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# INDIA'S MOST RECENT MICROFINANCE CRISIS: THEORY, EMPIRICS & LEARNINGS

Dwijaraj Bhattacharya,
Indradeep Ghosh,
Shree Harini,
Navaneeth MS
&
Madhu Srinivas

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# India's Most Recent Microfinance Crisis: Theory, Empirics & Learnings

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## Section 1: Introduction

The ongoing Non-Performing Assets (NPA) crisis in India's microfinance industry has attracted a lot of attention from a variety of stakeholders and commentators. However, an integrated view that combines insights from studying all three principal actors implicated in this crisis – the regulator, the lenders, and the borrowers – is yet to emerge. This paper aims to fill that gap. In it, we take an explicitly theoretical approach to thinking about the crisis, by anchoring to two conceptual papers: Hyman Minsky's 1977 paper on the Financial Instability Hypothesis[3], and our own 2024 paper on how to view over-indebtedness as a cultural phenomenon[4]. Taken together, these two papers provide a unique perspective on the microfinance crisis that we think is novel.

The perspective is novel for two reasons. First, it allows us to construct a general theory of boom-bust cycles in microfinance markets. Such a theory is currently lacking in both academic and policy discourses, to the best of our knowledge[5]. The general theory we offer in this paper is not only general in terms of being applicable for understanding microfinance crises anywhere in the developing world, but also general in terms of implicating in some detail both the rational and affective dimensions of decision making by lenders and borrowers. In other words, the theoretical contribution of our paper represents also a methodological innovation since the affective dimension has not been properly theorized, if at all, in the existing literature. Furthermore, such an innovation carries over to the empirical domain, since we not only amass evidence in support of the theory, but this same step also allows us to demonstrate what kinds of evidence such a theory – one that implicates both the rational and affective dimensions – might demand for its falsification. This, too, is a novel contribution, we believe.

When one looks at the literature on the leading causes for microfinance crises in the past 20 years (2000-2020) in different parts of the developing world, some identifiable factors emerge. First, market saturation and multiple borrowing are highlighted as a major source of crises. Too fast a growth of the loan book for multiple microfinance institutions (MFIs) can

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[1] The authors are Dwijaraj Bhattacharya, Indradeep Ghosh, Shree Harini, Navaneeth MS, and Madhu Srinivas.

[2] **We welcome comments from the public. Please write to our Head of Communication, Supriya Saxena, at supriya.saxena@dvara.com, with your comments, if any.**

[3] Minsky, Hyman P. "The Financial Instability Hypothesis: An Interpretation of Keynes and an Alternative to 'Standard' Theory." *Nebraska Journal of Economics and Business* 16, no. 1 (1977): 5–16

[4] Bhattacharya, Dwijaraj, and Indradeep Ghosh. "Exploring the Phenomenon of Debt Distress and Possible Solutions." In *Inclusive Finance India Report 2024*. ACCESS Development Services, 2024. https://dvararesearch.com/exploring-the-phenomenon-of-debt-distress-and-possible-solutions/

[5] Sriram (2025) may be a notable exception, but we would describe the paper as offering an excellent description of features shared by microfinance crises in India, rather than offering a general theory. See: Sriram, M S. "Where Medicine Is Poison." *Economic and Political Weekly* 60, no. 8 (2025): 10–14. https://doi.org/10.71279/epw.v60i8.42267.

cause them to lose the grasp on their processes and strategies[6]. The rapid expansion of loan books typically coincides with overlapping borrower bases and multiple loans per household[7], which signal an undermining of the delicate lender-borrower relationship and diminish the incentive to repay any single MFI[8] [9]. Eventually when repayment obligations surpass cashflows of households, systemic delinquencies emerge. Secondly, regulatory gaps such as unclear supervisory authority[10] or lack of internal controls[11] could create environments in which risky lending can flourish unchecked. Conversely, abrupt regulatory crackdowns or funding cut-off as a response to the increasing visibility of bad loans on MFIs' books, can precipitate a crisis on a wide scale (Andhra Pradesh crisis)[12]. Thirdly, some authors have argued that the MFI Industry has shifted its focus from serving a social mission towards profit-oriented models that have adopted unsustainable growth practices, such as inadequate credit-assessment, and over-lending. Large capital injections from investors are cited as the principal causal factor in these arguments, on the understanding that such injections have created strong incentives for continued levels of high growth and profitability[13]. Fourth, coercive recovery practices by loan-collection agents of MFIs are argued to often erode borrower trust, fuel negative media attention, and provoke political responses[14]. Such practices have been linked to borrower distress and strategic default, amplifying repayment crises[15]. Furthermore, political Interference has been a cause of crisis in some areas where political actors may encourage non-repayment[1617], or impose sudden restrictions on MFI operations. Such interference generates moral hazard among borrowers and therefore a collapse of repayment rates across lenders. Additionally, the high interest rates charged by MFIs have been cited as a major

[6] D'Espallier, Bert, Marc Labie, and Philippe Louis. "Microcredit Crises and Unsustainable Growth: A Management Perspective." *In The Crises of Microcredit*, edited by Isabelle Guérin, Marc Labie, and Jean-Michel Servet. Zed Books, 2015. https://doi.org/10.5040/9781350250932.

[7] Rozas, Daniel, Karine Pinger, Mohammad Khaled, and Sarah El Yaalaoui. *Ending the Microfinance Crisis in Morocco*. International Finance Corporation, 2014. https://doi.org/10.1596/26054.

[8] Reille, Xavier, Greg Chen, and Stephen Rasmussen. *Growth and Vulnerabilities in Microfinance*. No. 10. CGAP Focus Note. CGAP, 2010. https://www.cgap.org/sites/default/files/CGAP-Focus-Note-Growth-and-Vulnerabilities-in-Microfinance-Feb-2010.pdf.

[9] Nair, Tara S. "Microfinance: Lessons from a Crisis." *Economic and Political Weekly* 46, no. 6 (2011): 23–26.

[10] Ibid.

[11] Siwale, Juliana, and John Ritchie. "Accounting for Microfinance Failure: Insights from Zambia." *International Journal of Critical Accounting* 5, no. 6 (2013): 641. https://doi.org/10.1504/IJCA.2013.059017.

[12] Andhra Pradesh 2010: Global Implications of the Crisis in Indian Microfinance. Focus Note 67. CGAP, 2010. https://www.cgap.org/sites/default/files/CGAP-Focus-Note-Andhra-Pradesh-2010-Global-Implications-of-the-Crisis-in-Indian-Microfinance-Nov-2010.pdf

[13] Bateman, Milford. "How Lending to the Poor Began, Grew, and Almost Destroyed a Generation in India." *Development and Change* 43, no. 6 (2012): 1385–402. https://doi.org/10.1111/j.1467-7660.2012.01804.x.

[14] Shylendra, H. S. "Microfinance Institutions in Andhra Pradesh: Crisis and Diagnosis." *Economic and Political Weekly* 41, no. 20 (2006): 1959–63.

[15] Ghate, Prabhu. *MFIs: Learning from Andhra Pradesh*. Microfinance in India A State of the Sector Report, 2006. Microfinance India, 2006. https://www.findevgateway.org/sites/default/files/publications/files/mfg-en-paper-microfinance-in-india-a-state-of-the-sector-report-2006-2006_0.pdf.

[16] Bastiaensen, Johan, Peter Marchetti, René Mendoza, and Francisco Pérez. "After the Nicaraguan Non-payment Crisis: Alternatives to Microfinance Narcissism." *Development and Change* 44, no. 4 (2013): 861–85. https://doi.org/10.1111/dech.12046.

[17] Ibid.

source of borrower distress[18]. These "eye-watering interest rates"[19] make repayment difficult, leading to widespread defaults and public backlash. This in turn causes political intervention to follow, destabilizing the entire sector. Together, these factors illustrate how the pursuit for growth, operational misconduct, competitive pressures, and weak regulatory environments interact to produce systemic microfinance failures.

We would situate our paper within this corpus of research, but once again call out its unique features relative to the existing literature. The theory we offer in our paper is general enough that it incorporates many of the factors already described in the literature, as proximate causal factors, or symptoms, or epiphenomena. The fundamental point our general theory makes, however, is that it is hard to pinpoint precise first causes of crises, and this is because the affective dimension is implicated. The logic that operates in this dimension blurs the distinction between cause and effect, as we will describe in Section 2. This, however, does *not* prevent us from thinking about how to avoid pronounced booms and busts in microfinance in the future. Indeed, it offers a more sophisticated understanding of how to do so.

Our paper is organized as follows. Section 2 lays out the theory. The next three sections turn to the evidence for the ongoing microfinance crisis in India. Section 3 focuses on the regulator's actions, while Sections 4 and 5 draw attention to lender and borrower behaviours, respectively. Section 6 provides a distillation of what we have learned about the ongoing crisis from the data provided in Sections 3, 4 and 5. Section 7 concludes our paper by providing some recommendations for how the industry and the regulator might move forward from the crisis.

## Section 2: The "Minsky plus Culture" Frame

It is a feature[20] of the financial system, not a bug, that credit markets should seize up from time to time. There are many explanations of why this might happen. Since the Global Financial Crisis of 2008 (henceforth, GFC), however, one particular view has gained a great deal of currency. This is the explanation that economist Hyman Minsky provided in his 1977 paper on the Financial Instability Hypothesis (FIH)[21].

FIH offers a dynamic account of how financial systems evolve over the credit cycle. At its core is the idea that stability is not a persistent equilibrium; rather, periods of stable economic performance endogenously generate the behaviours that ultimately produce instability. The mechanism through which this occurs is the changing structure of borrower balance sheets and the shifting ways in which debt obligations are financed. This shifting implicates both sides of the credit market since lenders are, in many instances, borrowers themselves. Before describing the market dynamic that produces alternating periods of stability and instability, we start by characterising the three archetypical borrowers as laid out by Minsky —*hedgers*,

[18] Shylendra, "Microfinance Institutions in Andhra Pradesh: Crisis and Diagnosis," 1959

[19] Sinclair, Hugh. *Confessions of a Microfinance Heretic: How Microlending Lost Its Way and Betrayed the Poor*. BK Currents. Berrett-Koehler Publishers, 2012.

[20] By "feature" we do not mean to suggest that such cycles are desirable or normatively acceptable. Rather, we mean that these cycles are structurally embedded in the way credit is supplied to the sector.

[21] Ibid.

*speculators*, and *Ponzi actors*—each defined by the relationship between a borrower's cashflows and their obligations.

The hedgers are the most resilient, since their existing income is sufficient to meet both interest and principal payments. As such, they do not require refinancing and can withstand moderate financial shocks. When hedgers dominate, the system exhibits strong stability. Speculators occupy a more fragile position. Their cashflows allow them to service interest but not principal, requiring them to roll over debt upon maturity. Their stability depends on the existence of liquid credit markets and the willingness of lenders to refinance existing obligations. As long as credit remains abundant, speculative finance remains viable. Finally, Ponzi actors sit at the most fragile end of the spectrum. Their cashflows do not suffice even to meet interest payments, forcing them to borrow more simply to service past borrowing or to sell assets at prices that markets are willing to offer. Such positions are sustainable only while asset prices continue to appreciate or credit remains freely available. Any slowdown in asset markets or tightening in credit conditions renders Ponzi actors untenable.

Although all three types of borrowers coexist in any credit market, their relative prevalence shifts as the credit cycle advances. Following a downturn or crisis, lenders and borrowers display caution. Underwriting standards are conservative, leverage is modest, and balance sheets are strong. Most borrowers, in such a phase, are hedgers, and the system is robust. But periods of stability generate optimism: profits rise, defaults remain low, and asset prices climb. As the stability begins to look sustainable and historical memory of previous periods of instability continues to recede from consciousness, lenders loosen standards, borrowers take on greater leverage, and financial innovation expands the supply and complexity of credit. Hedgers, encouraged by favourable conditions, voluntarily assume greater risk and migrate into speculative positions becoming speculators. Finally, with continued optimism, the process accelerates. Asset prices rise, collateral values expand, and competition among lenders pushes them to finance riskier positions to maintain market share. Borrowers increasingly rely on expectations of future price appreciation or continued credit availability, rather than on current cashflows. Under these conditions, speculators become Ponzi actors as their obligations exceed what their income can reliably support. Thus, the emergence of Ponzi actors is not because of deception or irrationality per se but because favourable conditions encourage increasingly aggressive balance-sheet expansion.

Once a sufficient share of the system are speculators morphing into Ponzi actors, the financial structure becomes fragile. It now requires favourable conditions—rising asset prices and abundant liquidity—to remain stable. Any disturbance, whether a slowdown in growth, a tightening of credit, or even a pause in asset-price appreciation, can trigger a reversal. Speculators face rollover difficulties, while Ponzi actors are forced into asset sales, accelerating the downward movement in prices, and thereby increasingly eroding collateral values. These dynamics amplify one another, i.e., it becomes a reinforcing loop, pushing more borrowers into distress and generating cascading failures characteristic of financial crises. The cycle ends only through deleveraging, defaults, and the restoration of balance sheets, after which the system gradually returns to a hedger-dominant structure. Thus, the FIH suggests an endogenous transition from stability to fragility and from fragility to crisis.

Minsky's FIH is sufficiently well accepted by the academic economics profession that it appears as the main theoretical explanation of financial crises in Robert Aliber & Charles Kindleberger's classic text on the history of financial crises[22]. In turn, Philip Mader (2018) has shown how the FIH could successfully explain the Andhra microfinance crisis of 2010[23]. In this paper, we assume, following Mader, that the FIH does offer a good description of how the microfinance industry in India operates. But it is not a complete description. For that, we will need to overlay Minsky with a layer of cultural reasoning, which will yield a more precise account of the dynamics by which hedgers transform into speculators, and speculators into Ponzi actors.

We have laid out this cultural reasoning in our *Inclusive Finance India Report* chapter of 2024[24] (or the "IFI chapter") and we recount it briefly here. We posit that overlending and overborrowing are both cultural traits insofar as they are behaviours exhibited by large groups of actors[25], lenders in the former case and borrowers in the latter case. These behavioural traits appear first among a few select actors on each side of the market, usually those who enjoy some measure of stature in each group – typically, some of the larger microfinance institutions in a localized market on the lender's side, and some of the more high-status households in that same market on the borrower's side. They take root because of various precipitating factors that result in good performance of loan books and household balance sheets, and they contribute therefore to an overall sense of success and optimism on each side of the market. In the language of Minsky, we have all the conditions for a morphing of hedgers into speculators on each side of the market. As a result, these behavioural traits get transmitted through imitation, and so they become cultural traits, speeding up the growing incidence of speculation. The transmission of a behavioural trait through imitation is the first intimation that the logic at play, which we will call a cultural logic, is affective in nature. It operates not at a rational level in the human mind but at an emotional, affective level.

As imitation proliferates the cultural trait, the affective logic also comes into play on another front. Borrowers get confidence to churn loans (borrowing from one lender to repay another) because lenders are no longer performing proper credit assessment anymore – but at the same time, lenders get confidence to not perform proper credit assessment because borrowers are churning loans. As this continues, the incidence of the cultural trait on each side of the market only amplifies. Here is another quality of an affective logic. It cycles between cause and effect, blurring the distinction between the two. This is in contrast to the instrumental logics of mechanistic models that economists usually work with, and that Minsky was himself contesting in his 1977 paper. There, in the mechanistic models, it is assumed that the financial system is a machine-like totality, and that it functions according to a set of incontrovertible engineering laws. These laws are represented in mathematical form by the

[22] Aliber, Robert Z., and Charles Poor Kindleberger. *Manias, Panics, and Crashes: A History of Financial Crises*. Seventh edition. Palgrave Macmillan, 2017.
[23] Mader, Philip. "The Instability of Commercial Microfinance: Understanding the Indian Crisis with Minsky." In *The Rise and Fall of Global Microcredit*. Routledge, 2018.
[24] Ibid.
[25] In its most general form, this is what a cultural trait is – a behaviour shared by a large group of human subjects owing to the imitation or emulation of a select set of actors (who are effectively, or position themselves as, pioneers) by the rest of the group.

economist and such a representation, called a model, embodies the aforementioned instrumental logic. The logic is instrumental because it neatly separates cause and effect and therefore appears to give the user of the model some measure of engineering control over the machine that is supposedly being stewarded. Not so with affective logics, which grow in charge or intensity as they cycle between cause and effect, until the one is indistinguishable from the other.

The overlaying of the affective logic over Minsky's FIH becomes possible because the presence of a conventional price-appreciating asset is not a necessary condition for a Minskyian cycle to take hold. At its core, regardless of where the system sits in the credit cycle, the Minskyian borrower has a singular objective: to maximise returns, not merely the rate of return. Even where net interest margins are capped, a credit-driven mania can emerge. In the context of microfinance, MFIs themselves are borrowers from banks and wholesale funders. Given constraints on margins, MFIs can increase returns primarily by expanding volumes, either by increasing ticket sizes or by accelerating disbursements (aside from cost reductions). It is this imperative that drives borrowing at the institutional level and initiates the Minskyian dynamic. The loan book itself becomes the asset: the larger the stock of loans that can be accumulated, the higher the returns. The borrower-side dynamics operate somewhat differently. In the initial, hedge-dominated phase, borrowers largely take loans for productive purposes, generating new cash flows that are sufficient to service debt. As the cycle progresses, speculative borrowers become more prominent, followed by Ponzi-type borrowers. The Ponzi borrower is not seeking economic or monetary returns in the conventional sense, but rather returns in the form of status since a lot of the loans go, either directly or indirectly, towards funding status goods consumption (we lay out this argument properly in Section 5). The costs, however, remain monetary. When borrowers are repeatedly approached by lenders offering additional lines of credit, they come to believe that loans can be continuously churned, allowing them to derive status benefits at a negligible present cost. The possibility that churn may eventually become infeasible appears remote, given the frequency with which new credit offers arrive. A false confidence in the ability to meet future repayment obligations therefore combines with the immediacy of registering status gains, inducing Ponzi-like behaviour.

We would like to clarify further that when an affective, cultural logic is laid over Minsky's FIH, it does not produce a model but rather a frame. It is not a model because what we have is not a mathematical representation of the market, but rather a perspective on, or a certain way of viewing, the microfinance market. It is our contention that this way of viewing the microfinance market is not unlike how the influential 20$^{th}$ century economist John Maynard Keynes himself viewed financial markets, and we will return to this point later, in Section 6. More importantly for now, the frame is helpful for understanding the ongoing NPA crisis by virtue of helping us understand how both sides of the market can begin with mostly hedgers but end up with mostly Ponzi actors. Our task in this paper will be to substantiate this contention. We do so by concerning ourselves primarily with the boom (or mania) phase of the cycle that preceded the ongoing crisis.

We focus on the boom (or mania) phase for the following reasons. First, a lot of the current discourse on the MFI crisis is focusing on the aftermath or the bust phase (i.e., the NPA situation), but good diagnoses of how that came to pass are missing. During the initial stages

of the bust phase, there were a number of opinion pieces from commentators that faulted factors external to the microfinance industry (such as extreme heat[26] or weak monsoons[27]) as responsible for the bust. Subsequently, as the bust deepened, commentators appeared to call out indiscriminate lending on the part of MFIs as also having contributed to high and rising NPAs[28]. But a careful empirical characterisation of the nature of that indiscriminate lending remained elusive. Our work aims to the lay out such a characterisation in considerable detail.

Second, characterising the boom phase gives us an opportunity to offer an account of borrower behaviour during that phase. Such an account, at any reasonable level of depth, has been conspicuous by its absence in the commentary. Typically, the regulator as well as commentators, have tended to see the borrowers as victims, but it is possible that the borrower also had a role to play in stoking the mania, as described earlier. Characterizing borrower behaviour in concrete terms then allows us to put that theoretical case on a firmer footing. It also demonstrates how explaining the boom phase on the strength of provider misbehaviour alone is like expecting to hear a one-handed clap.

If both lender and borrower behaviours can be characterised in sufficient detail, then that also has vital implications for regulatory supervision – for it alerts us to the possibility that when the next boom begins to build momentum, the supervisor may expect to find its markers in some of the indicators that we use to characterise the most recent instance of a boom. Thus, our characterisation of the boom phase offers clues for how the microfinance market may be monitored so that the buildup of mania can be identified, and so that suitable regulatory actions may then be taken in a timely manner to contain the boom, and by extension, to contain the subsequent bust also. Indeed, when we turn to the section on learnings, Section 6, after our empirical characterisation is complete, we will claim that reducing the amplitude of the cycle is the best that one can hope for from a regulator, given that boom-bust cycles are the norm anyway in credit markets. And yet, this would be a tremendous achievement in itself because it would mean that the brutal and disruptive start-stop dynamic of credit markets that is a typical accompaniment to pronounced boom-bust cycles would be significantly mitigated.

Finally, because any detailed description of a boom phase has lessons for the regulator in the sense of preparing it for the next boom, it logically follows that the regulator is also an actor of interest in the boom phase. Thus, it is reasonable to assume that the regulator may also have inadvertently contributed to the conditions underlying the boom phase. Therefore, and because the regulator provides the set and setting for the market to function, we begin our investigation into the boom phase of the most recent cycle, by discussing the role of the regulator.

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[26] Tendulkar, Reema, and Sonia Shenoy, "Why This Analyst Finds Microfinance a Compelling Investment Opportunity." CNBC TV18, June 27, 2024. https://www.cnbctv18.com/market/anand-rathi-microfinance-stocks-equitas-credit-access-fusion-micro-ujjivan-19434566.htm

[27] Ghosh, Shayan. "Largest Micro-Lender CreditAccess Grameen Joins Peers in Flagging Stress Pockets." Live Mint, August 2, 2024. https://www.livemint.com/industry/banking/largest-mfi-joins-peers-in-flagging-stress-pockets-11722508888850.html

[28] Mathew, George. "Microfinance Delinquencies Nearly Double to over Rs 28,000 Crore in a Year." *The Indian Express*, January 13, 2025. https://indianexpress.com/article/business/microfinance-delinquencies-nearly-double-to-over-rs-28000-crore-in-a-year-9773817/

## Section 3: The Regulator

The MFI sector comprises less than 3% of all banking sector assets[29], but services around 6 Cr borrowers[30], with all the borrowers belonging to low-income households. These two facts underpin the RBI's approach to regulating and supervising the MFI market, as evidenced by various speeches delivered in recent years by the RBI's top management. For instance, at the Confederation of Indian Industry (CII) Non-Banking Financial Company (NBFC) Summit 2024, in a speech about the RBI's approach to regulating NBFCs, the Deputy Governor, Mr. Rajeshwar Rao remarked –

*Microfinance loans are small-sized loans and constitutes a very small share in overall credit. Therefore, probability of financial stability concerns emanating from microfinance loans is quite low. However, in terms of numbers, microfinance loans affect a large number of borrowers, and these borrowers belong to the vulnerable category. Therefore, it becomes necessary that the regulatory approach for microfinance loans is specifically targeted to protect the interests of these borrowers. With the objective of customer protection in mind, an entity-agnostic and activity-based comprehensive regulatory framework for microfinance loans has been put in place for microfinance loans provided by all regulated entities*.[31]

This focus on customer protection in regulations and supervisions is what we find when we analyse the 2022 MFI regulations. In the Consultative Document[32] released by the RBI prior to finalising the regulations, the key concerns expressed were over-indebtedness among borrowers, coercive recovery practices on the part of lenders, and the lenders depriving the borrowers of pricing benefits (i.e., loans at lower interest rates). The need was also expressed to harmonize the MFI regulatory framework by extending its scope to all lending entities that were advancing microfinance loans. This too demonstrated a concern for customer protection as earlier the regulations were only covering the customers of lenders registered as NBFC-MFIs, whose share of the microfinance market had been on a downward trend.

The final regulatory actions were announced in the Master Directions of March 2022[33]. Some of these actions were clearly aligned with the concerns expressed in the Consultative Document, such as extending regulatory coverage to all registered lenders, requiring lenders to assess both household income and household liabilities prior to lending, providing an indicative methodology for assessing household income, allowing lenders to come up with their own pricing models, requiring these models to be transparently communicated to both

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[29] *Report on Trend and Progress of Banking in India 2021-2022*. Reserve Bank of India, 2022. MFIN India (https://mfinindia.org/microfinance/IndustryPortfolio); and Authors' calculations.

[30] *MFIN India Annual Report 2021-2022*. Microfinance Institutions Network (MFIN), 2022.https://mfinindia.org/assets/upload_image/publications/AnnualReports/AR%202021-22%20-%20Web.pdf

[31] Rao, M. Rajeshwar. "No More a Shadow (of a) Bank." Speeches and Media Interactions, Reserve Bank of India, February 9, 2024. https://rbi.org.in/scripts/BS_SpeechesView.aspx?Id=1416

[32] Consultative Document on Regulation of Microfinance." Reserve Bank of India, June 2021. https://rbi.org.in/Scripts/PublicationsView.aspx?id=20377#13

[33] "Master Direction – Reserve Bank of India (Regulatory Framework for Microfinance Loans) Directions, 2022." Reserve Bank of India, March 2022. https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12256&Mode=0

the borrower and the public at large, instituting a debt service ratio ceiling, and laying out guidelines for recovery practices. Less transparently traceable to customer protection concerns were the relaxations on end-use criteria and the number of lenders per borrower, which could arguably have pressed in the opposite direction. Notwithstanding these apparent wrinkles, the overall regulatory orientation was positioned by the RBI as one that encouraged the MFI industry to become more competitive and therefore more efficient, and at the same time more mindful of not trapping the borrower in a debt spiral.

Several observations may be made on the regulatory stance during the boom phase, which we date (approximately) from Quarter 1 of FY 2022-23 to Quarter 4 of FY 2023-2024, a 2-year period. This choice of period will be validated in the next two sections. For now, if we accept that period as the boom phase, then it appears that the RBI did not view the microfinance market through a Minsky frame, since there is no mention of cyclical dynamics in either the Consultative Document or in the Master Directions. Further, the RBI did not demonstrate an explicit concern for the potential gaming of regulations (which would, in Minskyian terms, occur when hedgers turn first into speculators and then into Ponzi actors), and did not employ any communicative efforts at moral suasion to discipline either lenders or borrowers during the aforementioned 2-year period[34], despite acknowledging the need for such communicative efforts elsewhere[35]. Instead, it appeared to leave most of the oversight of the new regulations to the Boards of financial institutions or the Self-Regulatory Organisations (SROs) to perform. In November 2023, when the RBI increased the risk weights of retail loans of NBFCs flagging abnormally high growth in certain sub-sectors of consumer credit, it specifically excluded MFI/SHG loans from this increase, suggesting that it saw no evidence of a credit bubble in the microfinance market[36]. At the same time, from the very start of the new regulations being announced, the RBI took an accommodative view of microfinance loans being used for consumption purposes, even for buying gadgets or financing ceremonies – as made explicitly clear in the Frequently Asked Questions released in July 2022[37]. We argue (below, in Section 5) that it is particularly in the context of such consumption spending that boom-bust cycles can become pronounced and amplified, and this has consequential implications for how the regulator should orient itself towards the microfinance market.

In sum, factoring in the possibility of a credit bubble developing on the back of extensive de-regulation may have permitted the RBI to anticipate in its regulatory stance some of the

[34] Research has shown that national culture, and therefore strategic communication from policymakers, matters for the efficacy of macroprudential policies. See, for instance – Lu, Yiming, and Yu Wang. "Macroprudential Policies, National Culture, and Bank Systemic Risk: A Cross-Country Comparison." *Finance Research Letters* 58 (2023): 104295. https://doi.org/10.1016/j.frl.2023.104295.

[35] The RBI is well aware of the importance of communication for monetary policy. See, for instance – Central Banking in Uncertain Times: The Indian Experience, Shri Shaktikanta Das, Governor RBI, June 13, 2023 - https://www.bis.org/review/r230622l.pdf). It is also not averse to using moral suasion to remind MFIs of their social objectives. See, for instance – Micro finance: Empowering a Billion Dreams (Inaugural Address by Shri M. Rajeshwar Rao, Deputy Governor, Reserve Bank of India - October 27, 2021 - at the Sa-Dhan National Conference on "Revitalizing Financial Inclusion") - https://www.rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=1137)

[36] "Regulatory Measures towards Consumer Credit and Bank Credit to NBFCs." Reserve Bank of India, November 2023. https://rbi.org.in/Scripts/NotificationUser.aspx?Id=12567&Mode=0

[37] Frequently Asked Questions. "Regulatory Framework for Microfinance Loans." Reserve Bank of India, January 2025. https://www.rbi.org.in/Scripts/FAQView.aspx?Id=147

excesses that followed on both sides of the market, which we turn to next. First, we consider lending data and attempt to characterise the boom phase from a supply-side perspective.

## Section 4: The Lender

The lenders' actions during the boom phase of the cycle are important to understand, not only because they provide us a window into how that phase may be characterised in empirical terms, but also because they are typically papered over in a summary style by much of the commentary once the NPA crisis breaks. We think, on the other hand, that a careful, detailed investigation into lender actions during the boom phase can be eye opening.

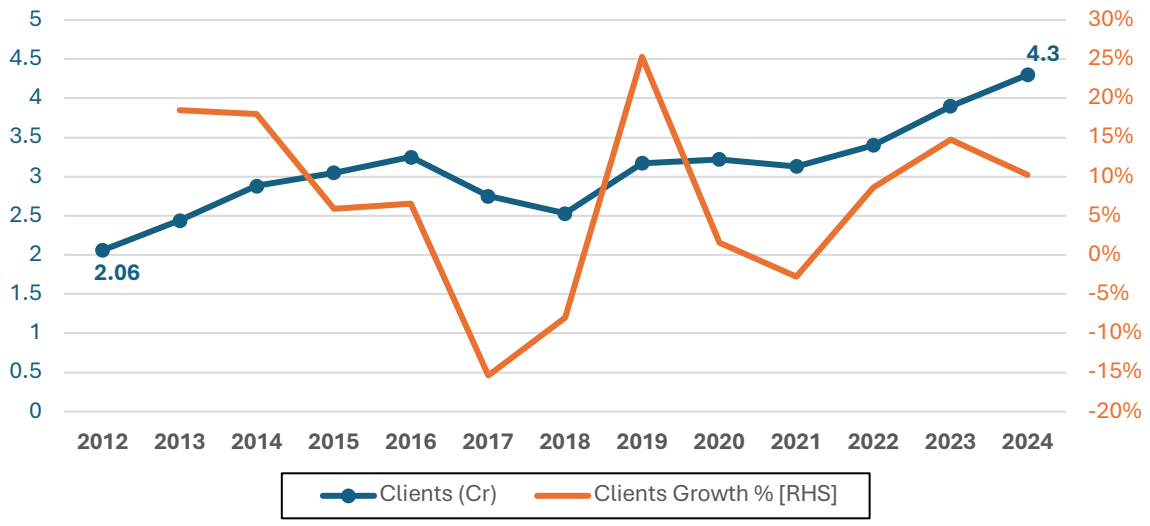
We begin our analysis by examining the lenders' growth trajectory. Thereafter, we use interviews that we conducted with leaders, managers, and frontline staff from over 12 MFIs of varying sizes across the country, to identify some of the underlying drivers of lender behaviour. Finally, we study publicly listed lenders of microfinance loans and analyse their earnings calls and annual reports to capture the sentiment prevailing during the boom phase. By combining quantitative and qualitative approaches, we are able to not only report stylized facts but also interpret those facts in light of perceptions that were revealed to us by industry participants.

Overall, our analysis indicates the following: The growth trajectory captures the mania that a Minskyian dynamic would typically exhibit, while the interviews reveal that industry participants were indeed worried about the sources of growth. Yet public avowals by industry leaders in earnings calls and annual reports suggest a mood of celebration, even euphoria.

### Section 4.1: What was the Growth Trajectory?

To understand the growth trajectory of the sector, we study three primary metrics: how the client base grew; how the portfolio grew; and what the growth in disbursements looked like. The long view (spanning more than a decade) is presented in Figures 1, 2, and 3. It is necessary to present this view first since the cyclical nature of the market comes forth quite clearly.

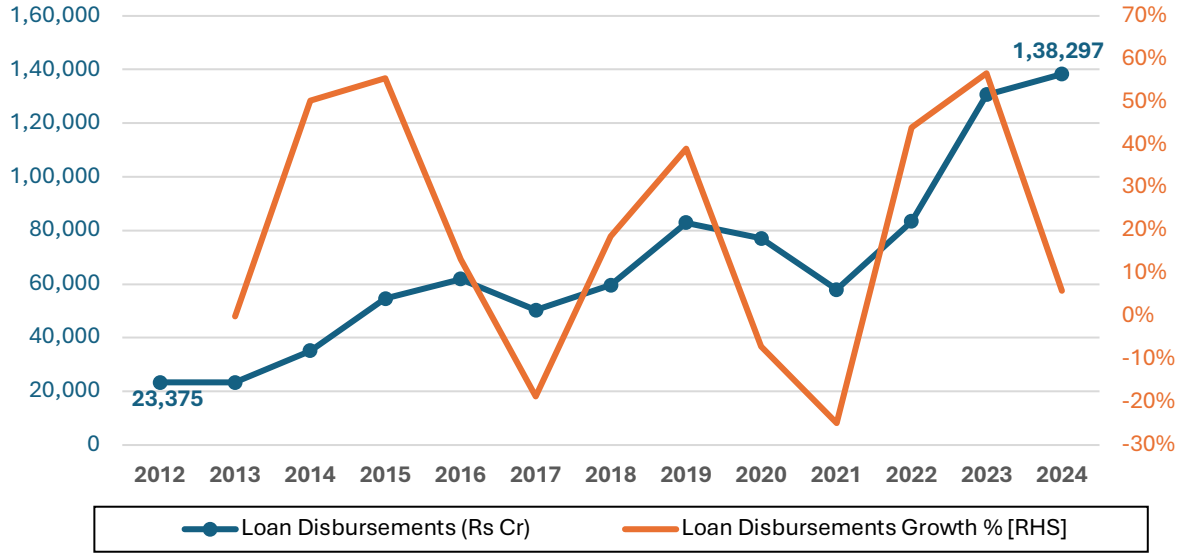
**Figure-1: Growth and Growth Rate in MFI Clients**



Source: MFIN Annual Report, Authors' calculations

Between March 31, 2012, and March 31, 2024, the client base of the microfinance sector grew from 2.06 crores to 4.3 crores. This represents an average annual growth rate of 6.9% and a Compounded Annual Growth Rate (CAGR) of 5.8%.

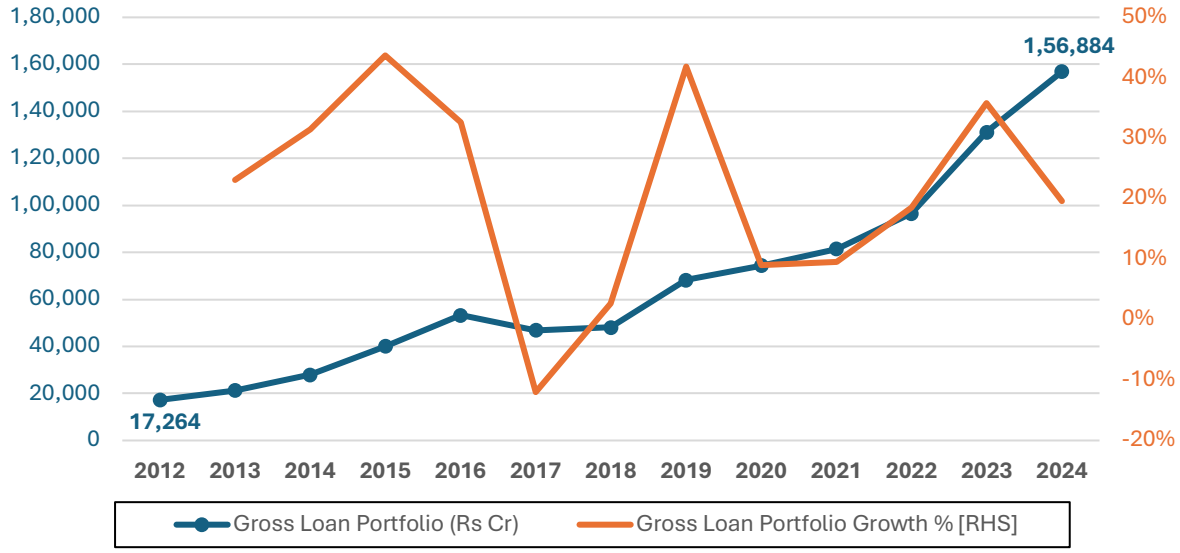
**Figure-2: Growth and Growth Rate in Disbursements**




Source: MFIN Annual Report, Authors' calculations

Between 2012 and 2024, disbursements by the microfinance sector grew from ₹23.3 thousand crores to ₹138.2 thousand crores. This represents an average annual growth rate of 19.4% and a CAGR of 15.9%.

**Figure-3: Growth and Growth Rate in Gross Loan Portfolio**



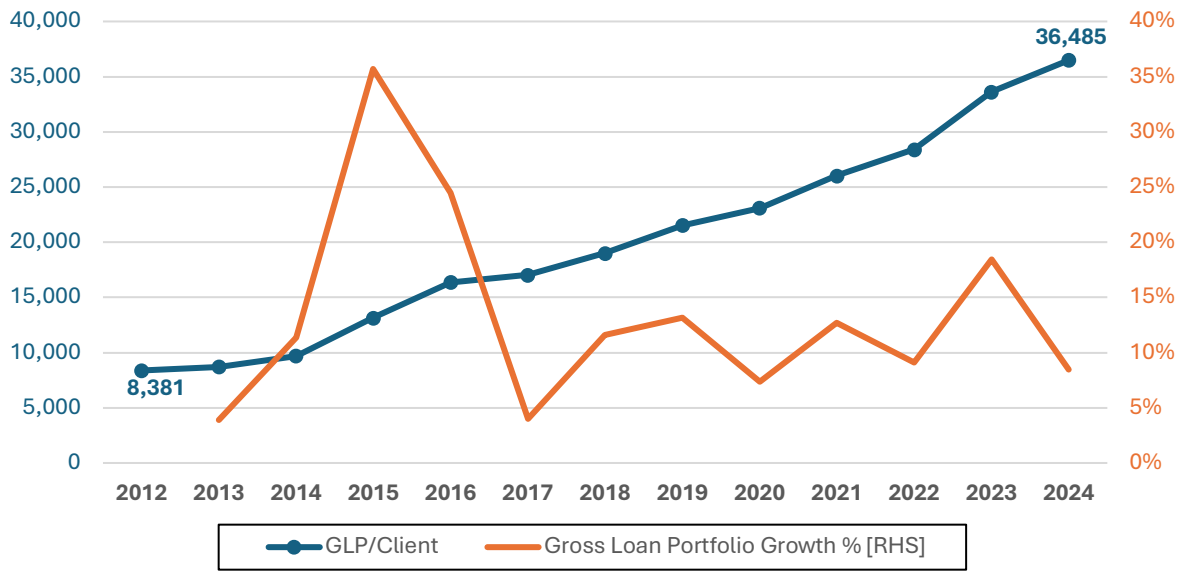

Source: MFIN Annual Report, Authors' calculations

Finally, between 2012 and 2024, the Gross Loan Portfolio (GLP) grew from ₹17.2 thousand crores to ₹156.7 thousand crores. This equates to an average annual growth rate of 21.3% and a CAGR of 20.2%.

These patterns, when viewed together, reveal three characteristics of MFI market growth that are central to understanding the latest episode of a boom phase.

1. The growth appears to be cyclical. There are periods when the sector shrank in terms of the number of clients, disbursements, and GLP. However, immediately after that, the sector also grew rapidly. The proposition that all busts are preceded by a boom and all booms are succeeded by a bust is apparent when we study the evolution of the sector in the longer run.
2. The growth in GLP was primarily driven by disbursement growth, i.e., the sector's growth appears to be driven by an increase in the amount lent to clients rather than the number of clients to whom the sector has lent.
3. If we plot the average GLP per client —i.e., an approximation of the average amount of loan outstanding per client — and the rate at which individual borrowers are taking additional credit, the average growth rate stands at 13.4%, with a CAGR of 12% between 2012 and 24. See Figure-4.

**Figure-4: Growth and Growth Rate in average GLP/Client**




Source: MFIN Annual Report, Authors' calculations

Figure 4 reveals that, immediately prior to the current crisis, there was a significant increase in the average outstanding per client. Between 2012 and 2016, the sector witnessed significant growth. This is to be expected, since the sector was nascent, with limited penetration, as such, had scope for rapid expansion. However, as the sector matured, the growth rate rarely slowed down, though there were exceptions. In 2017, for example, the impact of demonetisation was felt that led to a negative growth of 10% in GLP and negative 15% in number of clients and negative 20% in the amount disbursed.

Beyond 2017, however, the sector continued its growth trajectory. In fact, in 2019, despite having already grown by 400% over the prior decade, it witnessed a further growth of 25% in clients, and approximately 40% in terms of GLP and disbursements. 2020 and 2021 marked the impact of COVID, after which the growth trajectory intensified further, especially in the aftermath of the new regulations, which expanded the addressable market.

As briefly previewed in the previous section, there were two key changes to the 2022 regulatory regime that underpinned this growth. First, the household income limit was changed from ₹1,25,000 for rural households and ₹2,00,000 for non-rural households to a uniform ₹3,00,000. This, in theory, was expected to significantly increase the client base. The second change pertained to the maximum indebtedness limits, which were increased from ₹1,25,000 to ₹1,50,000, representing a modest increase relative to the income limits. However, the increase was not universally applicable. A household must earn above ₹2,50,000 to see an increase in its indebtedness limit, since, instead of a universal ceiling of ₹1,25,000, the new regulations introduced a dynamic cap on indebtedness at 50% of household income. Additionally, all of the household's loans were to be included in the indebtedness limit, unlike earlier, when only borrowers' outstandings were considered.

Given these changes, indeed, a new growth wave was possible. But since the significant change was only in qualifying income, the expectation would be that growth is driven by new clients rather than additional loans to existing clients.

The trajectory during the boom phase (FY 2022-23 to FY 2023-24) contradicted this expectation. While the growth rate in the number of clients remained fairly low (average growth rate of 8.1% vs. 8.4%), the growth rate of disbursements (to new and existing clients) increased significantly (average growth rate of 35.5 % vs. 16.9%). The promise of serving new clients did not fully materialise; instead, existing clients were heavily leveraged with additional loans. To understand this phenomenon, we have to realise that the changes in the regulatory thresholds for household income were not very meaningful. In theory, it more than doubled for rural households and increased by ~30% for non-rural households, but in practice, given the notoriously difficult task of income assessment, it is more than likely that these households were already being served by MFIs.

### Section 4.2: How was the Growth Achieved?

Between February and September 2024, we conducted 120 interactions across 13 microfinance institutions, including 30 interviews with leadership teams (CEOs and senior managers) and 90 interviews with field-level, branch-level, and regional staff[38]. The overarching theme underscoring post-regulation lending practices was a pervasive fear: "If we don't lend, another MFI will." This competitive pressure, articulated by MFI leaders, was driven by four interlocking forces: 1) Investor and Creditor Pressure, 2) Target-Driven Underwriting, 3) Unreliable and Gameable Data, and 4) The Bandwagon Effect (A Race to the Bottom). We discuss each of these in turn below.

[38] See: Bhattacharya, Dwijaraj, Priyadarshini Ganesan, and Sowmini G Prasad. *Emerging Trends and Shifts in Microfinance*. Dvara Research, 2025. https://dvararesearch.com/emerging-trends-and-shifts-in-microfinance/

*Investor and Creditor Pressure: The Growth Mandate*

When the RBI lifted caps on interest rates and removed restrictions on the number of lenders per borrower, it effectively signalled to investors that microfinance was entering a new phase of maturity. Equity and debt inflows into the sector more than doubled between FY 2021 and FY 2023, rising from ₹4,637 crore in FY21 to over ₹13,000 crore in FY23[39]. As one CEO admitted, "Funds are flowing into the sector to capitalise on the increased interest rates and the apparent insensitivity of customers to interest rates." This new wave of capital arrived with a mandate for rapid deployment and aggressive, fast-paced growth. Eager to prove profitability after pandemic losses, MFIs pursued 'deepening' rather than 'broadening'—lending more to existing customers in existing geographies—as it was economically more efficient than expanding into new, uncertain markets. Almost all MFI leaders suggested in our interviews attested to this fact. Thus, if the RBI had wished for competitive efficiency, it got it, but of a perverse kind.

The economic logic was straightforward. Expanding into virgin areas meant higher acquisition costs, new infrastructure, and uncertain repayment behaviour. Deepening, on the other hand, meant leveraging existing networks and borrower familiarity. But this strategy had an unintended (but not unforeseeable) outcome: the same borrowers became the common target of multiple lenders. With the removal of the "two-lender rule,"[40]competition intensified. MFIs began competing not on price or product quality, but on speed and scale. As one CEO put it, "there is intense competition, but it is not reflected in interest rates." Instead, the race was for faster disbursals and larger tickets. Every rupee deployed was a signal of vitality to funders, every uptick in loan book a badge of competitive strength.

The "deepening" phenomenon thus had a dual driver — external pressure from investors and internal pressure from management. This manifested in perverse incentives for field officers.

*Target-Driven Underwriting*

Under the new regime, MFIs were required to assess repayment capacity through a "Fixed Obligation to Income Ratio" (FOIR) capped at 50% of household income. They were also to develop board-approved policies for household income assessment. In theory, this was meant to anchor credit decisions in affordability. In practice, it became a bureaucratic checkbox that subordinated judgment to targets. A CEO's remark captures the core problem: "Household income is a big black hole." This, despite the RBI's indicative method for household income assessment, as announced alongside the Master Directions. Without verifiable

[39] See: *The Bharat Microfinance Report 2021*. Sa-Dhan, 2021. https://www.sa-dhan.net/wp-content/uploads/2023/05/BMR-2021_c.pdf; *The Bharat Microfinance Report 2023. Sa-Dhan, 2023. https://www.sa-dhan.net/wp-content/uploads/2024/01/Bharat-Microfinance-Report-2023_compressed.pdf*

[40] The two-lender rule refers to the pre-2022 regulation that no lender can be the third lender to the borrower. See: Tiwari, Anukriti, and Sowmini G Prasad. "Our Response to RBI's Consultative Document on Regulation of Microfinance." *Dvara Research*, 2021. https://dvararesearch.com/our-response-to-rbis-consultative-document-on-regulation-of-microfinance/

documentation in informal economies, the income figure was whatever the borrower claimed — or, more precisely, whatever the loan officer needed it to be.

Field interviews revealed how regulatory intent got lost in translation. Almost all loan officers operationalised the 50% FOIR as a flat ceiling of ₹12,500 in EMIs, irrespective of actual income. This understanding was also shared by many branch- and regional-level employees. This simplification was not an innocent misunderstanding; it was an adaptation to institutional incentives. Loan officers were evaluated on disbursement and recovery targets, not on underwriting accuracy. The conversations revealed that targets and incentives feature heavily on the loan officers' minds, and they would continually "optimise for the highest possible monthly take-home salary."

The conflict of interest here was structural. A field officer's job security and bonuses depended on meeting loan volume targets, while prudence risked rejection rates that could be interpreted as underperformance. "We would accommodate old customers who are just above the threshold by modifying household incomes or outstanding EMI amounts," one officer explained. In other words, loan approval was the default; ineligibility was a problem to be solved, not a warning to be heeded, in many cases. While rejections did occur in some cases, especially for mature customers, these were not sharply different from pre-2022 regulations. Despite some exceptions, the general rule was a culture where compliance became performative, and we use the word “culture” here advisedly – we will return to it later. Income data was collected because the regulations required so, not because it informed a meaningful risk assessment.

*Unreliable and Game-able Data*

The backbone of the underwriting model was supposed to be data — specifically, credit bureau records. Every loan was to be reported, cross-checked, and reconciled, ensuring that household obligations did not exceed permissible limits. But in practice, this system was porous, outdated, and easily manipulated. MFIs themselves admitted as much. MFI CEOs noted – "there is currently no way to ascertain whether the income recorded with the credit bureau is the actual reality of the customer." Further, all respondents reported that data updates were delayed. In many cases, SHG and KCC loans were often missing, and, needless to mention, informal borrowings were invisible. This opacity created the perfect conditions for gaming the system. Loan officers learned how to navigate credit bureau lags to disburse new loans before old delinquencies appeared. Customers, too, benefited from or exploited loopholes, like using multiple IDs or borrowing under different household members' names. As one officer said candidly, "They (customers) often lie. We ask them why there is a mismatch, and we make a final decision based on their explanation."

Essentially, the credit bureau, meant to be the market's memory, became its mirage. Everyone saw what they wanted to see: investors saw credit penetration, regulators saw compliance, and MFIs saw growth potential. Meanwhile, the data's inaccuracies allowed systemic risk to accumulate invisibly.

*The Bandwagon Effect*

Once a few institutions adopted aggressive lending practices to meet growth and funding targets, others were compelled to follow suit. The compromised credit assessment culture

proliferated, as culture usually does, by imitation. Field staff across regions reported encountering multiple MFI representatives visiting the same households within a short span of time. As one officer remarked, "Whether we find customers or not, we keep running into other MFI staff, since 10–15 MFIs operate in the same region." In such an environment, prudence quickly became a competitive disadvantage. Institutions that adopted stricter underwriting standards risked losing clients to competitors and appearing less dynamic to investors. This produced what several respondents described as a "race to disburse." A senior executive put it bluntly: "We can't afford to slow down when others are growing."

The convergence of incentives across institutions created a collective action problem: each was acting rationally in pursuit of growth, yet the aggregate effect was market saturation and elevated systemic risk, which possibility as the previous section argued, the RBI had already written out of hand or at least did not consider salient enough to inform its regulatory orientation.

In summarizing the learnings from our qualitative data, we may say that the FY 2022-23 to FY 2023-24 microfinance boom was shaped less by deliberate regulatory evasion than by the interaction of incentives, data limitations, and structural competition. Investor expectations for rapid portfolio expansion encouraged MFIs to deepen existing markets rather than broaden outreach. Internally, target-driven underwriting practices compromised the quality of credit assessment and created conflicts of interest for field staff. Weak supervisory mechanisms and unreliable data systems further enabled the gaming of regulatory safeguards. Finally, once aggressive growth strategies became the industry norm, competitive and funding pressures ensured widespread imitation.

However, in public discourse, the omnipresent concerns (from the interviews) were seldom reflected. A study of the earnings calls and annual reports (but mostly of earnings calls) of publicly listed entities operating in the sector revealed an apparent euphoria between 2022 and 2024. Next, we discuss this contrast.

### Section 4.3: How was the Growth “Sold”?

To understand the public narrative, we analysed the collective communication strategy of major MFIs and Small Finance Banks (SFBs) operating in the microfinance segment. These included Satin Creditcare, Credit Access, Fusion Finance, Muthoot Microfin, Spandana Sphoorty, Arman FS, Ujjivan, ESAF, Suryoday, and Utkarsh SFB. Their annual reports and, especially, analyst calls were relied on to parse the narrative for clues about the industry sentiment as evidenced by public declarations.

Our analysis suggests that the industry successfully constructed a two-part narrative designed to shield its rapid post-crisis growth from investor scrutiny. Emerging from the deep COVID-19 asset quality crisis, this strategy aggressively compartmentalised all existing problems as "legacy" or "COVID-distressed" while simultaneously proclaiming the "pristine" quality of the newly disbursed loan portfolio under the March 2022 harmonised regulatory regime. The narrative evolved through three stages.

*Stage-1: FY 2021-22, Or The Great Segregation – Blaming the Past*

The transition year of FY 2021-22 (the period between the release of the Consultative Document and the release of the Master Directions) was defined by the relentless effort to clean up balance sheets and establish a clear distinction between the pre- and post-crisis portfolios. Analyst calls from Q4 FY 2021-22 and Q1 FY 2022-23 show a near-unanimous strategy: attributing high Gross Non-Performing Assets (GNPA) or Portfolio at Risk (PAR) to specific, non-recurring historical events.

Institutions that faced acute regional stress consistently assured investors and other commentators that, while headline asset quality figures appeared elevated, this was solely due to the "stagnant" legacy pool, which was no longer receiving disbursements. The focus was on collection efficiency (CE) metrics for the current, or "performing" book, which were reported as near-perfect (typically 99%+). This was the primary mechanism for establishing the aforementioned firewall.

The Small Finance Banks (SFBs) employed similar language. During their FY 2021-22 Q3 calls, management would differentiate clearly between the GNPA arising from the restructured or older portfolios (the "legacy") and the newly minted books, which were reported as having minimal to zero slippages. This allowed them to communicate significant write-offs and provisioning efforts—actions necessary to clean the balance sheet—not as systemic failures, but as a final, decisive action against the past. This messaging consistently assured the market that elevated credit costs were provisions against the vintage pre-March 2020 pool and residual COVID-restructured assets, while the newly disbursed current book showed collection efficiency above 99.5%, indicating a definitively superior underwriting quality.

By successfully pinning all distress on legacy issues, the institutions effectively granted themselves a clean slate for the future, absolving the newly implemented post-COVID underwriting processes from any immediate attention.

*Stage-2: FY 2022-23, Or The New Regulation Shield and the Pristine Mandate*

The FY 2022-23 brought the full implementation of the harmonised regulatory framework (RBI circular on 'Regulatory Framework for Microfinance Loans' effective April 2022). This was a significant inflexion point, as it enabled greater operational flexibility and removed the lender limit on borrowers. Instead of acknowledging the inherent risk of over-indebtedness that the relaxed framework could introduce—especially given the continued pressure for AUM growth—MFIs and SFBs reframed the new rules as an enhancement of risk management. The public narrative shifted from fighting COVID to celebrating regulatory excellence.

Institutions driving aggressive growth frequently highlighted that the new Risk-Based Pricing (RBP) and the simplified debt-to-income (DTI) computation meant their underwriting was now "scientific" and "risk-calibrated." The core problem, however, as discussed earlier, was the assessment of income and existing debt, which remained difficult and prone to inaccuracy, but was seldom acknowledged. The analyst calls actively deflected concerns about the looseness of DTI checks and the potential for multiple loans per customer. Instead, management teams frequently argued that the new framework encouraged a "true partnership approach" with the borrower, and that technology platforms, bolstered by DTI

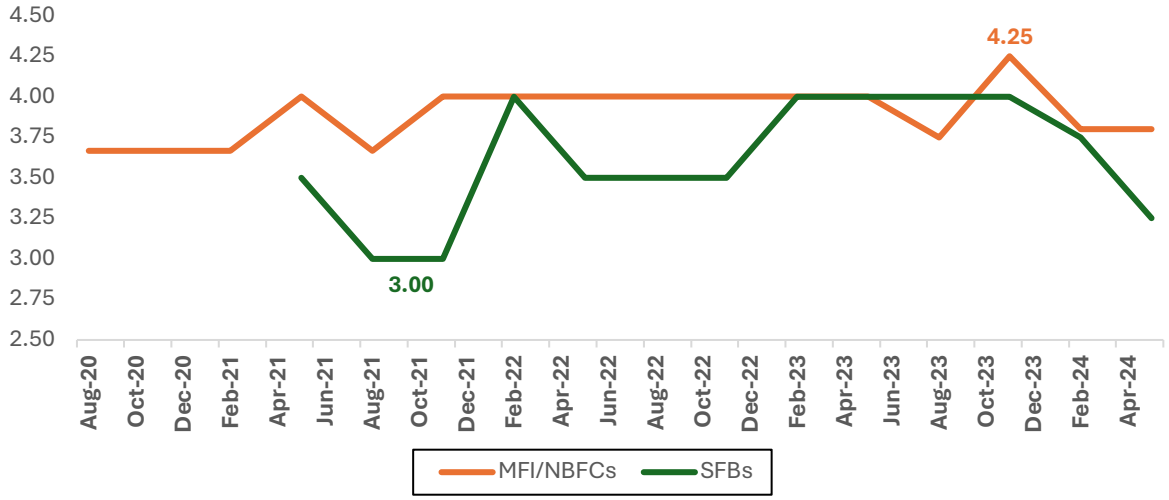
guidelines, ensured every post-April 2022 loan was fully assessed for repayment capacity, making the quality of this new vintage superior to anything seen historically. The message was clear: because the loans adhered to the new DTI ratio (not exceeding 50%), they were, by definition, pristine. Any suggestion that high AUM growth might be masking poor income assessment was met with reference to this new, regulatory-approved quality standard, making the book seem inherently flawless.

*Stage-3: FY 2023-24, Or Isolated Pockets and the Denial of Systemic Flaws*
By early 2024, the narrative faced its first significant test. While headline GNPAs for the overall book continued to drop, driven by high write-offs and portfolio growth, subtle signs of stress began to appear in the newly originated books—specifically, an uptick in Portfolio at Risk (PAR) metrics (30/60 days past due) in certain regions. The institutions responded by employing the second component of their rhetorical strategy: blaming isolated cases of distress. Any increase in slippages was quickly framed as a function of external, non-replicable factors: localised weather events (unseasonal rains), political disruptions, or specific geographical regions that were already known to be problematic.

For instance, larger entities might report slightly higher short-term PAR. Still, the explanation would link it to localised flood damage or a small pocket of unrest in a single district. Management asserted that such a marginal rise in PAR 30+ was strictly due to localised issues following external events, framing it as an operational, temporary issue, not a credit underwriting challenge, thereby confirming that the core, pan-India book continued to perform impeccably. This was crucial because it allowed the institutions to maintain the core thesis—that the underwriting process itself remained flawless—while addressing temporary fluctuations. This consistent denial of internal, systemic flaws—such as relaxed DTI verification due to growth pressure or the cumulative impact of the new regulations on over-leveraging—allowed the MFIs and SFBs to continue rapid disbursement and growth, selling a portfolio to the market that was described as virtually without risk, save for the occasional, unavoidable "act of God" or regional anomaly.

Thus, we observe that the sector employed three distinct phases and two distinct strategies between FY 2021-22 and FY 2023-24. By establishing a rigid distinction between the "legacy" portfolio (the scapegoat for all past failures) and the "pristine" new book (the symbol of regulatory compliance and technological prowess), the industry managed market expectations. This communication strategy allowed them to maintain a high-growth trajectory while aggressively provisioning for past losses, successfully deflecting the more challenging questions about the genuine sustainability and risk profile of the new, rapidly growing microfinance books in the post-COVID regulatory environment. This is captured in the figure below, which plots the sentiment of analyst calls from 2020-24.

**Figure-5: Cumulative Sentiment Score Based on Analysis of NBFCs, MFIs and SFBs[41]**




Source: FSP Transcripts, Authors' Calculations

Using Azure's Text Analytics, we model the sentiment present across the analyst calls. A score ranging from 1 to 5 was assigned to each transcript, then averaged for each category (of provider) and quarter. A score of 1 suggests extreme pessimism, 2 suggests pessimism, 3: neutral, 4: optimism and 5 as extreme optimism. As evident from Figure-5, the observed range was between 3 and 4.25. From the observation, two key features stand out: the microfinance sector was more optimistic than the SFBs in general, and optimism did not falter throughout the period FY 2021-22 to FY 2023-24. This is in direct contrast to the evolution of the industry's internal assessment, as discussed in the previous section.

In concluding this section, our analysis points to a significant growth spurt during the boom phase, which was clearly unsustainable. This lack of sustainability was apparent both in the data and in the information that we were able to gather from our interviews with MFI personnel. In those interviews, we also learned about operational deficiencies and investor pressures. Yet public commentary offered a sharply contrasting narrative to all of this. Listed entities consistently pushed a "pristine" narrative of post-March 2022 disbursements, seldom acknowledging the quicksand beneath the growth. Together, these ensured that disbursements continued to grow, along with borrower leverage. It is to this third and last aspect that we now turn.

## Section 5: The Borrower

Often, especially in the context of financial inclusion efforts, when the bust phase in the credit market begins, the borrower is viewed as a victim. We do not think that such a reflexive attitude is helpful in properly diagnosing the origins of the NPA crisis, as the borrowers do have some responsibility to bear as well. As lender optimism builds during the early stages of the boom phase, this optimism does not translate into an automatic slackening of credit assessment procedures unless borrowers participate in some way to ensure that lender optimism can be sustained or even stoked higher. This happens via the phenomenon of loan

[41] The data was not always present for all the providers and quarters. See Annexure-X for the details of quarter vs. provider data availability.

churning, i.e., borrowing from one lender to repay another, so that lenders continue to enjoy high repayment rates.

Further, we also may expect the churning of loans to pick up pace quickly during the boom phase. Our hypothesis, laid out in detail in the IFI chapter, is that this happens because in addition to the churning being aided by lenders slackening on credit assessment, the churning is in fact necessitated by the expenditure of the loans on status goods competition among borrowers, which can ratchet up very quickly, via imitation of one borrower by another. Once status goods consumption proliferates in this way, and along with it, the churning of loans as well, then both of these phenomena also become cultural traits, just as the phenomenon of a slackening in credit assessment appears as a cultural trait on the lender's side. We showed in the IFI chapter (and also argued in Section 2 above) how these two cultural traits feed into and amplify each other, and this too is the reason that the boom phase becomes quickly pronounced and a site of growing euphoria.

Our point for the reader to appreciate is that poor credit assessment on the part of lenders, coupled with loan churning among borrowers, is precisely the interactive dynamic that imparts to the boom phase of a boom-bust cycle its kinetic power as well as its amplification mechanism. In this section, we present some evidence to show that this sort of dynamic unfolds during the boom phase on the borrower side quite naturally in the microfinance market where credit is often used for status goods consumption, which is also a form of competition among borrowers.

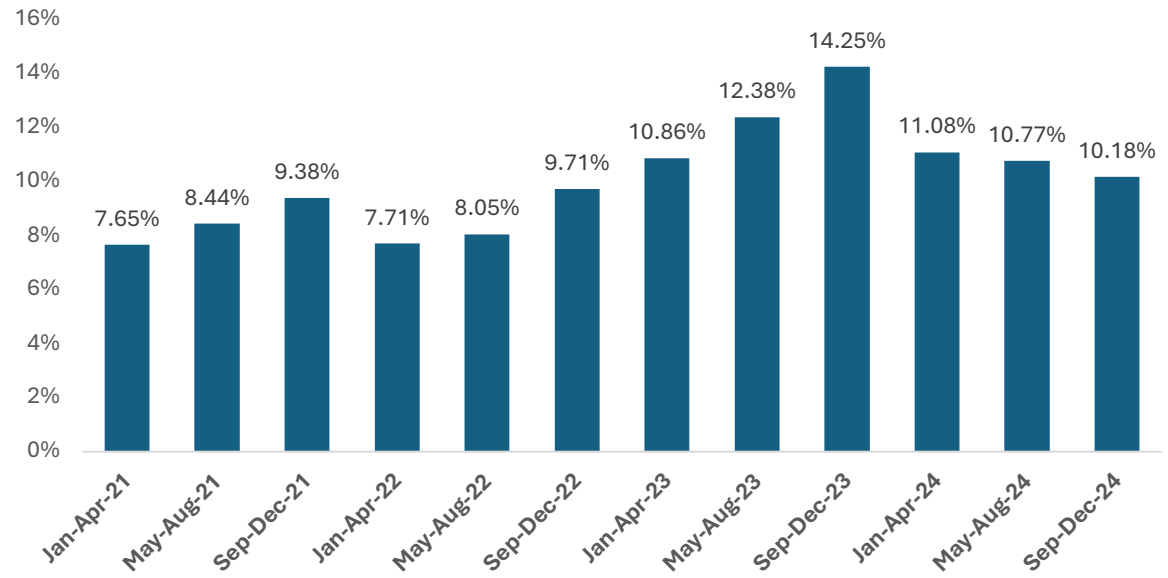
### Section 5.1: CMIE Data

First, we consider the Centre for Monitoring the Indian Economy's Consumer Pyramids Household Survey (CMIE CPHS) dataset which is India's only high frequency panel dataset of households, allowing us to document household participation in different kinds of credit markets, both formal and informal. By participation, we mean that the data allows us to observe whether a household has borrowed from a particular source or not, but not the actual loan outstanding amounts. The CMIE CPHS data also allows us to document the uses to which households put their borrowings.

Even though the CMIE CPHS dataset covers about 1,70,000 households in all, only about 126,000 households are repeated in the survey for the period we have chosen, which is Jan-Apr 2021 to Sep-Dec 2024[42], a year before the boom phase picks up momentum, up until about 6 months after the bust begins to set in. Data on these households therefore offer a true balanced panel for us to analyse trends. Figure 6 shows the percentage of all households who had microfinance borrowings. We see this number on an upward trend from the start of the period until Sep-Dec 2023, after which it begins to decline. Between May-Aug 2022 and Sep-Dec 2023, the number almost doubles from approximately 8% to approximately 14%.

[42] The CMIE CPHS data is collected in three 4-month waves every year: Jan-Apr, May-Aug, Sep-Dec.

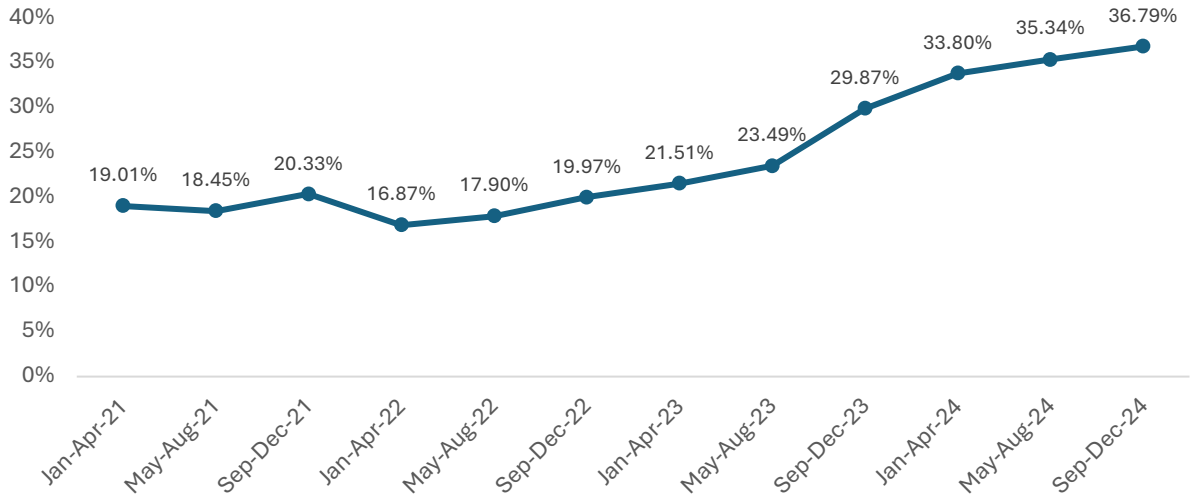
**Figure 6: Share of Microfinance-borrowing Households Among All Households**
**Sample: Panel of 120,155 Households**




Source: CMIE CPHS, Authors' calculations

Figure 7 increases the resolution – it shows the percentage of borrowing households who had microfinance borrowings. We see an even more pronounced upward trend relative to the first graph, with the number increasing from approximately 18% in May-Aug 2022 to approximately 30% in Sep-Dec 2023, and then continuing to rise by another 7 percentage points by Sep-Dec 2024.

**Figure 7: Share of Microfinance-borrowing Households Among All Borrowing Households**
**Sample: Panel of 120,155 Households**



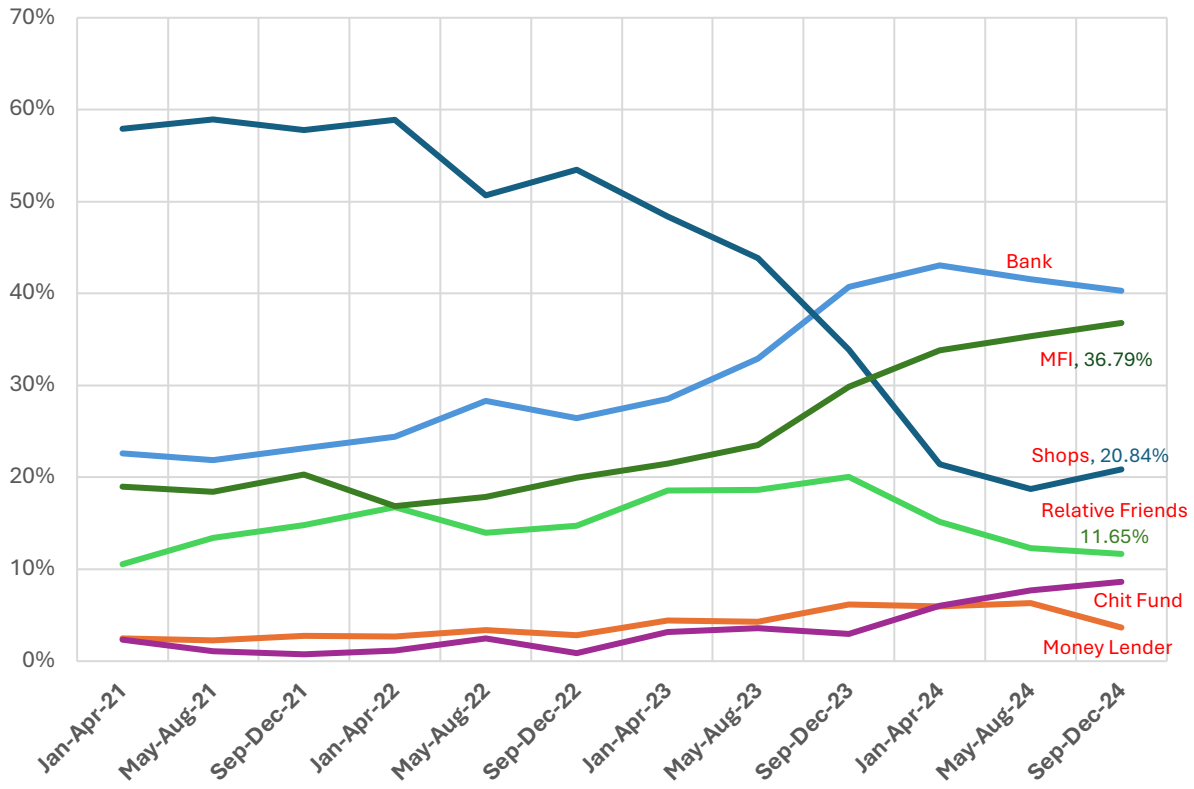

Source: CMIE CPHS, Authors' calculations

Thus, even after the bust phase set in, the percentage of borrowing households who were borrowing from microfinance institutions increased. Further, comparing Figures 6 and 7, we

find that whereas the percentage of all households who had microfinance borrowings increased by approximately 2 percentage points between May-Aug 2022 and Sep-Dec 2024, the percentage of borrowing households who had microfinance borrowings increased by approximately 20 percentage points. Although both the share of all households with microfinance loans and the share of borrowing households who relied on microfinance increased between May–Aug 2022 and Sep–Dec 2024, the latter increased much more sharply. When the microfinance share among borrowers grows substantially faster than the microfinance share among all households, it indicates that the overall pool of households taking any kind of loan has likely shrunk. In other words, microfinance became a larger part of household borrowing not only because its own footprint expanded, but also because fewer households were borrowing from other sources.

This, in turn, suggests that loans from sources other than microfinance were being retired during this period. What might have been these sources? Figure 8 provides the answer. It plots through time the shares of borrowing households that were borrowing from different sources. We see that mainly, shops and relatives/friends as loan sources became less significant for borrowing households between May-Aug 2022 and Sep-Dec 2024, with the share of borrowing households that were borrowing from shops more than halving during this period.

**Figure 8: Share of Households Borrowing from a Given Source Among All Borrowing Households**
**Sample: Panel of 120,155 Households**




Source: CMIE CPHS, Authors' calculations

How were the loans that were retired being paid off? If loans were being churned, then the answer would be other loans. Therefore, we examine the use of loans by households. Figure

9 shows the trends in the percentages of borrowing households, no matter the source of the loan, that were borrowing for a given purpose. The figure is to be read as follows: in Jan-Apr 2021, approximately 65% of all borrowers were borrowing for consumption purposes[43], approximately 10% were borrowing for vehicle purchases, and approximately 12% were borrowing for repaying loans. The figure clearly indicates that the share of borrowing households that were borrowing for consumption purposes declined significantly (more than halved) between May-Aug 2022 and Sep-Dec 2024, while the share of borrowing households that were borrowing to repay loans increased significantly (more than doubled) during this same period.

**Figure 9: Share of Households Borrowing for a Given Purpose Among All Borrowing Households**
**Sample: Panel of 120,155 Households**

| Period | *Consumption Expenditure* | *Education* | *Medical Expenses* | *Vechile* | *Wedding* | *Consumer Durables* | *Repayment* |
|---|---|---|---|---|---|---|---|
| Jan-Apr-21 | 64.81% | 0.31% | 0.49% | 10.43% | 1.77% | 5.02% | 12.22% |
| May-Aug-21 | 65.80% | 0.29% | 0.51% | 9.90% | 1.79% | 4.00% | 11.63% |
| Sep-Dec-21 | 64.96% | 0.25% | 0.59% | 10.98% | 2.12% | 4.40% | 13.43% |
| Jan-Apr-22 | 67.00% | 0.30% | 0.51% | 11.55% | 2.13% | 3.71% | 13.09% |
| May-Aug-22 | 59.26% | 0.34% | 0.49% | 13.71% | 1.91% | 3.42% | 15.14% |
| Sep-Dec-22 | 59.88% | 0.69% | 0.78% | 14.28% | 2.12% | 4.73% | 15.53% |
| Jan-Apr-23 | 56.41% | 0.60% | 0.89% | 17.18% | 2.33% | 5.82% | 15.73% |
| May-Aug-23 | 51.39% | 0.75% | 1.17% | 19.47% | 2.96% | 8.39% | 17.36% |
| Sep-Dec-23 | 42.74% | 1.08% | 1.72% | 21.61% | 3.56% | 9.77% | 20.76% |
| Jan-Apr-24 | 27.79% | 0.72% | 1.58% | 21.53% | 2.82% | 8.12% | 24.43% |
| May-Aug-24 | 19.45% | 0.98% | 1.15% | 22.42% | 2.15% | 8.30% | 29.29% |
| Sep-Dec-24 | 19.81% | 0.68% | 0.75% | 20.38% | 2.46% | 6.62% | 28.91% |

Source: CMIE CPHS, Authors' calculations

Figure 10 increases the resolution to just MFI-borrowings. It shows the trends in the percentages of MFI-borrowing households that were borrowing for a given purpose (i.e., trend in the ratio given by the number of households borrowing from MFIs for a given purpose divided by the number of households borrowing from any source for that same purpose). The first thing to note is that among households that were borrowing for consumption purposes, the share of households that were borrowing from MFIs for those purposes remains consistently small throughout the entire period under consideration. This is in stark contrast to the corresponding shares for vehicles and consumer durables. We would characterise both of these latter categories as falling under the rubric of status goods. Weddings too belong to the same rubric, and we find that between May-Aug 2022 and Sep-Dec 2024, the share of MFI-borrowing households among households that were borrowing from any source for weddings remained roughly the same, and almost always quite a bit higher than the share of MFI-borrowing households among households that were borrowing from any source for consumption purposes. The most remarkable stylized fact to be gleaned from Figure 10, however, is the share of MFI-borrowing households among households that were borrowing from any source to repay loans, and how this share changes over time. Not only does this

[43] This covers necessities, i.e., daily provisions such as food and beverages, liquor and tobacco products, clothing, rents and bills, entertainment, cosmetics toiletries, fuel, transport, communications, or other regular household expenses.

share consistently bear out that repaying loans was the most significant purpose of MFI borrowings (only consumer durables is more significant in the first few waves of the dataset), but this share increases by almost 20 percentage points between May-Aug 2022 and Sep-Dec 2024.

**Figure 10: Share of MFI-Borrowing Households Borrowing for a Given Purpose Among All Households Borrowing for That Purpose**

**Sample: Panel of 120,155 Households**

| Period | *Consumption Expenditure* | *Education* | *Medical Expenses* | *Vechile* | *Wedding* | *Consumer Durables* | *Repayment* |
|---|---|---|---|---|---|---|---|
| Jan-Apr-21 | 1.14% | 21.05% | 5.59% | 59.87% | 5.26% | 70.01% | 64.50% |
| May-Aug-21 | 0.74% | 35.14% | 9.38% | 58.91% | 6.18% | 76.10% | 72.62% |
| Sep-Dec-21 | 1.06% | 25.45% | 5.45% | 52.84% | 4.65% | 70.59% | 70.20% |
| Jan-Apr-22 | 1.28% | 34.88% | 6.33% | 44.13% | 6.66% | 58.66% | 59.49% |
| May-Aug-22 | 1.16% | 21.48% | 12.95% | 35.85% | 10.25% | 52.60% | 55.47% |
| Sep-Dec-22 | 1.10% | 25.59% | 12.54% | 42.72% | 7.52% | 34.54% | 58.88% |
| Jan-Apr-23 | 1.88% | 27.67% | 8.97% | 41.61% | 9.10% | 34.74% | 57.20% |
| May-Aug-23 | 2.88% | 15.08% | 6.71% | 36.59% | 8.71% | 28.19% | 59.66% |
| Sep-Dec-23 | 6.20% | 14.21% | 8.46% | 27.85% | 13.16% | 32.79% | 69.61% |
| Jan-Apr-24 | 9.72% | 11.29% | 9.58% | 21.40% | 11.83% | 47.49% | 74.88% |
| May-Aug-24 | 3.85% | 6.79% | 10.00% | 25.60% | 8.79% | 43.26% | 75.32% |
| Sep-Dec-24 | 2.12% | 9.64% | 8.65% | 30.81% | 8.26% | 41.11% | 78.56% |

Source: CMIE CPHS, Authors' calculations

What Figures 6-10 taken together indicate is that (a) between May-Aug 2022 and Sep-Dec 2024, more and more borrowing households were coming to rely on MFI borrowings, and fewer and fewer of them were coming to rely on borrowings from shops or from relatives/friends, (b) the increasing share of MFI-borrowing households among all borrowing households was matched by an increasing reliance on MFI-borrowings to repay other loans, and (c) aside from loan repayments, the status goods categories of vehicles and consumer durables were significant purposes for MFI borrowings among households that were borrowing from any source to spend on those categories. We next discuss these results in a little more detail.

The combination of (a) and (b) is revealing since it hints that MFI loans were being used to repay loans from shops and loans from relatives/friends. This defies rational calculation since the latter types of loans are typically much lower interest rate loans than the former type of loans. And yet, this is what we would expect if we believed that borrowing and repayment patterns are driven as much by social relations, which are imbued with affect, as by rational calculation. To validate further the connection between MFI loans on the one hand and loans from shops and loans from relatives/friends, respectively, on the other, we ran two regressions.

For the first regression, we only considered a sample of 27,874 households who had a shop loan in any wave during the 12 waves of the CMIE CPHS survey spanned by our focus period of Jan-Apr 2021 to Sep-Dec 2024. An observation is then a household-wave combination, and

there are 27,874 times 12 observations[44]. We created two dummy variables for each observation. The first dummy variable takes the value 1 if the household-wave observation registers no shop loan for the household in that wave but a shop loan for the household in the previous wave. Thus, this dummy captures the closure of shop loans for a household-wave combination. The second dummy takes the value 1 if the household-wave observation registers the presence of a microfinance loan for the household in that wave. We then regress the first dummy on the second dummy, while controlling for household characteristics such as income group, age group, education group, gender group, etc. The specification used was a fixed effects panel logit model, since the Hausman test rejected a random effects model. That is, we are examining whether the presence of an MFI loan is associated, via a logistic relation, with the closure of a shop loan. We find that it is, and significantly so in both statistical and economic senses. The results are shown in the 2nd and 3rd columns of Table 1. Households with MFI loans were 73.7% more likely to close shop loans, and this odds ratio is statistically significant at the 1% level.

For the second regression, we only considered a sample of 18,944 households who had a loan from a relative/friend in any wave during the 12 waves. Again, we construct dummies in a similar manner as just described, and the objective now is to examine whether the presence of an MFI loan is associated with the closure of a loan from a relative/friend. We find that is, and significantly so in a statistical sense, but somewhat less significantly so in an economic sense. The results are shown in columns 4 and 5 of Table 1. Households with MFI loans were 27.3% more likely to close loans from relatives/friends, and this odds ratio is statistically significant at the 1% level.

**Table 1: Does the Presence of Microfinance Borrowings explain Closure of Shop Loans and Closure of Loans from Relatives/Friends?**

| | **Closure of Loans from Shops** | | **Closure of Loans from Relatives/Friends** | |
|---|---|---|---|---|
| **Explanatory Variables** | **Odds Ratio (M1)** | **P-Value** | **Odds Ratio (M2)** | **P-Value** |
| **MFI Borrowing** | 1.737 | 0.000 | 1.273 | 0.000 |
| ***Control Variables*** | | | | |
| **Income Group** | | | | |
| *less than 2.50 lakh* | 1.355 | 0.000 | 1.234 | 0.000 |
| *less than 10 lakh* | 1.666 | 0.000 | 1.318 | 0.000 |
| *greater than 10 lakh* | 1.605 | 0.000 | 1.153 | 0.043 |
| *less than 1 lakh* | 1.564 | 0.000 | 1.216 | 0.184 |
| **Age Group** | | | | |
| *Balanced households with no Seniors* | 0.937 | 0.350 | 0.881 | 0.189 |
| *Children - dominant* | 0.825 | 0.311 | 0.814 | 0.443 |
| *Grown-up - dominant* | 1.067 | 0.350 | 0.920 | 0.382 |

[44] Strictly speaking, the actual number of observations available for the regression is smaller than this mathematical product since we use a fixed-effects logit estimator and most software packages will drop observations belonging to units with no within-unit variation in the dependent variable.

| | | | | |
|---|---|---|---|---|
| *Other households of the Young* | 1.005 | 0.956 | 1.106 | 0.363 |
| *Other households of Grown-ups* | 1.045 | 0.524 | 0.991 | 0.928 |
| *Seniors - dominant* | 1.280 | 0.002 | 0.941 | 0.571 |
| *Youngsters - dominant* | 0.830 | 0.012 | 0.849 | 0.108 |
| **Education Group** | | | | |
| *Medium* | 0.982 | 0.801 | 0.928 | 0.422 |
| *High* | 0.965 | 0.590 | 0.853 | 0.058 |
| **Gender Group** | | | | |
| *Female Dominated* | 0.929 | 0.219 | 0.891 | 0.143 |
| *Female Majority* | 0.897 | 0.003 | 0.946 | 0.245 |
| *Male Dominated* | 0.910 | 0.048 | 0.829 | 0.003 |
| *Male Majority* | 0.981 | 0.541 | 0.911 | 0.023 |
| *Only Females* | 1.134 | 0.105 | 0.953 | 0.613 |
| *Only Males* | 1.070 | 0.482 | 1.068 | 0.593 |
| **Occupation Group** | | | | |
| *Business & Salaried Employees* | 1.011 | 0.861 | 1.061 | 0.482 |
| *Entrepreneurs* | 1.197 | 0.004 | 1.144 | 0.098 |
| *Home-based Workers* | 0.869 | 0.214 | 1.070 | 0.604 |
| *Industrial Workers* | 0.964 | 0.484 | 1.139 | 0.052 |
| *Legislators/Social Workers/Activists* | 1.770 | 0.021 | 1.950 | 0.071 |
| *Managers/Supervisors* | 1.064 | 0.711 | 0.880 | 0.633 |
| *Miscellaneous* | 1.125 | 0.117 | 0.970 | 0.752 |
| *Non-industrial Technical Employees* | 0.956 | 0.387 | 0.954 | 0.474 |
| *Organised Farmers* | 0.924 | 0.143 | 0.983 | 0.809 |
| *Qualified Self-employed Professionals* | 1.140 | 0.366 | 1.278 | 0.297 |
| *Retired/Aged* | 0.985 | 0.765 | 1.046 | 0.497 |
| *Self-employed Entrepreneurs* | 0.953 | 0.294 | 1.008 | 0.893 |
| *Small Traders/Hawkers* | 0.949 | 0.405 | 1.172 | 0.034 |
| *Small/Marginal Farmers* | 1.018 | 0.700 | 1.039 | 0.530 |
| *Support Staff* | 0.887 | 0.022 | 1.098 | 0.159 |
| *Wage Labourers* | 0.854 | 0.000 | 0.930 | 0.186 |
| *White-collar Clerical Employees* | 0.975 | 0.695 | 1.142 | 0.131 |
| *White-collar Professional Employees* | 1.019 | 0.773 | 0.950 | 0.570 |
| **No. of Houses owned** | 1.315 | 0.000 | 1.102 | 0.108 |
| ***LR chi2(39)*** | *846.420* | *0.000* | *203.700* | *0.000* |
| ***No. of Observations*** | ***241584*** | | ***129721*** | |
| ***No. of Households*** | ***27,874*** | | ***18,944*** | |

Source: CMIE CPHS, Authors' calculations

Both regressions reinforce the summary observations from the figures earlier – that formal MFI loans and informal loans from shops and relatives/friends interact in ways that go beyond a simplistic framing of formal loans being always economic substitutes for informal loans, especially because that framing would deem it somewhat necessary that low-interest rate loans be used to refinance high-interest rate loans[45]. Here, on the other hand, we find that the interaction between the two kinds of loans traversed relational pathways that exceeded or even transgressed straightforward rational calculations. Further, we also find that it was the shop-loan borrowing households who spent the loan mostly for consumption purposes, whereas it was the relatives/friends-loan borrowing households who spent the loan mostly for weddings[46]. Thus, if MFI loans were being used to repay these other loans, it means that MFI loans were indirectly financing both the consumption of necessities and also the consumption of status goods. This is over and above result (c), which shows that MFI loans were directly financing status goods consumption.

Despite its many advantages, the CMIE CPHS data has been known to suffer from biases of representation, and also, it does not tell us about the intensive margin – what the values of the borrowings were from different sources and therefore what the actual debt-financed expenditures were for the different categories of spending. Therefore, we continue our empirical investigation into the borrowers' behaviour by consulting another panel dataset, which does contain intensive margin data.

### Section 5.2: IFP Data

This panel dataset was collected from 10 villages in districts of Tamil Nadu lying between Cuddalore and Kallakurichi, by researchers from the French Institute of Pondicherry (IFP)[47]. The data was collected in two rounds, in 2016/17 (pertaining to the 2015/16 year and immediately prior months), and in 2020/21 (pertaining to the 2019/20 year and immediately prior months). Surveys were administered for both households as well as individuals, and we will be concerned with the household-level data only as that offers a full-spectrum view of household finances. The number of households for which panel data is available across the two rounds is 485. However, the first round covered 6 additional households that were not covered in the second round. We are unable to separate these 6 households out, as the only marker for a household being repeated is a tag in the second round which identifies the household as one that is being repeated, but there is no other marker common to both rounds

[45] We say "somewhat" here because there is a rational argument for repaying a low-interest rate loan with a high-interest rate outside of the interest-cost consideration, and that is if the former type of loan is small-ticket and large in number on any particular household balance sheet, while the latter type of loan is large-ticket and small in number on that same balance sheet. In other words, there is an aggregation benefit to be exploited, and this would make rational sense in the context that we are considering because indeed, on any particular household balance sheet, MFI loans are likely to be lumpy and few in number, while shop loans are likely to be much smaller-sized and larger in number.

[46] Among households that borrow to meet consumption expenditure, the share that borrow from shops for this purpose starts at 88% in Jan-Apr 2021, declines steadily to reach 68% in Jan-Apr 2024, and then picks back up to end at 89% in Sep-Dec 2024. Among households that borrow for weddings, the share that borrow from relatives/friends for this purpose hovers between 45% and 65% during the entirety of the period under consideration.

[47] We acknowledge a debt of gratitude to the IFP researchers (Isabelle Guerin and Jalil Nordman, in particular) for sharing their data with us.

that would allow us to map a repeated household in the second round to its counterpart in the first round. Therefore, our sample is 491 households for 2016/17 and 485 households for 2020/21. For these households, the following information of interest to us is available – expenditures on different spending categories, all loans taken along with amount and source for each loan, and the "effective reason" at the time of using each loan (as opposed to the "stated reason" at the time of borrowing each loan, which could have been different). Our objective is to use data on these variables to examine the phenomenon of status goods consumption, and the use of microfinance loans to fund such consumption.

Two possible objections to our use of the IFP data need to be addressed before we proceed. The first is that the period that the IFP data spans does not correspond to the boom phase of the most recent cycle, and the second is that the very confined locus of data collection is not representative of India. Both points are conceded, but we believe that there is still something to be gained from examining this data, and that is because it spans a period containing the boom phase of a boom-bust cycle. We refer back to Figures 2 and 3, in which a cycle is clearly observable between 2015 (one peak) and 2019 (the next peak). Therefore, if we expect that boom phases in all boom-bust cycles bear some characteristic features such as an increase in loan churning, or an increase in status goods consumption financed by borrowings, then we have good reason to examine the IFP data, even if it does not span the period of the most recent cycle, or if it is not representative of India. We note that data on borrowers' use of microfinance loans is difficult to come by, and therefore the borrower-side features of a boom phase are to a very large degree understudied. Detailed panel data on the borrower's activities with loans is extremely rare to come by in India. We will see that even with the IFP data, there will be some degree of measurement error in reaching the conclusions that we reach. But the data is the best we have, and it gets us quite close to the answers we are seeking to find. Above all, our work with the IFP data is meant to highlight the importance of such data in terms of both understanding the borrower's side and also validating the kinds of theoretical arguments we have made earlier in our IFI chapter. Without such data, it would be impossible to properly explore such theoretical arguments, and it is largely the absence of such data that has resulted in such theoretical arguments not even being considered by the financial inclusion policy discourse in the first place.

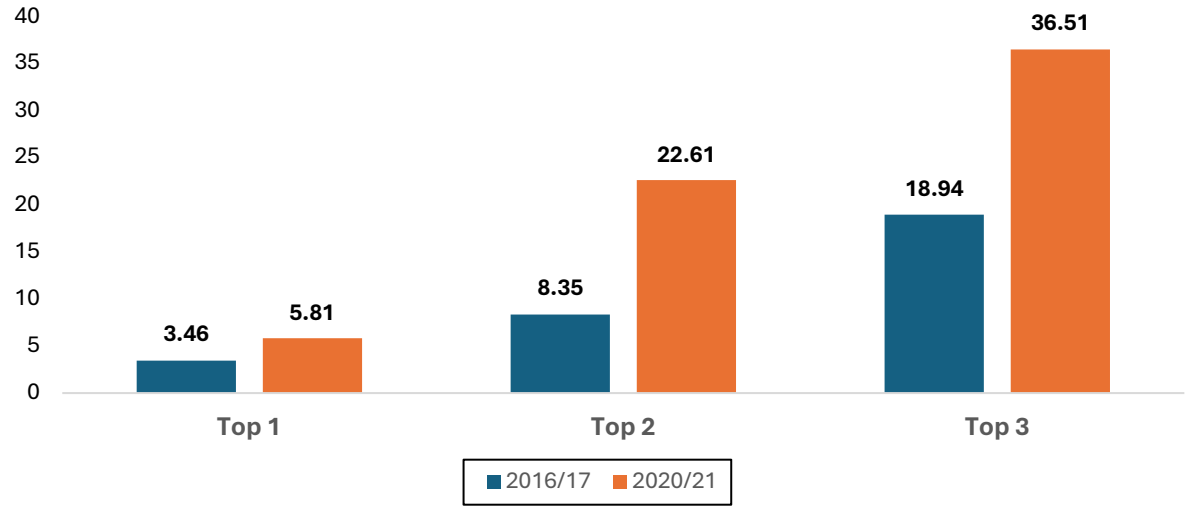
We begin with some definitions. In the IFP dataset, among spending categories, "goods" refers to mostly white goods or consumer durables such as cars, bikes, fridges, furniture, cell phones, DVDs, cameras, dish antennas, etc. but also one item that is not strictly a consumer durable, viz. a tailoring machine. There is no way for us to separate this item out in the data and therefore we acknowledge a small degree of measurement error, which we believe is acceptable since it is only the one item, in classifying "goods" as consumer durables. Alongside goods, we also include the following other IFP spending categories under the rubric of "status goods" – marriages within the household, ceremonies and festivals for household members, ceremonies and festivals for members outside the household, deaths within the household. The other spending categories represented in the IFP dataset are food, education, health, and rent.

It is important to note that while these spending categories are the choices offered to the respondent when data is collected on household expenses, these same choices are not exactly

replicated when the respondent is asked about the stated and effective reasons for borrowing. This is to be expected as the latter two reasons will include the category of repaying other loans which is not a natural candidate to be considered as a "spending" category. Still, it is a shortcoming of the data that whereas "goods" is a spending category, it is not explicitly one of the effective reasons for borrowing. Instead, the choices for the effective reason are the following: family expenses, health expenses, house expenses, marriage, education, ceremonies, relatives, death, investment, agriculture, and repayment of previous loans. We infer from reading the survey manual that the "goods" category is captured in this list under "family expenses" and "house expenses". We do not encounter the same problem with the other status good types, all of which appear in exactly the same form under spending categories and under effective reasons for borrowing.

The first step in our analysis will be to look just at the "goods" category, or consumer durables. We ask how economically significant expenditure on consumer durables is, for the households in the 10 villages under question. Figure 11 provides the answer. It shows for each of the rounds of data, the percentage of households for which "goods" is the top spending category, among the top two spending categories, and among the top three spending categories.

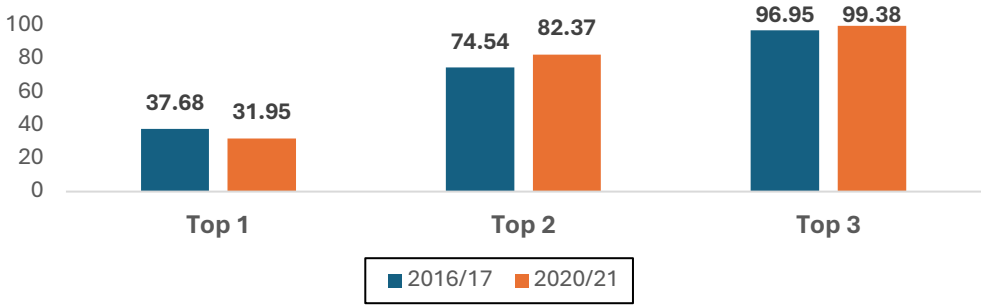
**Figure 11: Distribution of Households by Rank of "Goods" Expenditure in Total Household Expenditure (Sample: 491 Households in 2016/17, 485 Households in 2020/21)**




Source: IFP, Authors' calculations

The important thing to note from the figure is not only that more than 1 out of 5 households reports "goods" as one of the top 2 spending categories in 2020/21, but that this percentage has consistently increased for each of the rank types we look at, between 2016/17 and 2020/21. This is necessary (but not sufficient) evidence for our hypothesis that "goods" consumption is likely to demonstrate network effects – in other words, such consumption spreads by imitation, and is therefore a cultural trait. Next, when we enlarge the scope of our inquiry to cover all status goods, as defined above, we find the same pattern, and of course much higher proportions of households in each rank type. Status goods are among the top 2 spending categories for at least 3 out of 4 households in both 2016/17 and 2020/21. Figure 12 illustrates.

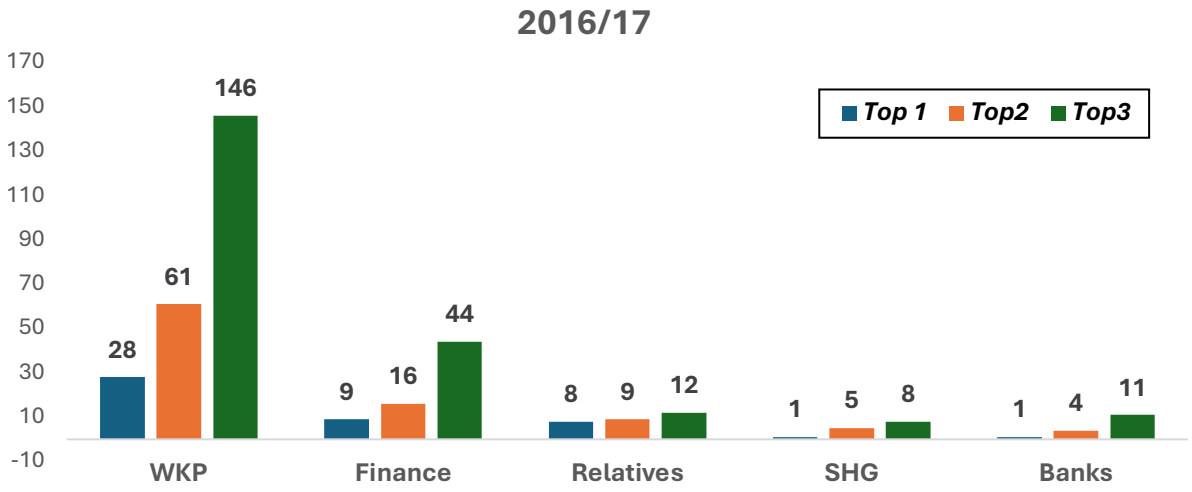
**Figure 12: Distribution of Households by Rank of Status Goods Expenditure in Total Household Expenditure (Sample: 491 Households in 2016/17, 485 Households in 2020/21)**



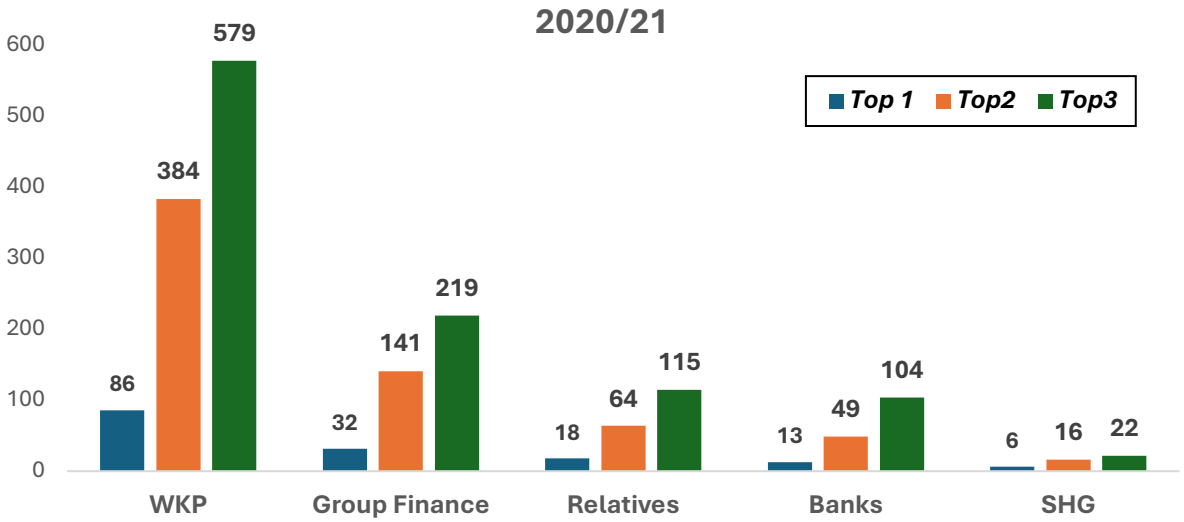

Source: IFP, Authors' calculations

If status goods is one of the top 2 spending categories for 3 out of 4 households in 2016/17 and 2020/21, then either food or education or health turn out to be the other for most of these households (but we do not show the numbers here for want of space). Next, we inquire into the sources of borrowing for the households for whom "goods" was the top, or one of the top 2, or one of the top 3, spending categories. Figure 13 shows the data for 2016/17 and 2020/21. Here, "WKP" refers to a Well-Known Person (outside of the immediate or even extended family)[48], "Finance" refers to a Moneylender, and "Group finance" refers to Joint Liability Group (JLG) loans. The figure is to be read as follows: in 2016/17, for households for whom "goods" spending was in the top 2 spending categories, 61 loans were sourced from WKP, and so on.

**Figure 13: Borrowing Source for Households in Rank Groups for "Goods" Spending (Sample: 491 Households in 2016/17, 485 Households in 2020/21)**




[48] The survey questionnaire uses the Tamil word "Therinjavanga", which can have different meanings, but for the survey, it refers to people one knows that are not part of one's family or relatives. These are familiar contacts such as one's father's friend, someone from one's old neighbourhood, or any other acquaintance – anyone, in other words, that is not a family member or a relative.



Source: IFP, Authors' calculations

We may combine the categories of "Group finance", "SHGs" and "Banks" to create the composite category of "microfinance" loans. What Figure 13 then reveals is that between 2016/17 and 2020/21, microfinance loans gain significant ground relative to other sources to become the second most important source of borrowings for households for whom "goods" is one of the top 2 spending categories. This is not yet evidence of a network effect in action, since we would expect to see necessary evidence of this at the level of households, and not at the level of loans. And indeed, this is what we find when we look at the households behind the loans shown in Figure 13. In 2016/17, 32 households in the top 2 "goods" spending category were borrowing from WKPs, 15 in this category were borrowing from "Finance" (i.e., moneylenders), 11 from Relatives, 5 from SHGs, and 3 from Banks. In 2020/21, moneylenders had been displaced altogether from the top 5 loan sources – 101 households were borrowing from WKPs, 54 from "Group Finance" (i.e. JLGs), 30 from Relatives, 21 from Banks, and 15 from SHGs. Comparing 2016/17 and 2020/21, then, provides necessary evidence for a network effect at the overall level of borrowing, and also for microfinance loans. That is, there is necessary evidence that as microfinance became more readily available during the boom phase between 2015/16 and 2019/20, more and more households began to borrow from that source. The same patterns emerge for households in the top 1 spending category, and for households in the top 3 spending category.

Further, the same patterns also emerge when we look at the composite spending category of status goods. Figure 14 shows the numbers for loans.

**Figure 14: Borrowing Source for Households in Rank Groups for Status Goods Spending (Sample: 491 Households in 2016/17, 485 Households in 2020/21)**


Source: IFP, Authors' calculations

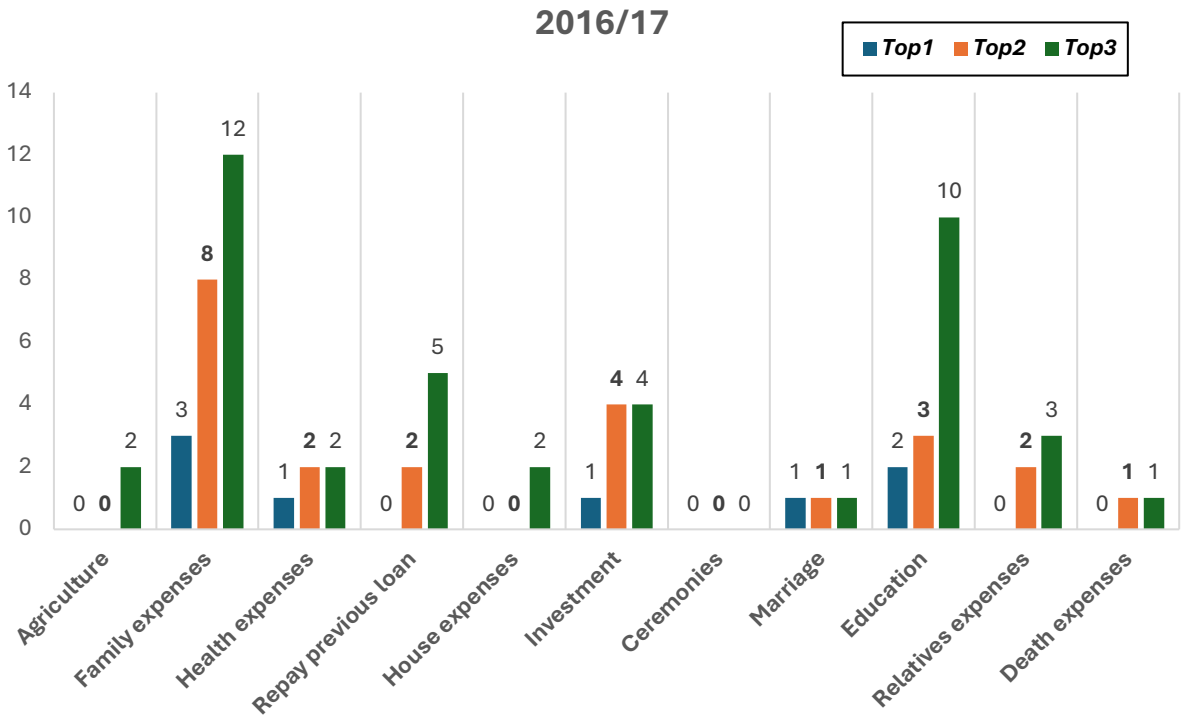
The numbers in Figure 14 provide necessary evidence for a network effect at the level of households. In 2016/17, 262 households in the top 2 status goods spending category were borrowing from WKPs, 147 in this category were borrowing from Relatives, 103 from "Finance" (i.e., moneylenders), 38 from Banks, and 23 from SHGs. In 2020/21, moneylenders had again been displaced altogether from the top 5 loan sources – 344 households were borrowing from WKPs, 160 from "Group Finance" (i.e. JLGs), 156 from Relatives, 123 from Banks, and 52 from SHGs. The same patterns emerge for households in the top 1 spending category, and for households in the top 3 spending category.

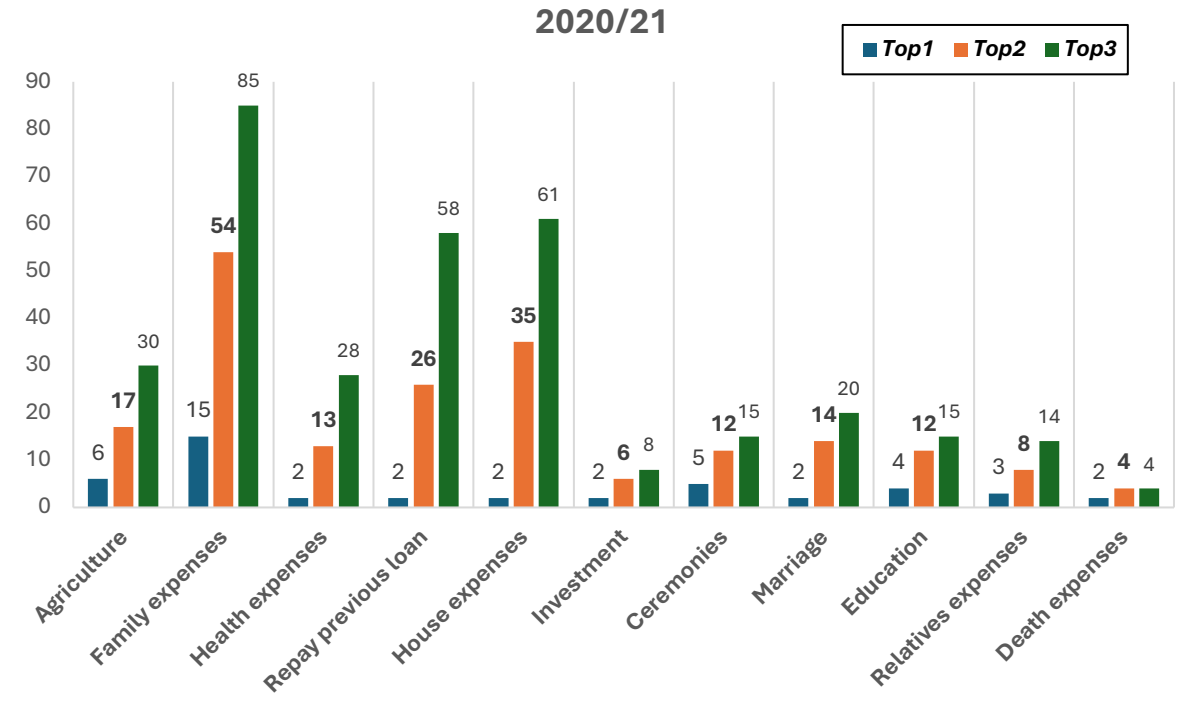
Now, it is important to recognize that the source of borrowing cannot be explicitly tied to the spending category since the latter is not necessarily the effective reason for the former. Thus, we cannot yet claim that we have demonstrated what we set out to do – that microfinance loans were being used, and increasingly so, as the boom gained momentum, to finance status

goods consumption. For this, it is necessary to triangulate the three kinds of data (importance of spending category, source of borrowing no matter the end-use, and effective reason for a particular kind of borrowing), precisely because the categories for effective reason do not exactly replicate those for spending.

Therefore, next, we investigate the effective reasons for microfinance loans (from "Group finance", "SHGs", or "Banks") for each of the types of households under consideration – those for whom "goods"/status goods were the top spending category, those whom these were one of the top 2 spending categories, and those for whom these were one of the top 3 spending categories. Figure 15 shows the data for "goods", while Figure 16 shows the data for status goods. Figure 15 is to be read as follows: in 2016/17, for households for whom "goods" spending was in the top 2 spending categories, 8 MFI-borrowings were for family expenses, and so on. Similarly, for Figure 16.

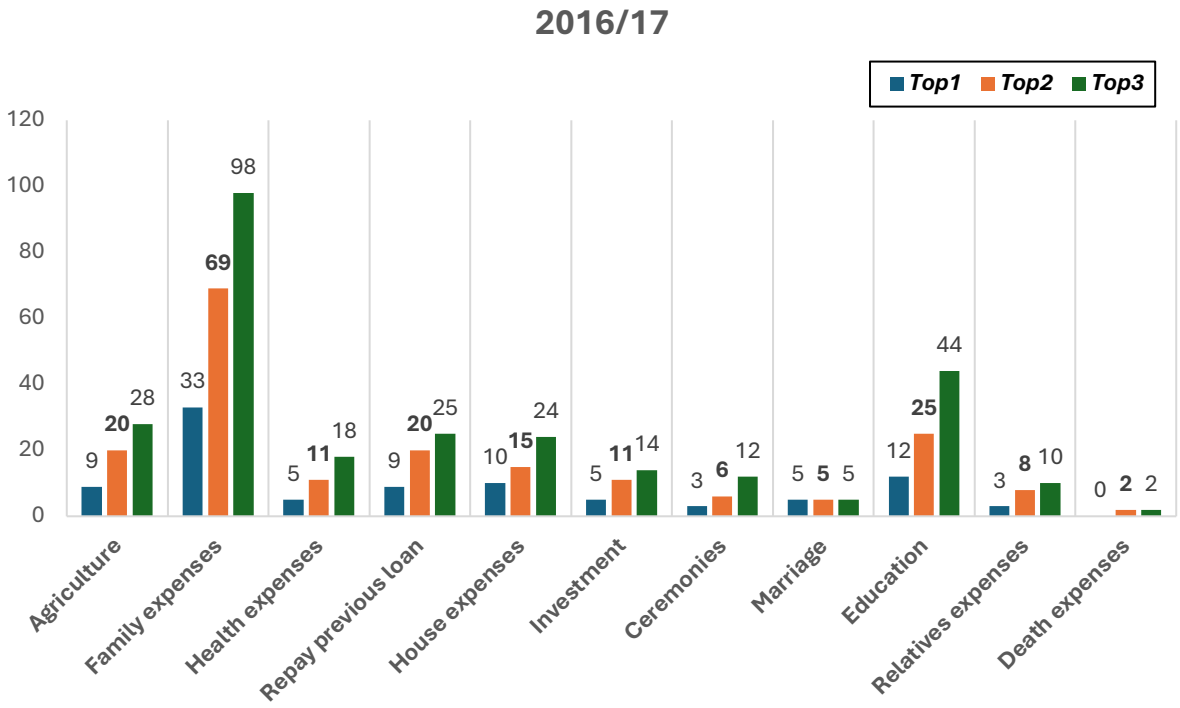
**Figure 15: Effective Reason for MFI Borrowings for Households in Rank Groups for "Goods" Spending (Sample: 491 Households in 2016/17, 485 Households in 2020/21)**

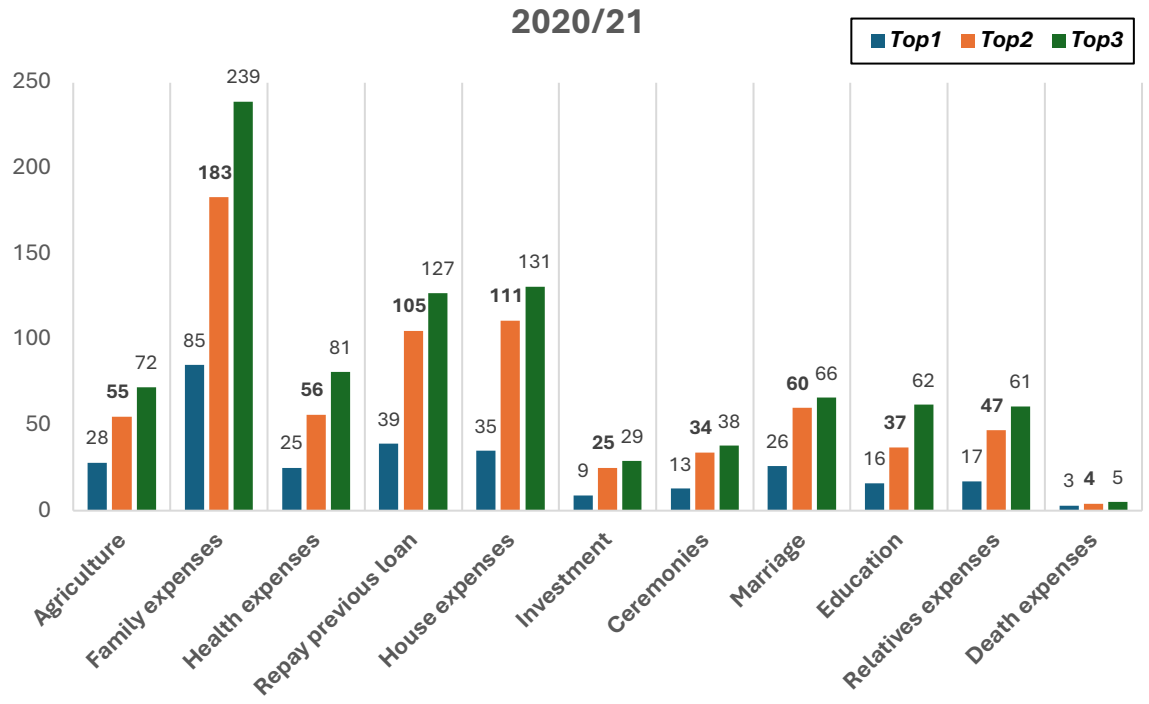





Source: IFP, Authors' calculations

**Figure 16: Effective Reason for MFI Borrowings for Households in Rank Groups for Status Goods Spending (Sample: 491 Households in 2016/17, 485 Households in 2020/21)**






Source: IFP, Authors' calculations

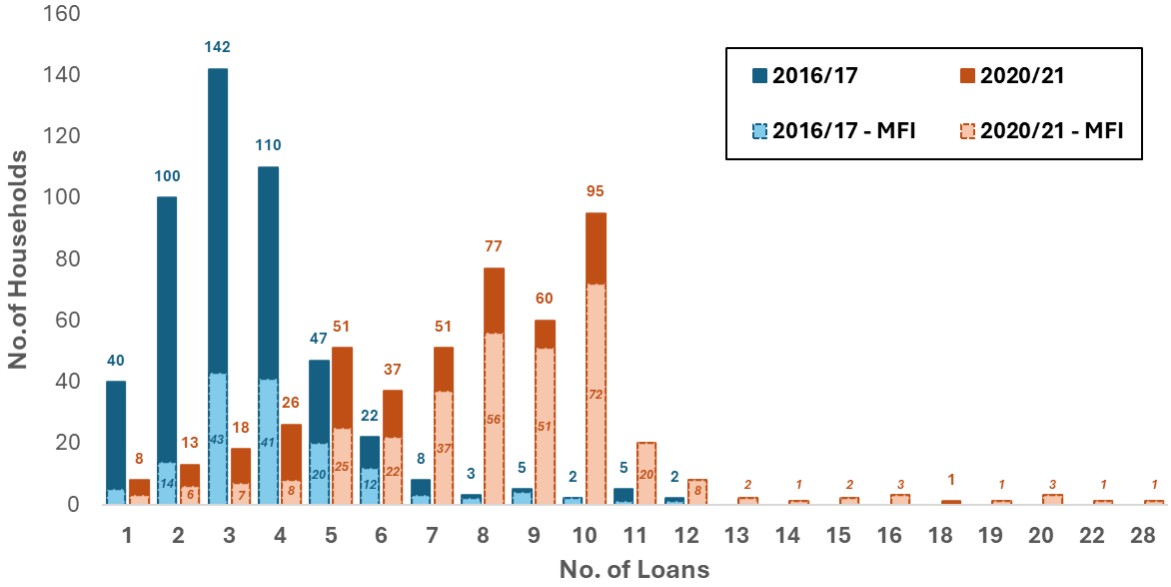
For ease of interpretation (but without loss of generality), we draw the reader's attention to only the orange bars in each of the four bar charts shown in Figures 15 and 16, indicating the data for households for whom the relevant spending categories ("goods" or status goods) were one of the top 2. Now, consider the composite category formed by combining the following effective reasons – family expenses, house expenses, ceremonies, relatives expenses, marriage, and death expenses. This composite is not exactly equivalent to status goods, but it comes close (food expenses are the only confounding variable that, by virtue of its presence in the composite but not in status goods, prevents us from establishing an exact correspondence). The most important takeaway from these figures is that between 2016/17 and 2020/21, microfinance gains in tremendous significance as a borrowing source for the consumption of this composite category. If we assume that the role of microfinance in funding food expenses could not have increased significantly between 2016/17 and 2020/21, and we also take into account the growing significance of microfinance between 2016/17 and 2020/21 in general (from Figures 13 and 14) – here is the triangulation – then we are able to arrive at the result we are seeking to establish, which is that microfinance grew significantly in importance between 2016/17 and 2020/21 as a source of borrowing for status goods consumption. Further, what is even more striking, but perfectly in alignment with our hypothesis, and what we also observed in the CMIE data, is the significant increase in the importance of microfinance loans for repaying other loans, between 2016/17 and 2020/21. It is possible to show, when the number of households is considered instead of the number of loans – just as we have done for Figures 13 and 14 – that the increase in importance of microfinance in funding status goods consumption and in repaying other loans is also necessary evidence of network effects.

The reader may object that our assumption about the role of microfinance in funding food expenses having undergone no change between 2016/17 and 2020/21 cannot be correct. This is a reasonable objection since the 2020/21 data covers the Covid period, and it is likely that during lockdown, with little regular income coming in, the households in these 10 villages may have increased their reliance on microfinance for food expenses. Two counter-arguments would help to maintain the validity of our earlier conclusion. The first is that if we remove family expenses and house expenses from the composite category, then our argument goes through for at least the remaining kinds of status goods, as it is indeed the case that for relatives expenses, ceremonies, marriage and death expenses, the importance of microfinance clearly increased between 2016/17 and 2020/21, and no triangulation is needed to see this. Guerin et al. (2024), who work with the same data, report a similar finding – that during Covid, the majority of borrowings by the households were for "social reproduction" purposes, such as ceremonies (accounting for 45% of borrowings) and social obligations such as receiving guests and helping others (accounting for another 28.6%)[49]. Now, the Guerin et al. (2024) claim is not about microfinance per se, but rather for all loans no matter the source, but we may infer that microfinance is heavily implicated, given what we report in Figures 15 and 16. The second counterargument is that the CMIE data has already shown us that throughout its 12 waves, shop loans (and not microfinance) were a highly significant source of borrowing for meeting consumption expenditures, of which food was a major item. And it is quite likely that the "WKP" category in the IFP data overlaps to a significant extent with the (implied) shop-owners category in the CMIE data. After all, there is no separate category in the IFP data that captures shop loans. The reasonable inference to be drawn then is that food expenses during Covid were mostly met out of WKP loans and not directly out of microfinance loans, even if microfinance loans may have been used later to retire the WKP loans, as we saw happen in the context of CMIE data.

Finally, the surest sign of growing mania on the borrowers' side of the market is an increasing number of loans on any single household's balance sheet. Therefore, we look at this number next. Figure 17 shows the distribution of households by the total number of loans they held, as well as, for each loan number, the number of households that were borrowing from one of the three microfinance sources.

[49] Guérin, Isabelle, Nithya Joseph, Sébastien Michiels, et al. *A Crisis like No Other: Gendered Burdens and Caste Dynamics of Debt and Food Insecurity during the COVID-19 Pandemic in Tamil Nadu*. French Institute of Pondicherry, French National Research Institute for Sustainable Development (IRD) and King's College London, 2024. https://odriis.hypotheses.org/projects/data/depletedbydebt

**Figure 17: Distribution of Households Across Number of Loans**




Source: IFP, Authors' calculations

In 2016/17, 486 borrowing households held a total of 1,697 loans, averaging 3 loans per household, with the largest group (142 households) holding 3 loans each. By 2020/21, the total number of loans had more than doubled, reaching 3,713 across 479 borrowing households. The average number of loans per household also more than doubled, increasing from 3 to 8, with the highest number of households (95) holding 10 loans each. This shift in the distribution, moving from a peak of 3 loans per household in 2016/17 to a peak of 10 loans per household in 2020/21, clearly reflects the significant escalation in borrowing during this period. Furthermore, Figure 17 shows that as the number of households with a higher number of loans increased, the share among those households that were borrowing from microfinance sources also increased. Thus, in 2016/17, out of the 142 households that had 3 loans each, only 43 among them had borrowed from microfinance sources. But in 2020/21, out of the 95 households that had 10 loans each, as many as 72 among them had borrowed from microfinance sources.

In concluding this section, our analysis of CMIE and IFP datasets strongly suggests that the boom phase of a boom-bust cycle demonstrates characteristic features of an affective logic gaining momentum on the borrower's side of the market. This logic implicates an increased propensity to use microfinance loans for status goods consumption and for repaying other loans. It is important to note that these two activities occur simultaneously, because that provides much of the kinetic power for the logic to cycle between the borrower's side of the market and the lender's side, as described at the beginning of this section.

## Section 6: What Have We Learned?

In the last three sections we have discussed the key contributory factors that germinated the mania and fuelled its propagation, and we have also characterised the forms that the mania assumed on the two sides of the market. However, to truly appreciate the implication of what we have presented so far, we must confront certain misunderstandings in the conventional

policy discourse. To do this, we reprise the distinction between instrumental logics and affective logics (or between models and frames) that was introduced in Section 2 and develop that distinction in a little more detail here, in terms of what it means for regulatory practice.

Our first observation is that much of the discourse on financial market regulation appears to take a mostly mechanistic view of credit markets. That is, the credit market is presumed to function like a machine subject to certain objectively quantifiable laws, and the regulator is presumed to have a workhorse analytical model of the laws by virtue of having played a significant role in making the market, or designing the machine, as it were. The regulator's role is then imagined to be one of finetuning the machine so that it performs optimally (i.e., achieves its aim of allocating capital properly at minimum cost). If the credit market fails to allocate capital properly, then it is logical to conclude that the regulator is to blame either for having got the parameters wrong even if the model is correct, or for having got the model itself wrong.

However, as Keynes pointed out in Chapter 12 of his General Theory (1937), the mechanistic view is a rather incomplete understanding of how financial markets actually function[50]. A good deal of affect, or emotion, or what Keynes called "waves of optimism and pessimism", are as fundamental to financial market functioning as is any kind of natural or engineering law. Thus, it is highly unlikely that the regulator's approach to finetuning a credit market for optimality will yield any sustained measure of success. Cycles are features of the credit system rather than bugs, and the regulator's role is then more properly imagined as putting in place counterbalancing systems that will attempt to reduce the amplitude of those cycles. We refer to this kind of role or stance for the regulator as adaptive, i.e., one that acknowledges that course-corrections may be needed and that a vigilant monitoring is the only enabler of corrigibility.

It should also be remembered that if credit markets are routinely subject to manias, panics and crashes, then disequilibrium is the norm rather than the exception in these markets. This has consequences again for how to think about regulation, since the regulator's role is often imagined, according to the mechanistic view, as one of helping to correct market failures. But the notion of market failure depends axiomatically on the presumption of equilibrium being the norm rather than the exception. The presumption of equilibrium is the foundation and basis of the Arrow-Debreu general equilibrium model and the celebrated welfare theorems arising from that model, with all their downstream implications for market failures and the like. That is, conceptually downstream from Arrow-Debreu, the category of "market failure" is meant to describe equilibria that appear to be compromised for various reasons, when measured against a suitable Pareto Optimality metric. But still, this category's members are first and last equilibrium phenomena! On the other hand, if affective forces are part of regular market functioning and if disequilibrium is the norm, then Arrow-Debreu is not the right setting for thinking about credit markets, and when the market suddenly seizes up during the bust phase, that is not market failure[51]. It is rather, the market's response as participants are

[50] Keynes, John Maynard." The State of Long-Term Expectation." In *The General Theory of Employment, Interest, and Money*. Palgrave Macmillan US, 1937.

[51] The Arrow-Debreu general equilibrium model is a mathematical model, owing its origins to Nobel Prize winning economists Kenneth Arrow and Gerard Debreu, of the conditions under which equilibrium obtains in multiple

overcome by anxiety and dread. The proper regulatory response would then be to allow the affective condition to play out as much as possible. That is, an affective logic operates during the bust phase of the cycle as well, and it is this that gives the overhang of mania room for sobering, often taking the double-form of a shutdown of insolvent financial institutions and an exclusion of delinquent borrowers from the credit market. In turn, this makes it easier for the regulator to ensure that the next time around, the mania during the boom phase is not allowed to get out of hand, because only then can the anxiety during the bust phase also be contained.

Again, Ch. 12 of Keynes' General Theory provides the right way to think about this. In that chapter, he describes the liquidity function of a financial market as being both a blessing and a curse – a blessing because liquidity is what makes the possibility of investment real (insofar as that possibility rides on the expectation that divestment is also possible), but also a curse because it can sometimes fall hostage to waves of optimism and pessimism that have little to do with fundamentals. It would be easy then to avoid boom-bust cycles by shutting down the liquidity function once investments have been made (Keynes likens this to a till-death-do-us-part marriage contract), i.e., after the boom has already occurred, but would one have a viable, functioning, financial market then? Would investments be forthcoming for such a market to even be made? Keynes' answer is correctly – of course, not.

It is in the foreground of such an understanding, that we may attempt to render a summary of the lessons to be learned from the 2022/24 boom phase. The first lesson we take away is that the account of how lenders and borrowers behaved during this phase is indicative of a cultural logic at play, in the sense that we described earlier in this paper (see Section 2). Thus, we observe from the empirical evidence in the previous sections, that as the boom phase intensified, the affective charge also intensified. Lender optimism and loan portfolios grew while loan churning and status goods consumption by borrowers also grew apace. This is the mania gaining in momentum. It is then only a matter of time before the growing incidence of speculation morphs into a growing incidence of Ponzi behaviour on either side of the market, ultimately unravelling in the form of an NPA crisis. If, under such conditions, the presumptive

markets all at once. Since its inception, this model has been particularly favoured for studying the correspondence between competitive equilibria achieved through market allocations and Pareto or social optimality. Under a specific set of conditions laid down by Arrow-Debreu, that correspondence is an exact match - that is, competitive equilibria are Pareto optimal and also socially optimal. But if the Arrow-Debreu conditions fail, then the correspondence becomes inexact and a gap opens up between competitive equilibria and social optimality. Now, there are different ways in which a gap may open up, such as if externalities are present, or if some of the goods being exchanged are public goods, or if information about the good being exchanged is not symmetrically distributed between the buyers and the sellers. Each of these instances represents a different type of market failure - the market fails, in each case, precisely because it fails to deliver a socially optimal solution, *not because it fails to achieve an equilibrium*. That is, in every case of market failure, an equilibrium is indeed obtained, but the equilibrium fails to be socially optimal. Our critique of Arrow-Debreu and the equilibrium economics it has spawned strikes, therefore, at the heart of the market failure concept, because we are saying that equilibrium is not the norm in financial markets, but it would have to be, as a necessary condition, for market failure to be even conceived as a conceptual phenomenon that is relevant for the study of financial markets. This critique is well known in heterodox economics circles, but it has largely been ignored by mainstream economists – we think, to the latter's detriment. For a good reference for this kind of critique of Arrow-Debreu, see: Shaikh, Anwar. *Capitalism: Competition, Conflict, Crises*. Oxford University Press, 2016.

regulatory stance is one of stewarding a machine, then the purely instrumental logic of the regulator's calculations, lacking any real affective charge, runs straight into a vortex of affect without offering much resistance. As described in the previous sections, this is arguably how the significant relaxations of 2022 played out, coming to be co-opted and gamed by both sides of the market as the mania intensified. An adaptive regulatory stance would have recommended small incremental changes in place of discontinuous large relaxations.

Industry commentators have blamed the arbitrary income and liability thresholds announced as part of the deregulations, coupled with little guidance from the regulator to MFIs on how to effect those thresholds in practice. We would argue that the regulator is wrongly faulted here, since the perception of arbitrariness is partly a matter of not fully accounting for the limits of what a regulator is capable of doing, when the underlying market dynamics are non-mechanistic. In a mechanistic world, thresholds might and should be deliberately calibrated, but in a non-mechanistic world, it is as much a matter of judgment as it is one of computation. Still, the intrinsic difficulties of performing such a calibration exercise notwithstanding, a proper adaptive stance would have required the regulator, after having announced the thresholds, and such greatly relaxed thresholds at that, to continuously and assiduously monitor markets for any signs of mania buildup, and to act decisively if such signs became visible. This would have signalled the understanding that the microfinance market is really a complex adaptive system whose dynamics are driven just as much by affective forces as by rational calculations.

## Section 7: Concluding Remarks and Recommendations

In a previous policy brief, titled, "*How Should the RBI Respond to the Microfinance Crisis? (2025)*"[52], we outlined the short-term measures necessary for stabilising the system—relating to liquidity, provisioning, and borrower protection. Those remain important. But the deeper question this paper raises is a longer run one: if microfinance markets naturally exhibit cyclical behaviour, what can policy realistically do? One might argue that the premise itself precludes resolution—that booms and busts are inevitable. At one level, this is correct: cycles cannot be eliminated. But policy can meaningfully influence their amplitude, reducing the intensity of the boom and thereby tempering the severity of the bust. We have seen what happens when policy does not orient itself in this way. Not only is the boom very pronounced but the cycle unfolds almost violently within a very contracted period of time. There is a greatly increased probability, then, of abrupt start-stop dynamics punctuated by large and dramatic regulatory easings and then, once the panic sets in, large and dramatic regulatory tightening. Accomplishing a moderation of amplitude requires viewing the microfinance market as a complex adaptive system, in which market actors adapt, affective processes combine with rational decision making to shape outcomes, cause and effect may not be neatly separable, mathematical models may not offer stable control, and it may become difficult to distinguish structural soundness (competence) from temporary good fortune (chance).

[52] Neelam, Amulya, Dwijaraj Bhattacharya, Navaneeth M. S., and Anjali Nambiar. "How Should the RBI Respond to the Microfinance Crisis?" Dvara Research, 2025. https://dvararesearch.com/wp-content/uploads/2025/05/How-Should-the-RBI-Respond-to-the-Microfinance-Crisis.pdf

The recommendations that follow build on this insight. They propose an approach to microfinance governance that is incremental, diagnostic, and contextually aware. The goal is modest but essential: to build a system that bends with the cycle but is far less likely to break under it.

### Recommendation 1: Adaptive Regulation

The 2022 reforms demonstrated how multiple structural changes, introduced simultaneously, can interact in unexpected ways. Expanding the income threshold broadened the theoretical client base; raising the indebtedness limit marginally expanded headroom; removing the lender limit heightened competition; and pricing freedom sharpened investor expectations. Taken together, these adjustments emboldened lenders to pursue rapid growth—largely by deepening exposure among existing clients—without offering regulators the opportunity to disentangle which component of the reform was driving which behaviour.

Adaptive regulation addresses this problem by structuring policy changes as incremental, measured, and testable interventions rather than comprehensive redesigns. Under such an approach:

1. Policy changes are introduced sequentially, allowing regulators to observe behavioural responses before implementing additional reforms.
2. Short review cycles assess whether changes produce intended or unintended effects—for instance, whether a higher income threshold genuinely expands outreach or merely fuels larger loans among existing clients.
3. Gaming is assumed rather than discovered. Income assessment procedures, FOIR checks, and credit bureau verifications are all subject to predictable patterns of strategic adaptation. Regulation must be calibrated with these adaptations in mind.
4. Feedback loops between regulatory change and market behaviour must be integral to regulatory design. If a shift in one parameter visibly accelerates credit deepening or lender overlap, the framework must be able to adjust swiftly.

Adaptive regulation recognises that policy not only guides markets but is also interpreted, internalised, and repurposed by them. Its objective is to ensure that regulation evolves at least as quickly as the behaviours it seeks to shape.

### Recommendation 2: Strengthening Supervision and Market Monitoring

Supervision must move beyond periodic, backward-looking checks toward a richer understanding of how both households and providers behave as markets expand. Effective monitoring, therefore, requires attention to the interactions between household financial conditions and the competitive dynamics of providers.

A useful starting point is the fact that credit bureaus already maintain household-level mapping in the aftermath of the 2022 regulations. This makes it possible to observe cumulative exposure across lenders, detect when disbursement growth outpaces genuine client expansion, and see when loan cycles begin to shorten. The same data also reveals anomalies: sudden, widespread shifts in reported household size, income, or composition—signals that information may be reshaped to preserve eligibility. Because these changes often

appear well before delinquency, they serve as early cues that the market's underlying rhythm is accelerating too quickly.

But borrower-level signals are only one part of what supervision must watch. Household exposure patterns need to be read alongside provider-side behaviour: whether multiple lenders begin saturating the same geographies, whether ticket sizes converge across institutions, whether new lending is increasingly concentrated in districts that are already heavily leveraged, and whether credit absorption capacities—local incomes, occupational structures, and sectoral resilience—are being stretched. These spatial and institutional patterns typically shift months before portfolio stress appears and provide a clearer view of when competition has tipped from healthy expansion into momentum-driven lending.

Even with improved bureau data (that allows for household-level discovery), some forms of strain remain invisible until households themselves articulate them. This is why any credible monitoring architecture must incorporate periodic household-level surveys. These surveys provide an external view of distress-coping strategies, informal debt, and livelihood changes that households may use to sustain repayment even when stretched. They offer a reality check against bureau signals, helping to distinguish between genuine stability and stability sustained through short-term adjustments.

Taken together—a closer reading of household exposure, early detection of provider clustering and geographic saturation, and periodic validation through household surveys—supervision can become more anticipatory. Instead of reacting to delinquency, it can recognise when both sides of the market are reinforcing one another in ways that heighten systemic vulnerability and intervene before this momentum becomes unmanageable.

Our earlier report and policy brief, *Detecting Over-Indebtedness while Monitoring Credit Markets in India* (2021)[53] and *A Framework for Detecting Over-Indebtedness and Monitoring Indian Credit Markets* (2021)[54], offer a blueprint for operationalising such an approach.

### Recommendation 3: Rethinking Delegation — Boards and SROs

The microfinance governance structure relies heavily on two delegated mechanisms: the board-level oversight of individual institutions and the industry-level oversight of SROs. Both mechanisms proved insufficient to contain the exuberance of the boom.

Providers' boards are meant to serve as the primary line of defence against imprudent growth. Yet in practice, annual reviews often become procedural, partly because of the sheer number of policies that must be reviewed. Board qualifications and experience also vary

[53] Bhattacharya, Dwijaraj, Amulya Neelam, and Deepti George.
"Detecting Over-Indebtedness while Monitoring Credit Markets in India." Dvara Research, 2021.
https://dvararesearch.com/wp-content/uploads/2024/01/Detecting-Over-Indebtedness-while-Monitoring-Credit-Markets-in-India.pdf

[54] Neelam, Amulya, Deepti George, and Dwijaraj Bhattacharya.
"A Framework for Detecting Over-Indebtedness and Monitoring Indian Credit Markets." Dvara Research, 2025.
https://dvararesearch.com/wp-content/uploads/2025/05/A-Framework-for-Detecting-Over-indebtedness-and-Monitoring-Indian-Credit-Markets.pdf

widely, and growth pressures frequently overshadow prudential concerns. For boards to play the supervisory role expected of them, oversight must be anchored in enforceable expectations: clearer qualification norms, differentiated review cycles, and explicit accountability for underwriting failures.

SRO governance structures, meanwhile, tend to dilute responsibility, with supervisory authority dispersed across institutions that are themselves deeply invested in growth. This creates conflicts of interest, limits the voice of smaller institutions, and results in fragmented responses during periods of stress. A reimagined SRO framework would require greater independence, clearer mandates, and well-defined boundaries between advisory functions and regulatory authority.

Together, these reforms would strengthen the delegation architecture so that it becomes a meaningful complement to regulatory and supervisory oversight rather than a symbolic or procedural layer.

### Recommendation 4: Building Deeper Funding Markets for MFIs

Herding in credit markets amplifies boom-bust cycles, as has been seen to occur in the bust phase of the most recent cycle with banks shutting down liquidity to a large mass of small MFIs all at once. If this mass of MFIs had access to alternative funding sources, as would become possible with a greater variety of upstream funders, then the liquidity squeeze would not have been so dire. In turn, a greater variety of upstream funding sources might also change the dynamic in the boom phase. In a scenario with bank funding only, it is likely that in the beginning stages of a mania, banks will herd around large downstream lenders, causing smaller downstream lenders to play “follow the leader” in terms of their own lending behaviours, with such mimetic behaviour becoming a force of downstream herding around unsustainable lending practices.

Therefore, it is of urgent importance that more liquid upstream funding becomes available to MFIs. This can be facilitated through the development of debt markets beyond banks, and the regulator should assume a proactive role in helping this to happen. There is still no guarantee that these newer debt markets will also not be subject to mania, herding, etc. The 2018 experience of debt markets seizing up on a wide basis after the IL&FS crisis, demonstrates how a crisis of confidence cannot be easily contained within the sector in which it originated. Financial contagion is a well-documented feature of crises phenomena. Therefore, adaptive regulation (our Recommendation 1) is at least a co-requisite, if not a pre-requisite, for this development to occur.

In conclusion, microfinance cycles will continue. But cycles need not be destructive. With adaptive regulation, contextually informed monitoring, and a more robust governance structure, the market can absorb cyclical pressures without experiencing large-scale distress. The aim should not be an efficient or optimal regulatory framework, which would presuppose that one is only solving a computational problem, but an efficiently or optimally *evolving* framework, which instead presupposes that one is solving a value judgment problem. The latter kind of problem fully envelopes the former kind of problem but exceeds the former’s

scope substantially, and requires a mixture of adaptive, context-sensitive, and ethical approaches for its proper resolution.

## Appendix: Comments from Reviewers and Our Responses

The first draft of the paper was circulated to experts drawn from the academic, policy and industry domains. In some instances, the comments occasioned changes to the main text of the paper, which we have made. This appendix summarises the remainder of the comments that we received, and our responses to those comments.

In each case, we proceed in four steps: (1) we present the comment, (2) we attempt to situate ourselves in the commenter's position and argue their point as persuasively as possible (this appears as "Elaboration" and is equivalent to steel-manning the commenter's argument). (3) we present our response.

### A Summary Observation

Our paper offers a theoretical frame in Section 2. Once the reader fully inhabits this frame, then their analytical perspective on the MFI market in particular, and on retail credit markets in general, fundamentally shifts from the conventional perspective that is expressed in policy discourse. The reader comes to understand that the MFI market could be the site of a non-linear disequilibrium dynamic driven by affective forces, and this calls into question conventional modes of analysis that anchor to deliberative, rational choice-making on the part of borrowers and lenders, and also conventional modes of measurement that presume equilibrium dynamics characterised by slow and incremental changes.

In the comments that we have received, we find that the commenters are hesitant to fully inhabit the frame, and therefore they appear to miss many of the implications that follow when a disequilibrium dynamic is understood to be the predominant condition of the system. In our responses to the comments, we therefore attempt to reiterate as much as possible the necessity of questioning the conventional analytical perspective itself. The necessity arises, we believe, because the conventional analytical perspective has no proper room for an affective dimension and therefore it cannot provide a good explanation of crisis phenomena. That an affective dimension is necessary for explaining crisis phenomena is borne out amply by historical analyses of such phenomena (the Kindleberger-Aliber book is the classic reference). Therefore, our frame explicitly incorporates an affective dimension and offers an internally consistent theory as well as empirical evidence.

Our theory is unconventional, not because the history of financial crises has not been written, but because that history appears to have been overlooked by much of the policy discourse on financial inclusion. Perhaps the history is overlooked because the discourse presumes that the MFI market cannot be subject to speculative credit bubbles. Yet we see the occurrence of such bubbles repeatedly in India's MFI market. So, we think that such phenomena need an explanation, and this requires us to invoke ideas, concepts, and even logical pathways, that represent a fundamental departure from existing discourse. Because our theory is unconventional, we are faced with a handicap – the data to test the theory is not available as a matter of course, especially on the borrower's side. We are not claiming that our empirical evidence is dispositive, but we do the best we can with what we have available to us, and we believe that our paper provides reasonably compelling empirical evidence for our theory's

explanatory mechanisms, while pointing the way to further empirical investigations of those mechanisms.

In the final instance, we submit that our paper is premised on two, we think, undeniable propositions – that credit bubbles occur in India's MFI markets, and that mimetic or imitative behaviour is a characteristic feature rather than an aberration of human nature – and we rely on the second of these to explain the first.

It is against this background and in this light that we hope that our responses to comments will be evaluated for their validity and persuasiveness.

**1. Academic expert**: "*I am not sure if your recommendations to the regulator would cut ice. As you rightly point out (quoting Rajeshwar Rao) that the sector is 3% of the banking system, and does not represent a systemic concern. Given this, would the RBI put nuanced dynamic regulatory frame? If it does, would it make sense for the players who look for regulatory stability? While your recommendations emanate out of the study, if you look at it from the regulators perspective, it becomes complicated to implement, even if RBI wanted to take the recommendation seriously.*"

**Elaboration**:
There are two separate points here. The first point (following Mr Rao's speech) is that the size of the MFI sector is too small, relative to the overall credit market in India, for the RBI to deem the cost of adaptive regulation (of the MFI sector) as worth bearing. Here the presumption (as in Mr Rao's speech) is that the quantum of systemic risk is the only variable to be considered in deciding whether the cost of adaptive regulation is worth bearing. The second point is that even if the RBI were to undertake adaptive regulation of the MFI sector, this would create uncertainty among MFIs as to the regulatory norms (that may be likened to parameters in their business decision making models), and therefore impede the work of financial inclusion that MFIs are looking to perform. Here the presumption is that there is no affective response by MFIs to regulatory norms, and that regulatory stability is therefore a necessary condition for MFIs to further the goal of financial inclusion.

**Response:**
On the first point, our contention is that even if the MFI sector is small in size and poses little systemic risk to the overall credit system, the quantum of systemic risk should not be the only variable to consider when weighing the advisability of costly adaptive regulation. Rather, the political economy risk of having the MFI sector systematically be subject to large-amplitude cycles and (their necessary accompaniment) violent stop-start dynamics should be just as important a consideration for costly adaptive regulation to become a worthwhile endeavour. Indeed, the political economy risk, we would argue, is indistinguishable from the customer protection concern that Mr Rao cites as the RBI's primary motive for regulating the MFI sector, and offers a sufficiently strong basis for embracing adaptive regulation.

On the second point, our contention is that once the affective dimension is admitted into the analytical frame, then the behaviour of market actors (borrowers and lenders) becomes fundamentally non-deterministic (i.e., not subject to rational control). This is just another way

of saying that the market dynamics depart from equilibrium behaviour and non-linear, abrupt, large changes become highly probable. In this environment, a certain degree of regulatory instability may well be necessary as a means of keeping the disequilibrium dynamics within certain bounds. This requires an experimental, tentative, incremental approach to regulation, one that always already presumes that as time unfolds, correction will be necessary, and that vigilant monitoring is the only enabler of corrigibility. This is exactly what we are recommending in the final section of the paper.

In effect, our claim (and this claim deserves further study on both theoretical and empirical fronts) is that when the system is complex but presumed to be deterministic (i.e., subject to rational control), then large discontinuous regulatory changes aiming for periods of regulatory stability following those changes, nevertheless end up allowing affective forces to predominate, causing the disequilibrium dynamics to transgress acceptable bounds. On the other hand, when the system is recognized as complex, then small continuous regulatory changes that incorporate a certain minimal degree of regulatory instability, dampen the play of affective forces and keep the disequilibrium dynamics within acceptable bounds.

**2. Ex-regulator**: *"The Regulatory and supervisory architecture for NBFC MFIs was always underpinned by what DG [Deputy Governor] Rajeshwar Rao has articulated.- given that the NBFCs are not deposit taking institutions, there is no depositor protection angle; given the small size of the sector to overall regulated financial sector assets, its financial stability implications are relatively less; since the borrowers in this segment are vulnerable- the protection of their interests from sharp practices by the lenders is the bulwark of the architecture. Since a bank could lend to an MFI borrower who could have borrowed from two MFIs, limiting the number of lenders for the MFIs alone made no sense. Also, with judicial bar on linking credit history to Aadhar, multiple borrowing by the same borrower under different identities became possible. So, simplification attempted in 2022 was logical. I do realise that income assessment and consequently FOIR determination could be an issue. Here, lender discretion is the antidote. if it is not working, it is unfair to blame the regulator."*

**Elaboration**:
The 2022 regulatory reforms were internally consistent and appropriate given the structural and legal constraints faced by the RBI. By removing entity-specific restrictions and relying on lender discretion, the regulator consciously adopted a principles-based framework aimed at eliminating arbitrage. In this context, failures in income assessment, FOIR discipline, or multiple borrowing reflect shortcomings in lender behaviour rather than regulatory design, and it is therefore inappropriate to attribute responsibility for subsequent excesses to the regulator.

**Response:**
We broadly agree with the logic underpinning the 2022 reforms and acknowledge that they were shaped by clear structural and legal constraints. The move to remove entity-specific restrictions reduced regulatory arbitrage and was consistent with a principles-based approach that placed greater reliance on lender discretion. We also agree that, given the sector's size, financial stability considerations were unlikely to be the primary driver of regulatory design, and that customer protection remains the central concern.

Our argument is not that the regulator may have erred in adopting a discretion-based framework, nor that it should be held responsible for lender-level failures in income assessment or FOIR determination. Rather, our concern is narrower and relates to the role of regulatory signalling within such a framework. Even where rules were relaxed, supervisory communication and moral suasion could have served as important tools, particularly in segments characterised by vulnerable borrowers and strong commercial incentives. As such, clearer and more consistent signalling—through speeches, supervisory communications, or thematic reviews—emphasising that the regulator was continuing to monitor borrower-level leverage and loan stacking, could have reinforced discipline without reintroducing rigid thresholds. While such signalling did occur in a limited form, particularly around interest rates, it was less evident with respect to growth in loan portfolios or borrower indebtedness.

Finally, we note that when the affective dimension is admitted into the analytical frame, then large and discontinuous shifts in regulation are not advisable, and even with incremental regulatory relaxations, a vigilant monitoring and pre-announced response-protocols are called for. This point only underscores the tempering role that more active signalling might have played, given the large and discontinuous regulatory relaxations of 2022.

**3. Ex-regulator:** *"Since capital for the MFIs came from private sector and borrowings from market and credit institutions, I can't understand the logic of pushing top line growth by the investors at the expense of sustainable earnings, the cost of which has to be borne by the very investors in the bust period. Am I getting something wrong? Is it then not their job to align incentives with sustainable growth. Which is why RBI is right in removing artificial controls on the purpose of borrowing. I am also aware of RBI frowning on entities exhibiting unusual top line growth, nevertheless."*

**Elaboration**:
Investors attempt to maximise their risk adjusted returns. Given this, it is rational for investors to insist on topline growth, but always remaining mindful of the cost of rising risks, since investors must now absorb the risk, as and when they materialise. So, how could there have been a mania on the supply side?

**Response:**
If we were to assume fully rational behaviour under static conditions, we would agree that a sustained push for topline growth at the expense of long-term sustainability appears difficult to justify, particularly when investors ultimately bear the downside risk. However, the dynamics observed here are better explained through an intertemporal lens that combines accounting signals, competitive pressures, and what we describe as an affective dimension in decision-making.

In practice, periods of rapid credit expansion often coincide with stable headline portfolio indicators such as PAR. As long as these metrics remain contained, incremental disbursements appear low-risk, reinforcing the belief among lenders that additional growth is feasible. Internally, this gives rise to a logic of the form: rapid growth has not yet resulted in visible stress, therefore further growth remains within acceptable risk limits.

This logic is sustained in the short run—and often for extended periods—because borrowers use a portion of new credit to service existing obligations, either through refinancing within the same institution or through borrower churn across lenders. As long as borrowers retain access to alternative sources of credit, both reported portfolio quality and growth trajectories can remain favourable, delaying the manifestation of underlying stress.

Alongside this rational reinforcement operates an affective dimension. As some lenders report outsized growth and returns, those observing from the sidelines experience growing pressure to participate, driven by concerns around relative performance, capital access, and market positioning. Over time, this generates a collective momentum in which caution increasingly feels costly, while expansion appears validated by peer outcomes.

Importantly, this does not imply that lenders or investors are unaware of over-indebtedness risks. Rather, they operate under the belief that the critical threshold has not yet been reached. The combination of delayed risk realisation, competitive benchmarking, and the affective pull of observed success creates a self-reinforcing circuit that incentivises continued expansion. In this sense, the supply-side "mania" is not a rejection of rationality, but an outcome of dynamic incentives shaped by both measurable signals and affective responses.

**4. Industry expert 1**: "*I am personally not convinced that boom bust cycles are a feature and not a bug, especially when they occur in a strategically important sector of PSL and that too so often i.e. they are not 8-10 year cycles.*"

**Elaboration**:
Credit cycles typically unfold over much longer term than 4-5 years, since they're intrinsically tied to business cycles, which we know to be longer term. Further, for a mania to even play out, it needs to gain momentum. Let's assume that the bottom of the cycle is at least 3-4 quarters, as we are seeing now and also in the past. Thus, it means that mania must be created instantly in quarter 5 after the bust so that it can gain enough momentum to become a bubble in 8-10 quarters, like we saw between 2022-2024. This isn't enough time for the mania to build up. Following FIH only, it would appear that every other quarter there is a shift from hedgers to speculators to then the Ponzi actors. This is highly improbable, especially since this is a PSL sector, where the need for credit disbursement does not grow more that the rate of growth of banks' balance sheets (<10% annually).

**Response**:
We agree that repeated boom–bust cycles in a strategically important PSL segment raise legitimate concerns, and our use of the term "feature" is not meant to suggest that such cycles are desirable or normatively acceptable. Rather, our argument is that these cycles are structurally embedded in the way credit is supplied to the sector.

We do not believe that the absence of long cycle durations disqualifies the presence of boom–bust dynamics, particularly in sector-specific credit markets. Unlike economy-wide business cycles, sectoral credit cycles can be significantly compressed when capital supply is shaped by regulatory mandates. In the case of microfinance, PSL requirements coupled with relatively

high yields create a captive demand for exposure to the sector. As a result, the sector rarely experiences a prolonged or deep trough (though some institutions suffer worse than the sector). Though asset quality deterioration causes a temporary withdrawal of credit, but once headline indicators stabilise, capital re-enters the sector rapidly. This dynamic shortens both the bust and the subsequent recovery phase, allowing sentiment to turn quickly without requiring a prolonged build-up of speculative behaviour. Recent patterns illustrate this compression: despite stress in the sector, securitisation and Pass Through Certificates (PTC) volumes have rebounded even as other funding channels remain cautious. Such patterns are consistent with shorter, more frequent credit cycles driven by structural features of capital supply rather than by classical long-horizon manias.

Our intention, therefore, is not to normalise these cycles, but to highlight that their frequency reflects how the sector is financed and regulated. Recognising this distinction is essential for designing interventions that address the underlying drivers rather than treating each episode as an anomaly.

**5. Industry expert 1**: "*The paper does not look at the income side of the borrower and what's happening there, I feel this is a very important dimension that needs understanding in order to understand overleverage.*"

**Elaboration**:
The primary premise of the paper is that there was over-leverage on the borrower side, for purposes like retiring old loans, status signalling and so on. However, the purpose of borrowing is not a measure of over-leverage. Neither is the total number of loans. As such, the conclusion that borrowers are over-leveraged is a strenuous one.

**Response:**
We agree that looking at the income side of the borrowers is important. A ratio of income to debt does shed light as to the state of indebtedness, but we believe the current analysis sheds light on the motivations there of, i.e., the affective dimension.

That said, we do not believe there is substantial disagreement, either within the industry or among the regulator, that borrower over-leverage did emerge during the recent cycle. As a simple illustrative check, even broad income proxies such as erstwhile Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) wages suggest relatively modest growth of around 4–5 percent between 2022 and 2025, compared to significantly higher growth in indebtedness.

We, however, agree that a more systematic examination of income trends alongside indebtedness would be valuable, and we view this as a natural extension of the present work. We will therefore explore the feasibility of a follow-up analysis focused specifically on the income side of borrower balance sheets.

**6. Industry expert 2**: "*Section 4.1 is using nominal growth in disbursements everywhere without any inflation adjustment. If you deflate the 2024 GLP per capita number to 2012 levels, the increase in the average disbursement size (Fig 4) from 8,381 to 36,485 represents a real*

*CAGR of ~ 7.3% per year. This is against the growth rate of clients of ~ 6.9%. I think this significantly changes the discussion and conclusions in this section.*"

**Elaboration**:
Not all the variables used in section 4.1 are nominal. The discussion focuses on a nominal growth rate in disbursements and then compares it to a real growth in the number of clients. As such, it would be fair to deflate the nominal growth rate to produce a real growth rate number. That would offer a much better understanding of whether in real terms, the rise in indebtedness was in fact alarming. Such an understanding is especially desirable because an MFI's loan disbursement decisions may well have been motivated by rising goods prices. Thus, for example, if goods price inflation had been substantial in a previous period, and an MFI knew that its loans were being used for consumption purposes, then it could choose to increase loan ticket sizes in the current period, and such a decision would be only rational. And quite aside from the necessity of rendering a true quantitative representation of the rise in indebtedness, isn't it always the case that we should be concerned with real growth rates, especially when nominal variables are being tracked, and that therefore, as a general principle, the analysis should not be confined to tracking nominal variables?

**Response:**
We believe that when strong affective forces are in play, then nominal disbursements become the correct measure to track, if one is seeking to track the buildup of affective charge in the system. One does not deflate nominal disbursements in such situations because goods price inflation is not independent of inflation in loan values. Suppose an individual MFI is disbursing higher-value loans to account for higher goods prices. When every MFI does this, and if loans are being widely used for consumption, then higher-value loans in the aggregate cause goods prices to increase, which then causes loan values to inflate even more in the next round of disbursements, and so on. This dynamic is especially likely when mania takes root, because then a self-fulfilling logic begins to operate, whereby first loan values increase, then goods prices increase, then loan values increase some more, then goods prices increase some more, and so on. In these situations, what appears to be rational from an individual MFI's perspective turns out to be irrational from the perspective of the market as a whole. Such "fallacies of composition" are common in going from the micro to the macro.

For example, one may consider Keynes' famous "paradox of thrift". If an individual household were to get anxious about the future and so choose to cut back consumption and save, then that might seem like a rational response for the individual household to its felt affect. But if weakened confidence about the future were to become a contagious phenomenon, and all households were to reduce consumption, then GDP would fall, causing incomes to fall, causing everyone to cut back consumption some more, and so on – making the weakened confidence about the future self-fulfilling. Therefore, analytically, under conditions of mania, deflating asset prices by goods prices carries no information about fundamentals, since a necessary condition for deflation to capture any analytical value is that goods prices should be evolving independently of asset prices instead of being endogenous to them. One would be hard pressed to find historical analyses of financial crises phenomena performing such deflated measurements (as amply evidenced by the history told in the Kindleberger-Aliber book).

It is of critical importance to note that these kinds of self-fulfilling logics (which are coincidental with fallacies of composition) come into play whenever an affective dimension is implicated in markets – a point we make rather sharply in our paper when we characterise the very notion of an affective logic as implicating self-fulfilling dynamics. Therefore, once again, and stating our broader point somewhat differently, measurement paradigms and analytical modes that make sense in a world in which actors are assumed to behave rationally do not carry over into a world in which the actors' reason is mixed up with a good dose of affect.

To test our contention that nominal measurements become the guiding principle for loan disbursements under conditions of mania, we reviewed Sa-Dhan and MFIN reports, along with annual reports of select MFIs and transcripts of listed MFIs. With the sole exception of the 2012 State of Microfinance report, real growth is barely discussed. This is also true across other financial sectors, we find. Even GDP numbers, when discussed in management commentary sections, are quoted in nominal terms.

Finally, let us set aside all of the previous discussion about the implications of an affective dimension in play, and take the comment up on the basis of its own internal logic. When we focus only on the CAGR numbers, it is important to note that the 12-year period between 2012 and 2024 already includes more than one cycle. It is therefore more appropriate to examine growth rates over specific episodes of mania. Accordingly, we ran the numbers for the most recent cycle. The GLP per client between 2022 and 2024 grew at a CAGR of 13.3 percent; adjusting for inflation at 5 percent, the real CAGR is approximately 8 percent. Over the same period, the number of clients increased from 3.4 crore to 4.3 crore, implying a CAGR of 12.5 percent. If one were to follow this comparison alone, it might appear that there was no increase in average indebtedness.

However, this is a misleading comparison, because GLP per client already adjusts aggregate GLP for client growth. The more appropriate comparison, in our view, is between growth in aggregate GLP (rather than GLP per client) and growth in the number of clients. On this basis, the picture changes. Between 2022 and 2024, GLP grew at a CAGR of 27.5 percent in nominal terms and approximately 21.4 percent in real terms (assuming 5 percent inflation). Disbursements grew at a CAGR of 28.8 percent nominally and 22.7 percent in real terms. When growth in GLP or disbursements is compared against growth in the number of clients, the conclusions drawn by us remain unchanged.

**Edits to paper:** The above comment (anonymised as "Industry expert 2"), elaboration and response will be added in an Appendix to the paper, entitled "Review Comments from Sector Experts, and our Responses".

**7. Industry expert 2:** "*I found Section 4.2 and observations like "target-driven underwriting practices compromised the quality of credit assessment and created conflicts of interest for field staff" naïve. One fundamental issue that the authors have not grasped is that the MFI model has never involved under-writing by the lender – a well-known fact to all of us in the industry. It has always relied on the group structure to do under-writing. Regulations on income when they were introduced were complied with a performative manner as you lay out but that was not a factor pre-crisis either. But the real issue of why the group*

*structure/dynamics unravelled is not even referenced. This entire paper could be about individual lending as far as the authors' explanations go. I think any meaningful explanation has to also look at why did group norms collapse?*"

**Elaboration**:
From the very start, MFIs were confronted with the problem of underwriting loans in the absence of physical collateral, and they solved this problem by activating a new understanding of what might serve as collateral, which was social pressure within a group setting. If group structures were to be compromised, then this function of social pressure could not be relied upon to discipline either the use of a loan or, as a consequence, its repayment. It is quite likely that this is precisely what transpired during the recent boom-bust cycle, because group structures have indeed unravelled in the aftermath of Covid-19, as has been widely reported by MFIs and other observers. The paper, however, does not acknowledge the role of group financing as a critical element of the MFI context and is therefore unable to identify the unravelling of group structures as a possible explanation for the boom-bust cycle.

**Response:**
There are some assumptions implicit in the argument of the comment.

The first assumption appears to be that group lending will, at least in theory, successfully rely on social pressure for better discipline. In the context of status goods competition, it is not clear that the theoretical result obtains, nor is there any theoretical literature addressing this question. It is likely that peer pressure within the group will indeed contain the tendency for status goods competition, because the borrower's peers will understand the inherent dangers of borrowing for status goods consumption. But it is just as likely that borrowers collude to participate in status goods consumption anyway, since there is strong social pressure from outside the group on each group member to do so. Which effect is more likely to predominate is a matter for theory to work out, and then for empirical work to investigate. But even theoretical environments without status goods competition do not always predict better repayment discipline. For instance, Giné et al. (2010)[55] note that "group-based mechanisms that are frequently employed can induce moral hazard rather than reduce it," and that improved information flows within groups can sometimes exacerbate these problems. So, in sum, the first assumption is contestable, and more to the point, the context of status goods consumption renders any discussion of group dynamics in our paper speculative at best.

The second assumption appears to be that group lending will, in practice, successfully rely on social pressure for better discipline. A recent VoxDev review[56] of the academic literature on microfinance calls this assumption into question. The first section of Chapter 4 of the literature review is entirely devoted to examining the effects of group lending. It reports the results of

[55] Giné, Xavier, Pamela Jakiela, Dean Karlan, Jonathan Morduch. "Microfinance Games". American Economic Review: Applied Economics 2, no. 3 (2010): 60-95.
[56] Cai, Jing, Muhammad Meki, Simon Quinn, Erica Field, Cynthia Kinnan, Jonathan Morduch, Jonathan de Quidt, and Farah Said. "Classic Features of Microcredit." *Microfinance: Issue 3*, VoxDevLit, 3(3), January 30, 2025. https://voxdev.org/voxdevlit/microfinance-issue-3/classic-features-microcredit

two RCT studies, Gine & Karlan (2014)[57] in the Philippines, and Attanasio et al. (2015)[58] in Morocco. Neither study found any beneficial impact of group lending on default rates, relative to individual lending. Perhaps there is also literature that we are unaware of, that would validate the second assumption, and we welcome the prospect of being pointed to such literature. But our reading of the peer-reviewed and published literature that we have found so far is that the assumption is not validated. Further, we observe that joint liability is rarely invoked in practice – defaults by individual borrowers seldom translate into penalties for the entire group, as en-masse reporting to credit bureaus carries significant social and political risks, particularly when liability is vicarious. As a result, the disciplining role of the group has eroded over time, and this may be an independent reason that centre meetings dropped off significantly during Covid-19 and subsequently never recovered properly. Another pathway for weakening group discipline independent of Covid-19 is the altered basis for group formation. Earlier models relied on pre-existing social networks, whereas current practices often involve more arbitrary group composition. This shift meaningfully diluted the scope for peer monitoring and social enforcement. It is even possible that debt-financed status goods consumption is itself an independent force weaking group-based discipline, since status goods consumption is competitive in nature. In other words, the breakdown of the JLG construct may be not a cause of the most recent boom-bust cycle, but rather a symptom of the mechanisms we describe in our paper.

The third assumption is that underwriting in the JLG context adheres strictly and exclusively to the logic of social collateral. We find this assumption to be at odds with prevailing industry practice, which, across institutions, prohibits lending to defaulters, per the SROs' codes of conducts. This suggests that adequate social collateral is insufficient in the presence of any evidence of past default; in other words, underwriting relies on additional filters beyond social capital. Further, the sector has witnessed a gradual shift away from joint liability groups toward individual lending. This shift predates COVID-19: between 2016 and 2025, the share of individual borrowers increased from 3 percent of clients to 10 percent of GLP. Owing to differences in the reporting formats of the Bharat Microfinance Report (published by Sa-Dhan), we are constrained to comparing proportions of clients with proportions of GLP. Beyond industry-level reports, our conversations with practitioners suggest that the move toward individual lending has strengthened in the aftermath of COVID-19. This transition was initially driven by operational considerations, particularly in the immediate post-pandemic period, when some group members had the capacity to repay while others did not. As a result, MFIs began collecting repayments from such individuals, effectively setting aside group-level collection norms. Finally, the increasing share of GLP accounted for by individual loans, together with the deepening discourse around individual lending, suggests a tacit acknowledgement that group-based underwriting has weakened over time.

[57] Giné, Xavier, and Dean S. Karlan. "Group versus Individual Liability: Short- and Long-Term Evidence from Philippine Microcredit Lending Groups." Journal of Development Economics, 2014. https://www.sciencedirect.com/science/article/abs/pii/S030438781300165X

[58] Attanasio, Orazio, Britta Augsburg, Ralph De Haas, Emla Fitzsimons, and Heike Harmgart. "The Impacts of Microfinance: Evidence from Joint-Liability Lending in Mongolia." American Economic Journal: Applied Economics, 2015. https://www.aeaweb.org/articles?id=10.1257/app.20130489

We do agree with the view expressed in the comment that the questions of why group structures have broken down and what implications that has for the industry going forward, are important ones to address. But we do not see the breakdown of group lending as an important casual mechanism in the explanation that we are offering for the recent MFI crisis, especially given the context of status goods competition, which, as noted, introduces new theoretical and empirical questions for the group construct that remain unexplored.

**8. Industry expert 2:** "*I think the more interesting & relevant empirics lie in looking at the tail of the borrower distribution and understanding if and how a certain segment of borrowers significantly increased leverage. A larger sample version of your Figure 17. This might change the narrative from large-scale affective explanations involving all borrowers to strategic behaviour by a much smaller segment.*"

**Elaboration**:
Figure 17 points to the possibility that in any given geographical location, a very small number of borrowers may be responsible for the excesses during the mania phase of the 2022-24 boom. If this were indeed true, then this would indicate a form of strategic behaviour by those borrowers that was markedly deviant in nature from the larger mass of borrowers, and it would be critical to understand the drivers and more granular features of such deviant strategic behaviour. Do these borrowers feel uniquely empowered to game the MFI market? If so, why? And what borrowing and consumption patterns does such gaming take? Further, strategic behaviour on the part of a small group of borrowers does not necessarily implicate the kind of affective logic that the paper regards as central to an explanation of the boom phase. Therefore, would that not weaken the argument for an affective logic in play?

**Response:**
We agree with the comment that borrowers at the right tail of the distribution in Figure 17 might be behaving strategically, but it is quite likely that their strategic behaviour is in good part motivated by extreme forms of status goods competition (which conceivably mark them out as high-status borrowers in the community and therefore give them some of the confidence and power to assume a strategic posture towards lenders). The IFP data appears to support this hypothesis, since it allows us to look at the patterns of spending for those borrowers in particular. We find that all 43 of the right tail (number of loans exceeding 10) borrowers in 2020 had status goods consumption as one of the "Top 3" spending categories, with the highest concentration (18 out of 43) in the "Top 1" category (that is, status goods was the highest spending category for these 18 households), and the next highest concentration (16 out of 43) in the "Top 2" category. Another way to look at the data on the right tail is to ask if households with a higher number of loans (past 10) have a greater propensity to spend on status goods. We find that this is indeed so – as the number of loans rises from 11 to 28, there is a rising probability that the household in question will fall in either the "Top 1" or the "Top 2" spending categories for status goods.

Therefore, we would argue that the existence of such extreme cases in the right tail of the distribution is not evidence for the absence of affective logics, because strategic behaviour need not be orthogonal to status goods competition. More than likely, the same underlying

features that motivate the intensity of status goods competition also influence the capacity for strategic behaviour. And we are very clear that any instance of status goods competition is prima facie evidence of affective logics at play.

Further, our theoretical frame allows us to hypothesize that a few borrowers engaging in extreme forms of over-borrowing is precisely the reason that the mass of the distribution rises so markedly to the 7-10 loans per household range over a 4-year period. And surely, 7-10 loans per household is also evidence of over-borrowing. The behaviour of the few extreme cases *affects* the behaviour of the over-borrowing mass, in terms of dragging/pulling that mass to the right over time.

We take on board the more general pointer in the comment to study more carefully the motivations and behaviours of the extreme cases during the mania phase of a crisis.

**9. Industry expert 3:** "While it is convenient and simple to blame incentive structures for poor practices, the reality is that many credit markets and institutions in India have functioned without such extreme crises - even though they have profit-oriented business models. So, it may be useful to understand what works for them which has not worked in case of the MFI industry."

**Elaboration:**
Financial institutions are motivated by profit, and they advance credit not as charity but for the purpose of generating a surplus. Yet such surplus generation is justified by the opportunity that credit affords to those who receive it. If it were true that poor underwriting practices in the MFI industry were a necessary consequence of the incentive to profit from lending, then we should see similar poor underwriting practices in other retail lending sectors, if not beyond that in non-retail lending also, and that should produce crises in those sectors just as claimed in the paper for the MFI sector. So, why is it that we do not see such widespread occurrence of crises in India beyond the MFI sector? Does their non-occurrence not point to the possibility that the cause of the recent MFI crisis has been mis-diagnosed by the paper?

**Response:**
We agree wholeheartedly that the profit incentive driving the commercial business of advancing credit does not *ipso facto* produce unethical business practice. Certainly, our claim in the paper about the MFI sector should not be read as suggesting that only non-profit micro-finance truly works. Far from it. We strongly believe that commercial microfinance ought to be able to solve for financial inclusion in a meaningful way. However, we do not believe that the "ought" should be conflated with the "is", and our strategy in putting forward the case that we do, has been to follow the evidence we have gathered from our field interviews with the leadership teams of 12 MFIs of various sizes. Those interviews strongly suggest that the regulatory relaxations not only created a perceived profit opportunity for lenders but also competitive pressures to take advantage of that opportunity as quickly as possible. And yet, that is not the full story since neither of those two factors alone would necessarily result in poor underwriting practices on a large scale. For that to happen, the activation of a pair of affective logics was also necessary – one of smaller lenders imitating larger lenders as the latter slid into mania, and the other of borrowers' participation in churning loans. So, the story

we tell is much more complicated than simply assigning the status of first cause to a profit incentive on the lender's side.

We appreciate the commenter's question of why it is that other retail credit segments have not traversed boom-bust cycles like the MFI sector. We regard this as an important empirical question to investigate. Our educated guess for now is that other retail credit segments do not suffer from some of the disadvantages that are intrinsic to the MFI sector, such as the problem of verifying the borrower's household income or the problem of ensuring that social collateral actually plays the role that it is envisioned to play, both of which create room for gaming the regulatory framework in ways that perhaps are not present in other retail credit segments. Further, it is likely that the regulator's stance towards those other segments is more adaptive, and therefore affective logics are dampened by such adaptive regulation, leading to more muted cycles in those segments than in the MFI sector. For example, we report in our paper that in November 2023, the RBI increased risk weights for retail loans of NBFCs but specifically chose to exclude microfinance loans from such an action. Which of these possible mechanisms offer a reasonable explanation for why other retail credit segments have not traversed large-amplitude cycles like the MFI sector has, remains an important avenue for future research.

**10. Industry expert 3:** "On Recommendation 2 - the question is - does the regulator have the mandate / resources to do what we are suggesting? Shouldn't much of this also be the responsibility of Boards / the SRO?"

**Elaboration:**
NA, as we read the comment to be suggesting questions for future research inquiry.

**Response:**
We do distribute the responsibility for supervision between the regulator (Recommendation 2) and Boards/SROs (Recommendation 3). However, we do not lay out the precise details of where the boundaries sit between these three entities. To do so would require a more in-depth investigation of current mandates for each of the entities, and a suitably calibrated and delimited assignment of interpolations or extrapolations as needed, so that accountabilities are clearly defined and demarcated. We will take this up for future study.