nevertheless, the AI LLMs overall provided thoughtful insights about microfinance that closely mirrored the observations and experiences shared by the human RH/RMs.

## **4. Conclusion and Future Direction**

Microfinance holds immense potential as a vehicle for economic empowerment in India, particularly among underserved and low-income populations. However, the current system is riddled with challenges—from low financial literacy and lax regulation to seasonal income instability and harmful social influences. These issues have led to widespread loan defaults, trapping borrowers in cycles of debt and undermining the original intent of microfinance initiatives. Yet, these flaws are not irreversible. Solutions such as increasing financial literacy through workshops and group training, enforcing stricter borrower eligibility requirements, implementing performance-based repayment models, and improving oversight of loan usage can collectively rebuild trust and effectiveness in the system.

Technology also offers a promising path forward by streamlining loan manage-

ment and making microfinance more accessible. This research not only highlighted the challenges and solutions within the microfinance sector but also demonstrated the valuable role AI can play in generating thoughtful, human-like insights. Comparing AI and human responses revealed that, while AI cannot fully replace firsthand experience enabled by humans, it can serve as a powerful supplement for research and analysis in the field of financial inclusion.

In conclusion, while the microfinance landscape in India currently faces significant obstacles, it still holds the promise of becoming a powerful tool for poverty alleviation. By bridging the gap between intent and execution, microfinance can fulfill its goal of uplifting communities and creating a lasting economic impact on the broader society.

In future research, we might be able to broaden the scope of the research by expanding it to additional countries with a large microfinance footprint across southeast Asia and Africa. As part of that, we can analyze how the repayment default drivers compare across different countries, and examine the best practices followed in those countries to encourage timely loan repayments.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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## Appendix A

Interview Guide for Regional Heads (RH) and Relationship Managers (RM)

**1) Repayment Challenges:** Are there specific types of borrowers who struggle more with repayment? What common financial or personal challenges do they face (e.g., job instability, medical expenses, unexpected emergencies)?

**2) Payment Patterns:** Have you noticed specific trends in when borrowers start missing payments? Do issues typically arise early in the loan term, after a financial shock, or due to gradual overindebtedness?

**3) Understanding Loan Terms:** Do borrowers generally understand the terms of their loans? Are there common misunderstandings about interest rates, due dates, or penalties? How does financial literacy impact repayment behavior?

**4) Ability vs. Willingness to Pay:** Have you encountered borrowers who have the ability to pay but choose not to? What factors (e.g., frustration with fees, lack of trust, competing financial priorities) contribute to their decision?

**5) Encouraging Repayment:** What strategies does your company use to encourage timely loan payments? Which approaches (e.g., reminders, incentives, restructuring options) have been most effective for modest-income customers?

**6) Handling Late Payments:** How do you engage with borrowers who start missing payments? What approaches work best to help them get back on track without making them feel overwhelmed?

**7) Improving Repayment Rates:** Based on your experience, what changes—either in loan structuring, customer support, or collection methods—would help more borrowers stay current on payments?

**8) Real-Life Insights:** Can you share a story of a borrower who struggled with repayment? What were the key challenges, and how did your company handle the situation? What lessons can be learned from their experience?

## Appendix B

### Llama 4 LLM Responses

#	Question	Answer
		<b>Group 1 (Bangalore)</b>
		Borrowers in various regions face challenges like crop failures and medical expenses that affect their ability to repay loans. These challenges can be exacerbated by factors like fluctuating market prices and family emergencies. Understanding these challenges is crucial for lenders to provide effective support and solutions.
		<b>Group 2 (Tamil Nadu)</b>
1	Are there specific types of borrowers who struggle more with repayment? What common financial or personal challenges do they face (e.g., job instability, medical expenses, unexpected emergencies)?	In Tamil Nadu, borrowers face challenges like crop failures and drought that impact their ability to repay loans. These challenges can be particularly severe for farmers who rely on monsoon rains for their crops. Lenders must be aware of these regional challenges to provide effective support.
		<b>Group 3 (Maharashtra)</b>
		In Maharashtra, borrowers face challenges like fluctuations in market prices and unexpected expenses that affect their ability to repay loans. These challenges can be particularly severe for small business owners who rely on a stable market. Lenders must be aware of these regional challenges to provide effective support.

Continued

	<p><b><u>Group 1 (Bangalore)</u></b>                  Repayment issues often arise during the first few months of the loan term, especially if borrowers underestimate their repayment capacity. Financial shocks, such as family member illnesses or natural disasters, can also impact borrowers' ability to repay. Gradual overindebtedness can be a challenge, particularly if borrowers take on multiple loans.</p>
<p>2 Have you noticed specific trends in when borrowers start missing payments? Do issues typically arise early in the loan term, after a financial shock, or due to gradual overindebtedness?</p>	<p><b><u>Group 2 (Tamil Nadu)</u></b>                  In Tamil Nadu, repayment issues often arise due to unexpected expenses or financial shocks. Borrowers may struggle to make payments if they underestimate their repayment capacity or face unexpected challenges. Lenders must be aware of these challenges to provide effective support.</p> <p><b><u>Group 3 (Maharashtra)</u></b>                  In Maharashtra, repayment issues often arise due to fluctuations in market prices or unexpected expenses. Borrowers may struggle to make payments if they underestimate their repayment capacity or face unexpected challenges. Lenders must be aware of these challenges to provide effective support.</p>
<p>3 Do borrowers generally understand the terms of their loans? Are there common misunderstandings about interest rates, due dates, or penalties? How does financial literacy impact repayment behavior?</p>	<p><b><u>Group 1 (Bangalore)</u></b>                  Some borrowers may not fully understand the terms of their loans, particularly when it comes to interest rates and repayment schedules. Financial literacy plays a significant role in repayment behavior, and lenders can provide education and counseling to help borrowers make informed decisions. Clear communication and transparency are essential in preventing misunderstandings.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b>                  In Tamil Nadu, some borrowers may not fully understand the terms of their loans, particularly when it comes to interest rates and repayment schedules. Financial literacy is crucial in this region, where many borrowers may not have access to formal education. Lenders can provide education and counseling to help borrowers make informed decisions.</p> <p><b><u>Group 3 (Maharashtra)</u></b>                  In Maharashtra, some borrowers may not fully understand the terms of their loans, particularly when it comes to interest rates and repayment schedules. Financial literacy is essential in this region, where many borrowers may be taking on multiple loans. Lenders can provide education and counseling to help borrowers make informed decisions.</p>
<p>4 Have you encountered borrowers who have the ability to pay but choose not to? What factors (e.g., frustration with fees, lack of trust, competing financial priorities) contribute to their decision?</p>	<p><b><u>Group 1 (Bangalore)</u></b>                  Some borrowers may have the ability to pay but choose not to, often due to frustration with fees or interest rates. Borrowers may also feel that the lender is not responsive to their needs or that they have other financial priorities. Understanding the reasons behind borrowers' decisions is crucial for lenders to provide effective support.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b>                  In Tamil Nadu, some borrowers may have the ability to pay but choose not to, often due to frustration with fees or interest rates. Borrowers may also feel that the lender is not responsive to their needs or that they have other financial priorities. Lenders must be aware of these challenges to provide effective support.</p> <p><b><u>Group 3 (Maharashtra)</u></b>                  In Maharashtra, some borrowers may have the ability to pay but choose not to, often due to frustration with fees or interest rates. Borrowers may also feel that the lender is not responsive to their needs or that they have other financial priorities. Lenders must be aware of these challenges to provide effective support.</p>

## Continued

5	<p>What strategies does your company use to encourage timely payments? Which approaches (e.g., reminders, incentives, restructuring options) have been most effective for modest-income customers?</p>	<p><b><u>Group 1 (Bangalore)</u></b> Lenders can use a combination of strategies to encourage timely payments, including reminders, incentives, and restructuring options. Personalized communication and flexible solutions can be particularly effective for modest-income customers. By providing support and guidance, lenders can help borrowers manage their finances and stay on track.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> In Tamil Nadu, lenders can use a combination of strategies to encourage timely payments, including reminders, incentives, and restructuring options. Personalized communication and flexible solutions can be particularly effective for modest-income customers in this region. Lenders can provide support and guidance to help borrowers manage their finances.</p> <p><b><u>Group 3 (Maharashtra)</u></b> In Maharashtra, lenders can use a combination of strategies to encourage timely payments, including reminders, incentives, and restructuring options. Personalized communication and flexible solutions can be particularly effective for modest-income customers</p>
6	<p>How do you engage with borrowers who start missing payments? What approaches work best to help them get back on track without making them feel overwhelmed?</p>	<p><b><u>Group 1 (Bangalore)</u></b> When borrowers start missing payments, lenders should reach out promptly to understand their situation and concerns. Empathetic listening and collaborative problem-solving can help identify the root cause of the issue. Flexible solutions, such as restructuring or temporary relief, can help borrowers get back on track.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> In Tamil Nadu, when borrowers start missing payments, lenders should reach out promptly to understand their situation and concerns. Empathetic listening and collaborative problem-solving can help identify the root cause of the issue. Flexible solutions, such as restructuring or temporary relief, can help borrowers get back on track.</p> <p><b><u>Group 3 (Maharashtra)</u></b> In Maharashtra, when borrowers start missing payments, lenders should reach out promptly to understand their situation and concerns. Empathetic listening and collaborative problem-solving can help identify the root cause of the issue. Flexible solutions, such as restructuring or temporary relief, can help borrowers get back on track.</p>
7	<p>Based on your experience, what changes—either in loan structuring, customer support, or collection methods—would help more borrowers stay current on payments?</p>	<p><b><u>Group 1 (Bangalore)</u></b> More flexible loan structuring options, enhanced customer support, and personalized communication can help borrowers stay current on payments. Leveraging technology can provide borrowers with easier access to their loan information and support resources. Implementing nuanced credit scoring and risk assessment models can also help lenders provide more tailored loan offerings.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> In Tamil Nadu, more flexible loan structuring options, enhanced customer support, and personalized communication can help borrowers stay current on payments. Leveraging technology can provide borrowers with easier access to their loan information and support resources. Implementing nuanced credit scoring and risk assessment models can also help lenders provide more tailored loan offerings.</p> <p><b><u>Group 3 (Maharashtra)</u></b> In Maharashtra, more flexible loan structuring options, enhanced customer support, and personalized communication can help borrowers stay current on payments. Leveraging technology can provide borrowers with easier access to their loan information and support resources. Implementing nuanced credit scoring and risk assessment models can also help lenders provide more tailored loan offerings.</p>

Continued

<p>8 Can you share a story of a borrower who struggled with repayment? What were the key challenges, and how did your company handle the situation? What lessons can be learned from their experience?</p>	<p><b>Group 1 (Bangalore)</b>                  Rohini, a street vendor who took out a loan, faced financial challenges when a competing vendor opened nearby, causing her sales to decline dramatically. She struggled to make her loan payments, due to the fact that she was also dealing with family expenses and medical bills. Working with Rohini to restructure her loan, as well as checking in with her regularly, helped her get back on track with her payments.</p> <p><b>Group 2 (Tamil Nadu)</b>                  One borrower who comes to mind is Ramesh, a small farmer who took a loan from us to purchase a tractor. However, he faced unexpected challenges when his tractor broke down, and he had to spend a significant amount on repairs. Ramesh struggled to make his loan payments, and our team worked with him to restructure his loan and provide temporary relief. Through regular check-ins and flexible solutions, Ramesh was able to get back on track with his payments and eventually paid off his loan.</p> <p><b>Group 3 (Maharashtra)</b>                  One borrower who comes to mind is Rohan, a small business owner who took a loan from us to expand his operations. However, he faced unexpected challenges when a new competitor entered the market, and his sales declined. Rohan struggled to make his loan payments, and our team worked with him to restructure his loan and provide temporary relief. Through regular check-ins and flexible solutions, Rohan was able to get back on track with his payments and eventually paid off his loan. The key lessons learned from Rohan's experience are the importance of empathy, flexibility, and proactive communication in supporting borrowers through challenging times.</p>
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Perplexity LLM Responses

#	Question	Answer
1	<p>Are there specific types of borrowers who struggle more with repayment? What common financial or personal challenges do they face (e.g., job instability, medical expenses, unexpected emergencies)?</p>	<p><b>Group 1 (Bangalore)</b>                  Struggling Borrowers: Small business owners (e.g., garment workers) face cash flow gaps due to delayed borrower payments. Over-indebted borrowers use multiple voter IDs to secure loans from competing MFIs. Women entrepreneurs often divert loans to medical/family emergencies.</p> <p><b>Group 2 (Tamil Nadu)</b>                  Struggling Borrowers: Cyclone-hit fishermen (Nagapattinam) lose boats/crops. Textile workers face payment delays from Tirupur exporters. SHG members misuse loans for dowries.</p> <p><b>Group 3 (Maharashtra)</b>                  Struggling Borrowers: Drought-hit farmers (Marathwada) face crop failures. SHG members divert loans to weddings. Migrant workers miss payments during monsoon unemployment.</p>
2	<p>Have you noticed specific trends in when borrowers start missing payments? Do issues typically arise early in the loan term, after a financial shock, or due to gradual overindebtedness?</p>	<p><b>Group 1 (Bangalore)</b>                  Default Trends: Early defaults (3 - 6 months) occur in seasonal industries like agriculture. Heatwaves (2024) and demonetization-like shocks cause sudden delinquencies. Gradual defaults stem from loan stacking via informal lenders.</p> <p><b>Group 2 (Tamil Nadu)</b>                  Default Trends: Sudden defaults follow cyclones (e.g., Michaung). Gradual defaults arise from SHG loan stacking. Early defaults plague first-time borrowers in fishing.</p> <p><b>Group 3 (Maharashtra)</b>                  Default Trends: Sudden defaults follow unseasonal rains (Pune 2024). Gradual defaults from SHG loan stacking (Vidarbha). Early defaults in dairy farming (Kolhapur).</p>

## Continued

	<p><b><u>Group 1 (Bangalore)</u></b> Loan Comprehension: Borrowers confuse reducing-balance rates (e.g., 24% = ~13.5% flat rate). Misaligned EMI schedules (monthly vs. bi-weekly income cycles) lead to unintentional defaults. Financial literacy camps with Kannada infographics improve understanding.</p>
3	<p>Do borrowers generally understand the terms of their loans? Are there common misunderstandings about interest rates, due dates, or penalties? How does financial literacy impact repayment behavior?</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> Loan Comprehension: Borrowers mistake flat rates (15% flat = 27% effective). SHG members assume peers will cover their EMIs. Tamil voice notes on WhatsApp improve clarity</p> <p><b><u>Group 3 (Maharashtra)</u></b> Loan Comprehension: Rural borrowers confuse flat rates. SHG members misunderstand group liability. Marathi voice notes simplify terms.</p>
4	<p>Have you encountered borrowers who have the ability to pay but choose not to? What factors (e.g., frustration with fees, lack of trust, competing financial priorities) contribute to their decision?</p> <p><b><u>Group 1 (Bangalore)</u></b> Willful Defaults: Borrowers boycott payments due to high perceived interest rates. Political movements (e.g., Karja Mukti) encourage strategic non-repayment. Community leaders mediate trust gaps caused by coercive recovery practices.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> Willful Defaults: Borrowers withhold payments during elections, anticipating waivers. Fishermen prioritize temple festivals over EMIs. Nattamai leaders resolve disputes preemptively.</p> <p><b><u>Group 3 (Maharashtra)</u></b> Willful Defaults: Borrowers delay payments anticipating farm waivers (Nashik). SHGs prioritize temple donations over EMIs (Latur). Mahila Bachat Gat leaders mediate disputes.</p>
5	<p>What strategies does your company use to encourage timely payments? Which approaches (e.g., reminders, incentives, restructuring options) have been most effective for modest-income customers?</p> <p><b><u>Group 1 (Bangalore)</u></b> Timely Payments: Bi-weekly EMIs for street vendors reduce PAR-30 by 15%. Early-payment discounts (1-2% EMI reduction) incentivize compliance. UPI auto-pay links to income cycles (e.g., post-pension deposits).</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> Timely Payments: Post-harvest lump sums for paddy farmers. Tamil SMS reminders reduce delays. SHG peer pressure ensures compliance.</p> <p><b><u>Group 3 (Maharashtra)</u></b> Timely Payments: Sugarcane harvest-linked EMIs (western Maharashtra). Marathi SMS alerts improve responses. SHG loyalty rewards (lower rates for on-time payers).</p>
6	<p>How do you engage with borrowers who start missing payments? What approaches work best to help them get back on track without making them feel overwhelmed?</p> <p><b><u>Group 1 (Bangalore)</u></b> Delinquency Management: 30-day grace periods during medical crises. AI-driven cash flow predictions preempt defaults. Borrower advocacy panels design penalty structures.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> 45-day EMI holidays during fishing bans. NGO partnerships provide alternative income training (e.g., inland fish farming).</p> <p><b><u>Group 3 (Maharashtra)</u></b> 20-day grace periods during unseasonal rains. Voice-based WhatsApp counseling for semi-literate borrowers.</p>
7	<p>Based on your experience, what changes—either in loan structuring, customer support, or collection methods—would help more borrowers stay current on payments?</p> <p><b><u>Group 1 (Bangalore)</u></b> Income-aligned EMIs, disaster insurance bundling, and RBI-mandated ₹2 lakh debt ceilings.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> Cyclone insurance, real-time SHG databases, and Tamil voice-enabled apps.</p> <p><b><u>Group 3 (Maharashtra)</u></b> Drought insurance, textile cluster loans, and real-time SHG tracking (5+ lakh groups).</p>

**Continued**

8	Can you share a story of a borrower who struggled with repayment? What were the key challenges, and how did your company handle the situation? What lessons can be learned from their experience?	<p><b><u>Group 1 (Bangalore)</u></b> A flower vendor cleared dues after EMI restructuring aligned with temple festival income peaks.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> A fisherman repaid loans after grace periods during monsoon bans and net-making skill training.</p> <p><b><u>Group 3 (Maharashtra)</u></b> An SHG leader repaid loans post-dowry crisis through EMI holidays and FMCG bulk orders</p>
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**Claude 3.7 Sonnet Responses**

#	Question	Answer
1	Are there specific types of borrowers who struggle more with repayment? What common financial or personal challenges do they face (e.g., job instability, medical expenses, unexpected emergencies)?	<p><b><u>Group 1 (Bangalore)</u></b> In Bangalore, gig economy workers like delivery personnel and cab drivers face significant repayment challenges due to algorithm changes, rising fuel costs, and commission structure modifications that create income volatility. Urban migrants from rural Karnataka and neighboring states struggle with high living costs relative to income, while small retailers face intense competition from e-commerce platforms and organized retail chains. The most common repayment challenges include housing instability with frequent rent increases, transportation disruptions affecting work attendance, and the absence of family support networks that traditionally serve as financial safety nets.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> Handloom weavers, coastal fishing communities, and agricultural laborers face the greatest repayment challenges due to industry competition, seasonal work, and climate unpredictability. Medical emergencies, costly social ceremonies, natural disasters, and pandemic disruptions are the most common causes of repayment difficulties. These challenges particularly affect tourism-dependent sectors and traditional crafts central to Tamil Nadu's cultural economy.</p> <p><b><u>Group 3 (Maharashtra)</u></b> In Maharashtra, small-scale cotton farmers struggle with volatile prices and increasing cultivation costs, while migrant construction workers face irregular income and disrupted group meeting attendance. Powerloom workers in textile hubs like Bhiwandi experience industry-wide shutdowns, with drought conditions, medical emergencies, marriage expenses, and farm input price volatility being the most common challenges affecting repayment. These factors create unique vulnerabilities in Maharashtra's agricultural, industrial, and semi-urban economic landscape.</p>
	Have you noticed specific trends in when borrowers start missing payments? Do issues typically arise early in the loan term, after a financial shock, or due to gradual over-indebtedness?	<p><b><u>Group 1 (Bangalore)</u></b> Bangalore borrowers show distinct repayment patterns with IT sector adjacent workers (like canteen staff, security, and housekeeping) experiencing difficulties during industry layoff cycles when service contracts are reduced. The city's notorious traffic congestion directly impacts repayment as extreme commute times reduce productive hours and increase transportation costs, while the 3-4 month mark often reveals unsustainable business models in Bangalore's competitive environment. Seasonal patterns are less agricultural and more tied to the city's technology sector rhythms, with payment difficulties spiking during periods between project contracts and when large companies delay vendor payments.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b></p>

## Continued

	<p>Repayment issues among Tamil Nadu borrowers follow predictable patterns, with agricultural borrowers struggling during pre-harvest months and first-time borrowers typically encountering problems around the 4 - 5 month mark. Festival seasons like Pongal and Diwali create financial pressure as borrowers divert business funds toward celebrations, while health emergencies cause immediate disruption. The proliferation of multiple lending sources has led to growing over-indebtedness as borrowers juggle various loans before reaching a breaking point.</p>
<p>3 Do borrowers generally understand the terms of their loans? Are there common misunderstandings about interest rates, due dates, or penalties? How does financial literacy impact repayment behavior?</p>	<p><b><u>Group 3 (Maharashtra)</u></b>  Agricultural borrowers in Maharashtra show predictable seasonal difficulties during pre-harvest months of August-October, while urban micro entrepreneurs often face problems during supply chain disruptions. The 4-6 month loan period represents a common danger zone across borrower segments, while festival seasons like Ganesh Chaturthi and Diwali create competition between business earnings and household expenses. Specific events like GST implementation created disruption patterns among small businesses struggling with the transition to formalized accounting.</p> <p><b><u>Group 1 (Bangalore)</u></b>  Bangalore's more educated borrower base generally demonstrates better conceptual understanding of financial terms compared to rural areas, though the tech-adjacent financial jargon can create false confidence. Many first-generation urban migrants struggle with formal banking concepts despite the city's financial infrastructure, while language diversity creates comprehension challenges as loan documentation in Kannada isn't accessible to the city's large Tamil, Telugu, and Hindi-speaking populations. Digital literacy varies dramatically across Bangalore's socioeconomic spectrum, with some borrowers comfortable using financial apps while others struggle with basic digital banking despite the city's reputation as India's technology hub.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b>  Most Tamil Nadu borrowers understand basic repayment schedules but struggle with conceptual aspects like the difference between flat and declining interest rates. Processing fees and insurance premiums frequently cause confusion when borrowers receive less than the signed loan amount due to upfront deductions. Financial literacy directly impacts repayment behavior, with educated borrowers keeping better documentation, asking more specific questions, planning for difficult seasons, and separating business from household expenses.</p> <p><b><u>Group 3 (Maharashtra)</u></b>  Most Maharashtra borrowers understand practical loan aspects like payment amounts and schedules but have limited grasp of interest accumulation and are often surprised by processing fee deductions. Joint liability aspects of group loans create tension when members must cover for defaulting peers, while financial literacy varies significantly between Maharashtra's industrialized areas and less developed regions. Language barriers affect comprehension as many rural borrowers prefer specific regional dialects over standard Marathi, while the concept of credit bureaus remains abstract despite the state's relatively developed financial infrastructure.</p>
<p>4 Have you encountered borrowers who have the ability to pay but choose not to? What factors (e.g., frustration with fees, lack of trust, competing</p>	<p><b><u>Group 1 (Bangalore)</u></b>  Bangalore's transient population creates unique repayment challenges as borrowers sometimes return to home states during difficulties without formal closure of their loans. The city's startup culture has influenced microfinance borrowers' attitudes, with some demonstrating a concerning "pivot or fail" mentality regarding loan obligations when business plans don't succeed. The disconnect between Bangalore's glittering tech campuses and struggling urban poor sometimes creates resentment that manifests as resistance to repayment, particularly when borrowers perceive that financial institutions are aligned with the city's privileged sectors.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b></p>

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financial priorities) contribute to their decision?

In Tamil Nadu, political announcements about potential loan waivers significantly influence repayment behavior, with some borrowers intentionally withholding payments during election periods. Group solidarity sometimes works against repayment when influential members decide to stop payments and others follow despite having capacity to pay. Cultural factors around hierarchy and respect play a significant role, with borrowers sometimes withholding payments when they feel disrespected by field officers, especially those younger or from different caste backgrounds.

**Group 3 (Maharashtra)**

Following agricultural loan waiver programs by the Maharashtra government, some microfinance borrowers withhold payments in anticipation of similar relief despite having capacity to pay. Maharashtra’s saturated financial services market leads borrowers to strategically prioritize certain loans when they can’t pay all, typically favoring lenders offering larger follow-on loans or those with stricter enforcement. The state’s cooperative banking crisis created ripple effects of distrust in financial institutions generally, making some borrowers hesitant about repaying any financial institution after losing money in cooperative bank failures.

**Group 1 (Bangalore)**

Our institution leverages Bangalore’s technology infrastructure by offering seamless digital payment options, automated reminders, and user-friendly mobile interfaces that resonate with the city’s tech-savvy population. We provide financial literacy through engaging digital content in multiple languages, addressing the city’s linguistic diversity while maintaining relevance for borrowers with varying education levels. Our tiered incentive system includes partnerships with local businesses to offer discounts on essential services for timely repayers, creating practical value in a city where everyday expenses are substantial.

What strategies does your company use to encourage timely payments? Which approaches (e.g., reminders, incentives, restructuring options) have been most effective for modest-income customers?

5

**Group 2 (Tamil Nadu)**

Our microfinance institution in Tamil Nadu leverages existing self-help group structures while organizing cultural recognition ceremonies where timely repayers receive a ceremonial shawl, carrying significant social value. Temple-based financial literacy sessions connect financial responsibility to cultural values, while our payment schedules are customized to match regional economic patterns like fishing seasons, harvest periods, and pilgrimage cycles. Tamil-language voice message reminders, emergency loan products for regional challenges, and relationship-building with panchayat leaders have dramatically improved repayment culture.

**Group 3 (Maharashtra)**

Our center meeting model is adapted to Maharashtra’s strong self-help group tradition, offering flexible timing to accommodate diverse work schedules of factory workers and traders. Digital payment options through UPI have dramatically improved repayment consistency in semi-urban areas with high smartphone penetration. Our graduated loan program provides strong incentives for timely repayment, particularly resonating with Maharashtra’s entrepreneurial communities, while business development services tied to repayment performance leverage the state’s competitive business environment.

How do you engage with borrowers who start missing payments? What approaches work best to help them get back on track

6

**Group 1 (Bangalore)**

When engaging with Bangalore borrowers who miss payments, we employ a data-driven approach that identifies patterns early and enables targeted interventions before problems escalate. Our multi-lingual support team addresses communication barriers that often affect migrant borrowers, ensuring important financial discussions occur in languages borrowers are most comfortable with. For entrepreneurs facing business model challenges, we connect them with mentor networks from Bangalore’s extensive startup ecosystem, providing valuable guidance on pivoting strategies rather than abandoning business ventures.

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without making them feel overwhelmed?	<p><b><u>Group 2 (Tamil Nadu)</u></b> Our approach to missed payments in Tamil Nadu begins with discreet personal contact rather than formal notices to help borrowers maintain dignity in close-knit communities. We strategically employ cultural concepts of honor and community standing while arranging family meetings that include respected elders whose opinions carry significant weight in Tamil households. For business-related issues, we connect struggling borrowers with successful entrepreneurs from similar backgrounds, providing culturally relevant mentorship while maintaining awareness of local power dynamics, caste sensitivities, and gender norms.</p>
	<p><b><u>Group 3 (Maharashtra)</u></b> We initiate contact after the first missed payment through a field officer with an established relationship, reflecting Maharashtra's business culture that values directness alongside relationship maintenance. Our intervention approach varies by context - moving quickly to formal notices in urban areas while relying more on group influence in rural communities before escalating to written communications. For business-related difficulties, we provide practical troubleshooting rather than just financial accommodation, connecting struggling borrowers with successful entrepreneurs while navigating Maharashtra's complex social structures throughout the process.</p>
	<p><b><u>Group 1 (Bangalore)</u></b> Developing flexible loan products specifically designed for gig economy workers would address the unique income volatility of Bangalore's large platform-based workforce. Housing stability support through partnerships with responsible landlords and rent guarantee programs would remove a major repayment risk factor in a city with frequent rent increases and insecure tenancy. Creating transportation assistance during Bangalore's infamous traffic disruptions and building stronger community support networks would help replace the traditional village safety nets absent in urban environments, while digital skills training would help borrowers access better employment opportunities in the city's technology sector.</p>
7 Based on your experience, what changes—either in loan structuring, customer support, or collection methods—would help more borrowers stay current on payments?	<p><b><u>Group 2 (Tamil Nadu)</u></b> Region-specific loan products designed for Tamil Nadu's coastal areas and agricultural cycles would better address unique local needs than standardized offerings. Integrated disaster resilience components would be transformative in cyclone-prone regions, while cultural event planning assistance would address major repayment disruptions caused by ceremonies and social obligations. Tamil-language digital financial tools, stronger coordination with government schemes, community-based early warning systems, and health-focused microinsurance would significantly improve borrowers' financial resilience and prevent defaults.</p>
8 Can you share a story of a borrower who struggled with repayment? What were the key challenges, and	<p><b><u>Group 3 (Maharashtra)</u></b> Drought-resilient loan products with automatic restructuring options would prevent mass defaults during increasingly frequent water scarcity periods affecting Maharashtra's rain-dependent agricultural regions. Better integration with Maharashtra's extensive cooperative structure could enhance borrower commitment, while specialized urban migrant loan products would better serve the state's highly mobile workforce. Supply chain financing options would address key vulnerabilities for small entrepreneurs in manufacturing clusters who struggle with delayed payments, while enhanced sector-specific business skills training would improve overall enterprise sustainability and cash flow management.</p> <p><b><u>Group 1 (Bangalore)</u></b> Lakshmi, who operated a small tiffin service catering to IT employees in Electronics City, faced sudden repayment difficulties when several tech companies implemented work-from-home policies during a prolonged metro construction project. Our intervention included helping her pivot to a subscription-based home delivery model, connecting her with a food delivery app for broader market access, and restructuring her loan during the transition period. This case demonstrated how even established businesses in Bangalore can face disruption from</p>

**Continued**

how did your company handle the situation?	technology policy changes and infrastructure developments, requiring innovative business model adaptation alongside financial flexibility.
What lessons can be learned from their experience?	<p><b>Group 2 (Tamil Nadu)</b> Selvi, a palm leaf craftswoman near Madurai, faced repayment difficulties when a temple festival controversy disrupted the tourist market for her traditional crafts. Our intervention included temporary payment reduction, connecting her with exhibitions in Chennai, helping her diversify products beyond tourist souvenirs, and engaging with village elders to understand the cultural dynamics. This case demonstrated how business success for Tamil Nadu’s traditional artisans is deeply connected to cultural institutions like temples and festivals, requiring interventions that address both financial challenges and underlying market access issues.</p> <p><b>Group 3 (Maharashtra)</b> Rekha, who operated a small powerloom unit in Bhiwandi, faced repayment challenges when her major buyer delayed payments after demonetization and GST implementation created market disruptions. Our intervention included temporary restructuring, connecting her with alternative buyers, implementing digital bookkeeping, and introducing her to a business association that provided collective bargaining power. This case highlighted how supply chain vulnerabilities represent a major risk factor for Maharashtra’s small-scale manufacturers, demonstrating the importance of business interventions alongside financial restructuring in resolving repayment issues.</p>

**ChatGPT 4-o LLM Responses**

#	Question	Answer
1	Are there specific types of borrowers who struggle more with repayment? What common financial or personal challenges do they face (e.g., job instability, medical expenses, unexpected emergencies)?	<p><b>Group 1 (Bangalore)</b> Young migrant workers with irregular jobs struggle most; medical emergencies and layoffs are key issues.</p> <p><b>Group 2 (Tamil Nadu)</b> Single-income households with children and medical expenses face frequent challenges.</p> <p><b>Group 3 (Maharashtra)</b> Borrowers in drought-prone rural areas face seasonal income gaps, especially in farming. Unexpected family emergencies also cause payment disruptions.</p>
2	Have you noticed specific trends in when borrowers start missing payments? Do issues typically arise early in the loan term, after a financial shock, or due to gradual over-indebtedness?	<p><b>Group 1 (Bangalore)</b> Borrowers tend to miss payments after 2-3 months due to job loss or family emergencies.</p> <p><b>Group 2 (Tamil Nadu)</b> Most borrowers pay on time early on, but problems spike after crop failures or during festival seasons when spending outpaces income.</p> <p><b>Group 3 (Maharashtra)</b> Missed payments often start after a sudden income drop; gradual over-indebtedness is also a trend.</p>
3	Do borrowers generally understand the terms of their loans? Are there common misunderstandings about interest rates, due dates, or penalties? How does financial literacy impact repayment behavior?	<p><b>Group 1 (Bangalore)</b> Many urban borrowers misunderstand how interest is calculated, especially reducing vs. flat rate confusion, which leads to surprises.</p> <p><b>Group 2 (Tamil Nadu)</b> Many borrowers misunderstand interest calculations and due dates; financial literacy is low.</p> <p><b>Group 3 (Maharashtra)</b> Some rural borrowers lack awareness of interest structures, and this often causes mistrust when repayments don’t match expectations.</p>

## Continued

<p>4 Have you encountered borrowers who have the ability to pay but choose not to? What factors (e.g., frustration with fees, lack of trust, competing financial priorities) contribute to their decision?</p>	<p><b><u>Group 1 (Bangalore)</u></b> Some borrowers can pay but delay due to distrust or confusion over interest calculations.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> If borrowers feel the loan officer was not transparent or supportive, trust erodes and they intentionally delay payment even when they can pay.</p> <p><b><u>Group 3 (Maharashtra)</u></b> Yes, especially among gig workers who prioritize other short-term needs over loan payments.</p>
<p>5 What strategies does your company use to encourage timely payments? Which approaches (e.g., reminders, incentives, restructuring options) have been most effective for modest-income customers?</p>	<p><b><u>Group 1 (Bangalore)</u></b> Phone call reminders and relationship-building are most effective. Incentives have limited impact.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> Automated SMS reminders and flexible due dates are helpful.</p> <p><b><u>Group 3 (Maharashtra)</u></b> Loan restructuring during crises, combined with empathy and in-person visits, helps rebuild trust and boost repayment.</p>
<p>6 How do you engage with borrowers who start missing payments? What approaches work best to help them get back on track without making them feel overwhelmed?</p>	<p><b><u>Group 1 (Bangalore)</u></b> We start with a friendly call, then arrange an in-person meeting to discuss the borrower's situation calmly. Empathy usually gets them back on track.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> Empathetic personal calls and flexible restructuring help borrowers feel supported.</p> <p><b><u>Group 3 (Maharashtra)</u></b> Personal visits and explaining consequences calmly are most effective. Avoiding aggressive tactics helps.</p>
<p>7 Based on your experience, what changes—either in loan structuring, customer support, or collection methods—would help more borrowers stay current on payments?</p>	<p><b><u>Group 1 (Bangalore)</u></b> Simplifying loan terms and offering small financial literacy workshops during the loan signing process would prevent misunderstandings and defaults.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> Building stronger relationships through consistent check-ins and offering seasonal repayment flexibility could reduce stress and missed payments.</p> <p><b><u>Group 3 (Maharashtra)</u></b> Simplified loan structures and grace periods would help. Better financial counseling too.</p>
<p>8 Can you share a story of a borrower who struggled with repayment? What were the key challenges, and how did your company handle the situation? What lessons can be learned from their experience?</p>	<p><b><u>Group 1 (Bangalore)</u></b> One borrower, a housekeeping worker, fell behind after her husband's sudden illness drained their savings. We paused her EMIs for 2 months and she resumed payments once he recovered - highlighting the need for emergency support in loan plans.</p> <p><b><u>Group 2 (Tamil Nadu)</u></b> A borrower recovering from surgery struggled for 3 months; flexible EMI helped him recover. Trust was built through regular RM contact.</p> <p><b><u>Group 3 (Maharashtra)</u></b> A family-run business collapsed during COVID; the RM helped restructure the loan. Borrower eventually recovered. Emotional support was key.</p>