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Credit Information Systems for Microfinance in India
Developing solutions to manage anticipated boom in sector growth

by

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Abstract

Microfinance services (predominantly the disbursement of very small loans to the poorest sectors of society) have expanded rapidly over the past three decades and have much potential to affect grass-roots economic development. However, without proper information sharing systems in place, maturing microfinance sectors often operate sub-optimally. When lending institutions lack complete information about the credit-worthiness of borrowers, lending decisions are not optimized and the performance of microfinance institutions suffers. Several countries have solved this problem with formal systems for sharing credit information. Current research focuses on country cases where such systems have been successful as well as on general analyses of barriers to creating such systems. However, there are apparently no in-depth case studies on countries with under-developed credit information systems (CIS). This work is a qualitative study based on interviews and surveys with microfinance practitioners assessing the potential for building CIS in the India. The data reveals a current lack of demand for such a system that is expected to grow due to very recent events in the government and commercial banking sector. This study is a foundational work assessing current practices around credit information sharing as well as barriers to formalizing CIS in India.

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Growing Importance of Credit Information Sharing

Over the past few decades, microfinance services have become increasingly important tools for financial and social intermediation in the lives of the world's poorest. This method of grassroots economic development has showed promise throughout the world, the number of microfinance institutions (MFIs) has increased rapidly, and borrowers are offered a range of lending alternatives.

However, problems may arise if the proper systems are not in place to support the growth of microfinance. If lending institutions are not fully informed about the credit-worthiness of potential clients, adverse selection and moral hazard can lead to negative effects on the performance MFIs' loan portfolios and increased over-indebtedness of clients.

A trend that has developed over the past several years in reaction to these challenges is the implementation of credit information systems (CIS) in global microfinance sectors. There are various forces at work in the microfinance sector that create the need for better sharing of information.

Research suggests increases in demand for CIS when there are too many alternatives for sources of loans. Studies using surveys of MFIs shows that growing competition in the past decade among MFIs, especially in countries such as Bolivia, Bangladesh, Mali, Uganda and Paraguay, presents clients with more alternatives on the supply side of loans than they have before encountered. If MFIs do not share information about their clients, then borrowers have the opportunity to take out loans from multiple institutions without detection. Thus a situation of moral hazard develops where there is an increase in the risk of default because the client does not suffer the full consequences of or may even benefit from the problematic behavior. Clients then lack the incentive to pay back loans, and hence over-indebtedness and recycling of loans results (Campion and Valenzuela 2001).

A problem that arises with a high degree of competition between MFIs is adverse selection, when bad results occur due to information asymmetries between buyers and sellers. If lending institutions do not share information about their borrowers, then lenders cannot be fully aware of clients' risk profiles. Lacking information on credit history, MFIs cannot distinguish good clients from bad ones. This situation of adverse selection increases risk and decreases the performance of MFI loan portfolios.

These forces of information asymmetry and competition result in increased rates of portfolio in arrears and generally weakened MFI performance. Clients suffer in turn as the heightened costs of lending necessitate higher interest rates on loans. High quality or low risk borrowers especially suffer from these effects as they are essentially subsidizing higher risk borrowers.

A wealth of knowledge exists supporting the use of CIS to overcome these challenges of adverse selection and moral hazard in lending markets. Cross-country comparisons using correlations of the existence of CIS with lending volumes and default rates show that regardless of whether the CIS is a public or private system, bank lending is higher and credit risk is lower in countries that share information about borrowers (Japelli and Pagano 2000).

One mechanism that contributes to improved performance with CIS is the screening effect, namely improvements in the decision-making of lending institutions based on having more information. Better selection results in an improved pool of borrowers and ultimately lowered costs of lending and lower interest rates to clients.

A second mechanism for improving performance is the reputation effect. As borrowers become aware of the reputations they build among lending institutions and how these reputations affect access to loans, they have increased incentives to repay, thus further improving the pool of borrowers and lowering lending costs (Vercammen 1995).

The theoretical arguments for improved performance with CIS are empirically corroborated in commercial lending and microfinance sectors. Incorporating CIS significantly reduces lending costs from reduced default rates (De Janvry et al. 2003). This also has the effect of lowering interest rates for clients (Luoto, McIntosh and Wydick 2004). Both lending institutions and clients benefit from increased efficiency from reduced time for loan processing. Clients of MFIs in Peru that use the Infocorp CIS have experienced a reduction in waiting time for loan processing from one week to one day (Campion and Valenzuela 2001). CIS has also shown to be an effective combatant of microfinance borrowers' over-indebtedness (Campion).

Theory and evidence also support the idea that CIS benefits borrowers not only through reduced interest rates and waiting time but also through a shift in power. Lending institutions having information about a client allows the client to build up reputational collateral as a high-quality or low-risk borrower (Luoto, McIntosh, Wydick 5). Power shifts to borrowers even more with increased competition in the microfinance sector as borrowers can leverage and capitalize on their reputational collateral by proving their creditworthiness for larger loans and greater access to financial services (De Janvry et al. 2003).

There are also arguments that CIS for microfinance ultimately creates more access to credit among the poor. However, studies show an ambiguous effect on lending volumes (Luoto, McIntosh, Wydick 2004). Whereas some borrowers' access to credit is improved as they are able to leverage their reputation towards larger loans, reputation information can also act against borrowers with any history of default. There is even some evidence that implementation of CIS actually cuts poorer clients (who are generally riskier) out of credit markets altogether (De Janvry et al. 2003). These forces counter each other and result in an ambiguous effect on lending volumes.

Recognizing these benefits of improved performance due to the sharing of credit information,

microfinance sectors throughout various regions of the world have been developing their own CIS solutions.

Literature on CIS for microfinance includes: (a) in-depth case studies describing specific countries' successful experiences with CIS for microfinance, and (b) high-level country surveys explaining barriers to the development of formal CIS for microfinance. However, in-depth case studies on countries where CIS for microfinance has been less successful or has not begun to develop are extremely difficult to find and seem to not exist. Such studies would be interesting for two main reasons:

1) Such studies may lead to innovative models for CIS solutions. The current literature makes implicit assumptions about how formal CIS for microfinance should be structured. By focusing on (a) case studies where traditional CIS models are successful and (b) the barriers in underdeveloped sectors to achieving formal systems, there is an implicit assumption that formal CIS as it is traditionally structured (primarily public and private credit bureaus) is the best structure for CIS for microfinance. Exploring cases where formal CIS is underdeveloped may reveal interesting findings about alternative structures and solutions to achieve the same benefits of traditional CIS models. Almost all of Africa and the Caribbean island nations, much of Asia and parts of Latin America have underdeveloped CIS institutions, and existing models from other regions should not necessarily be imposed on those sectors.

2) Analyzing a case where formal CIS for microfinance is underdeveloped may serve practical consultative purposes for that particular country. Any findings may be useful to the country studied in designing and implementing its own CIS solution.

Hence, this study is motivated by these two factors: (1) the lack of literature on underdeveloped cases of CIS for microfinance, and (2) the potential to uncover findings that have practical applications in the field. For this research, an in-depth case study was conducted on the microfinance sector in India, a country with underdeveloped formal CIS.

The goal of this research is to suggest answers to the question:

"What is the potential for building a system of credit information sharing among microfinance institutions in India?"

This question does not assume that a traditional model for formal CIS is necessarily applicable to India. Using qualitative interview and survey data, this research will explore: (a) the challenges facing the Indian microfinance sector today and how CIS may relieve these challenges, (b) any current practices regarding the collection and sharing of borrower credit information, and (c) any barriers to the development of CIS for the Indian microfinance sector.

India as a Timely Case Study

India was selected as the country of study for a few primary reasons related to the motivations for this research. First, India is a prime example of a country with an under-developed CIS not only for microfinance but for the commercial sector as well. Second, India's population served by microfinance is much larger than that of other smaller countries that have under-developed CIS such as the Caribbean island nations, so any potential conclusions or suggestions from this research would have a bigger impact in the global microfinance sector. Most importantly, India is recently experiencing significant changes in its commercial CIS institutions. The amount of national attention on commercial CIS from both the government and the private sector suggests a timeliness and importance of the issue to India. This environment is ripe to explore discussions about CIS for microfinance as well.

The nature of the financial services industry and direct government regulations in India have limited the development of CIS until recently.

The banking industry in India has historically been extremely consolidated, much like many industries in India. To illustrate, in 1999, the government-controlled State Bank of India alone held 94% of consumer deposits (*McKinsey Quarterly* 1999). This extreme consolidation held off the need for CIS until deregulation allowed competition in the lending sector to increase over the past several years. With such consolidation, a large bank has little incentive to share credit information with other institutions, because it would gain access to marginally very few clients' records.

Historically, the only sharing of client information even in the commercial sector was the informal exchange of the subjective opinions of bankers. Several laws blocked any more formal activity. The State Bank of India Act, 1955, ensured that no banks would exchange clients' credit information. The State Bank of India (Subsidiary Banks) Act, 1959, and the Banking Companies (Acquisition and Transfer of Undertaking) Act, 1970/80, put the same restrictions on subsidiary banks and nationalized banks, respectively (Muivah 2004).

In very recent years, the national government began to encourage private CIS for commercial lending, and the CIS was primed to develop with the same kind of centralization that has characterized the rest of the financial industry. After talks started in 2001, the first credit bureau in India's history, the Credit Information Bureau of India, Ltd. (CIBIL) was established in May 2004 as a partnership of the government controlled SBI, the leading private bank HDFC, and the two foreign CIS technology firms, Dun & Bradstreet and TransUnion.

CIBIL was structured based on recommendations from India's central bank, the Reserve Bank of India (RBI). Although the RBI's recommendations encouraged the formation of other private bureaus, they also encouraged all banks to participate in CIBIL, thus priming the CIS sector for near monopoly (Muivah 2004). Additionally, just recently in May 2005, legislation was passed in India amending the legislative limitations on the sharing of credit information listed above but also

restricting the competitive landscape. All applications for the formation of credit bureaus must be approved by the RBI, and only three to four bureaus will be allowed to exist (*Economist* 2005).

The Indian national government is thus making concerted efforts to limit competition and maintain consolidation in the CIS space. This makes sense given the nature of CIS solutions as natural monopolies, but by actively creating a centralized sector rather than allowing for organic competition and consolidation, clients of CIBIL and other CIS institutions that emerge may suffer from non-competitive prices and from little incentive for the CIS institutions to focus on customer service and innovation.

The recent focus on commercial CIS follows a boom in consumer lending in the past few years. Increased demand and loan volumes have led to heightened competition between lending institutions.

As competition between banks increases, clients have more loan alternatives and less incentive to repay. Now India's commercial lending sector faces increased default rates, especially for credit cards. Although CIBIL was launched in May 2004 and updated regulations were adopted in May 2005 to accommodate the need for expanded CIS, India still lacks an adequate unique proof of identity system (*Economist* 2005). This barrier is even more significant for microfinance where there are fewer sources of identification for poorer clients especially in rural areas.

Barriers like the lack of a unique identifier and others will be explored in the context of the Indian microfinance sector and its current practices around credit information.

Commercial banks have started tapping into microfinance markets, using existing MFIs as distribution channels in two ways. In the first case, banks use MFIs as an intermediation channel. In this model, banks give bulk loans to MFIs who in turn distribute these funds across tiny loans to clients, and then repay the loans to the banks. A second model pioneered by ICICI Bank is the partnership model. The partnership model is operationally the same as the intermediation model, yet the actual loans remain on the balance sheet of the commercial banks rather than the balance sheet of the MFI. In this way, commercial banks can have recourse over loans they disburse; even if one partner MFI closes down, banks may partner with another MFI in order to fully process the loans already disbursed (Anath 2005). As these two models gain more and more popularity among Indian commercial banks, the resulting influx of funds will greatly enhance MFIs' financial capacity to disburse loans.

The national government recognized this trend and has responded to facilitate increasing interest in funding MFIs. On January 25, 2006 the RBI circulated an issue that now allows commercial banks to use "business correspondents" for the distribution of loans and for the collecting of savings. The specific implementation of this issue means that banks will now use MFIs as intermediaries for disbursing loans to microfinance clients (Business Line 2006). This is a monumental event for microfinance in India, as the national government is encouraging the flow of funds from commercial banks through MFIs to microfinance clients.

The heightened interest of commercial banks and the national government's support of banks' involvement with MFIs imply that funds will begin to flow into the microfinance sector in India at an unprecedented rate. It is important for practitioners to be aware of the most current and relevant challenges to the sector to utilize these funds optimally. That is the motivation for this study.

Methodology and Data Collection

Data for this study was obtained through open-ended interviews as well as through closed-ended surveys. Of the 25 interviews conducted, 12 were local-level microfinance administrators and 13 were national-level practitioners at support institutions. Of the 18 surveys conducted, 8 were from the local-level group and 10 were from the national-level group. (See Appendix A for a complete list of study participants.) Study participants were asked to describe their experiences as well as express their opinions on questions related to challenges in the expansion of microfinance in India.

Data was analyzed using standard qualitative research methods. The Micro-analytic and the Holistic Approaches were used to analyze interview results, and Matrix-based Classification was employed to analyze survey results. The data revealed several interesting findings about the sector in general and also about each of the two participant groups, local-level and national-level.

Results and Analysis

The study's findings are divided into sections corresponding to each question in the one-on-one interviews and related questions in the written survey. Within the sections below, findings from each open-ended interview question are presented, followed by the findings from the written survey's corresponding question. This presentation format mirrors the sequence in which the two question types were used in data collection. One-on-one interviews with open-ended questions were conducted first, followed by administration of the written survey. The open-ended questions allowed for the collection of data that would be free of the response-limiting assumptions frequently embedded in closed-ended survey questions. This data collection format provided a relatively unrestricted exploratory approach to learning study participants' views. The follow-up survey with its closed-ended questions facilitated both direct comparison of participants' views and greater precision in the quantification of results.

Due to the multifaceted nature of the data collected, the implications of the findings from each question are presented directly following the discussion of each question's results. After the results and implications are presented for all the questions individually, connections among findings across the questions are considered.

Question 1: *"What are the biggest challenges in the movement to expand the provision of microfinance in India?"*

A major challenge is always of a legal form…the industry needs its own, better legal environment. – Shiva Nageswara Rao, Planning Manager at SHARE Microfin

Previously, resources were very scarce…. Now, there are a lot of funds, but partners [MFIs] have not matured. – Daksha Niranjan, Credit Program Head at Friends of Women's World Banking

Although the microfinancing schemes started in an efficient manner by the professionalized NGOs and MFIs, now there are innumerable NGOs totally new to the microfinancing sector, which leads to duplication of programs sometimes and which ultimately causes the beneficiaries to be indebted. This is the biggest challenge. – K. Loganathan, CEO at Association for Sustainable Community Development

Question 1 gave study participants an opportunity to speak in an open-ended way about India's microfinance sector. (See Appendix B for a copy of the interview script.) Question 1 served to focus the interview on the general area of the present research: The challenges facing efforts to expand microfinance in India. Eliciting study participants' views regarding the most significant challenges faced by microfinance practitioners in India created a context for discussion of solutions for this sector. Both theory and practice support the use of CIS to overcome some of the challenges to providing loans and other financial services, and developing an understanding of significant challenges reveals the potential usefulness of CIS in improving Indian microfinance practices.

One-on-one interview results

The most common response to Question 1 focused on the need for investments in sector infrastructure and management information systems (MIS) to reduce MFIs' operating costs and inefficiencies (14 of the total of 25 respondents, 8 of the 12 local-level respondents, and 6 of the 13 national-level respondents expressed this view). There is a severe lack of use of technology in Indian microfinance practices. Most MFIs still operate with hard copies of their records, and only a handful of the largest institutions employ MIS software. MFIs' operations are exceptionally human-capital intensive. This lack of technology, together with the reliance on human capital and paper records, increases operating expenses and reduces efficiency of microfinance practices. Resulting high operational costs are then passed on in higher interest rates to clients.

Interview subjects were very consistent in their responses about the need for more investment in technology and infrastructure to reduce these operating costs; as noted above, over half of the respondents mentioned this as a major challenge to the expansion of microfinance in India. Interestingly, several respondents (11 of the total of 25 respondents, 4 of the 12 local-level respondents, and 7 of the 13 national-level respondents) explained that, over the next decade, there is expected to be substantial or adequate funding for the disbursement of loans, but funding for infrastructure is expected to be lacking.

Respondents also emphasized the need to expand the set of products offered by MFIs (9/25 of total respondents, 4/12 of local-level respondents, and 5/13 national-level respondents expressed this view). While the current loan models may be successful, many financial service needs are left unmet. For example, a farmer may be better off with an insurance product to protect against drought rather than a loan product to smooth consumption after a bad harvest. The range of innovative financial products and services needs to be expanded.

Another challenge commonly noted by study participants as a significant hindrance to the expansion of the Indian microfinance sector was the need for regulatory reform, especially regarding the difficulties NGOs face registering as financial institutions and legal restrictions on offering savings services (7/25 total respondents, 4/12 local, and 3/ 13 national respondents expressed this view).

Other challenges mentioned with some frequency focus on training and human capital capacity. Poorly trained staff, high turnover and suboptimal operating practices limit the capacity of MFIs to disperse the funds that they have for lending (6/25 total respondents, 1/12 local, and 5/13 national respondents expressed this view). Note that while only one of the 12 local-level study participants mentioned this as a concern, five of the 13 national-level study participants identified this as a problem area. Several interviewees noted that "market-linking" training for borrowers is important (5/25 total respondents, all of whom were local-level respondents, expressed this view). If clients do not have the training to use their loans effectively in their microenterprises, then problems with loan repayment are likely to occur. The following difference in perspectives is somewhat striking: The view that microentrepreneurs lack capabilities and need training was expressed by five of the local-level respondents, but none of their national-level colleagues. On the other hand, the view that MFI staffs (i.e., local-level professional and support staff) lack capabilities and need training was expressed by five of the national-level respondents, but only one of their local-level colleagues. It appears that each group has a more critical eye for the operational level just below them.

Less frequent responses included: (a) the need for standard metrics and increased transparency of MFI operations (4/25 total respondents, 2/12 local-level respondents, and 2/13 national-level respondents); (b) a general lack of funding for loan disbursement (3/25 total respondents, 2/12 local-level respondents, and 1/13 national-level respondents"); (c) problems of over-indebtedness due to MFI competition (3/25 total respondents, 1/12 local-level respondents, and 2/13 national-level respondents); (d) difficulties in encouraging borrowers to "graduate" to larger loans (only 1 local-level respondent); and (e) a need for the cultural empowerment of women (only one local-level respondent). A number of these challenges could be addressed through the implementation of CIS. The infrequent mention of challenges relating to CIS suggests a relatively low sense of urgency regarding the need for CIS in the Indian microfinance sector. Subsequent interview questions probed deeper into the issue of CIS's relevance to MFIs in India today.

Survey results

This first one-on-one interview question was mirrored by a similar survey question asking respondents to rank the importance of various challenges to the Indian microfinance sector on a scale from one to five, with one indicating "almost no importance" and five indicating "great importance". (See Appendix C for survey questions.) The means, medians and modes of these scores were calculated (1) across all study participants, (2) local-level MFI administrators and (3) national-level practitioners at support institutions within the microfinance sector. These descriptive statistics were then used to rank responses according to importance-ratings assigned by study participants in each group. (See tables for rankings.)

For the local-level group, mean importance-rating scores revealed the most important challenge as "Need for regulatory and policy reforms" (mean importance rating of 4.6). "Lack of funding for infrastructure" and the "Lack of technology infrastructure" both had the second highest importance rating (4.2), based on the mean importance rating of participants in the local-level group.

The rankings of the survey responses are generally consistent with the interview responses, except that the mean scores in the surveys assigned somewhat greater importance to regulatory reforms than was the case with the interview results. In assessing participants' rankings of items, three measures of central tendency were calculated (mean, median and modal scores) to provide a more complete analysis of the data. Median scores were calculated to determine if any outlier scores were impacting the mean scores. The mean, median and modal scores yielded the same primary importance ranking of "Need for regulatory and policy reforms" for the local-level group's Question 1 data. The top three rankings were the same according to all three scores and there was only a slight shift in the relative importance of "Lack of funding for infrastructure" and "Lack of technology infrastructure" based on the different descriptive statistics. (See table above.)

The descriptive statistics for the national-level group's importance rankings were also consistent across the three measures of central tendency. These statistics showed "Lack of technology infrastructure" to be the most important challenge to the expansion of microfinance, according to the national-level group of study participants (mean importance rating of 4.4). "Need for regulatory and policy reforms" and "Lack of training and capabilities of staff" both had the second highest importance ranking (4.2). The median and mode scores yield rankings consistent with the mean scores. However, according to median and mode scores, four challenges all have the second highest importance ranking. "Lack of sharing of best practices" and "Lack of funding for infrastructure" also have second highest importance according to median and mode. (See table above)

The local-level and national-level groups both identified "Need for regulatory and policy reforms" and "Lack of technology infrastructure" as two of the three most important challenges to the expansion of microfinance in India.

There are also interesting differences between the two groups. The local-level group ranked "Lack of funding for infrastructure" second in importance (based on the mean score), whereas the national-level group ranked that challenge fifth in importance. Both groups ranked "Lack of technology infrastructure" as either highest or second highest in importance. However, the local group identified "Lack of funding for infrastructure" as close in importance to "Lack of technology infrastructure," whereas the national group did not.

The patterning of similarities and differences in the two groups' importance rankings suggests that the following processes may be operating: Both groups highlight the lack of technology infrastructure as impeding Indian MFIs. However, the national-level group highlights lack of staff training as a major problem, while the local-level group highlights lack of funding for infrastructure as a major problem. While national-level practitioners have observed the increases in funding for MFIs over time, local-level practitioners have observed a more detailed earmarking in those increased funds. They realize that whereas increased funding has flowed into MFIs for the purpose of loan distribution, an adequate level of funding has not been made available for technology and infrastructure.

While neither group ranked "Lack of sharing of best practices" among the three biggest challenges, the national group assigned greater importance to this challenge especially according to median and modal importance ratings. This difference in perspective may reflect that whereas formal or informal sharing of best practices happens at the local level, national-level practitioners are not aware of this sharing. Alternatively, local-level microfinance administrators may be more narrowly focused on their local situation. If this were the case, they would see less importance in the sharing of practices across institutions and hence see the lack of sharing as a less important challenge.

Implications of results

The findings regarding technology have implications for microfinance researchers in India. Given that technology infrastructure surfaced as a challenge of high importance for the sector, there is much room for research to focus on developing a host of software and hardware products to improve MFI operations. In developing such products and services, it is important to understand the limitations of MFIs. For example, since another challenge of high importance is the lack of funding for this technology, it is critical to develop low-cost solutions. Also, considering that national-level respondents identified limited training and capabilities of MFI staff as an important challenge, academic or enterprise researchers developing these technologies should focus on solutions that require little training. Both local-level microfinance administrators and national-level practitioners should encourage researchers to develop these technologies and closely communicate with researchers so that their products and services cater to the sector's needs.

Some efforts are underway to improve this challenge relating to technology. Indian commercial banks that provide bulk loans to MFIs for micro-loan disbursement have a commercial interest in developing technology infrastructure to improve MFI practices. ICICI Bank is one bank in India particularly active in this area with their Social Initiatives Group (Ruchismita interview). However, commercial banks have partnered with a limited number of MFIs and hence have an incomplete view of the microfinance sector's needs. A national network of Indian MFIs called Sa-Dhan was recently established to create a common discussion forum for institutions and to serve as the collective voice of microfinance administrators. The network currently has 139 member MFIs of various sizes and therefore has a much more complete view of the sector's needs. Since one objective of Sa-Dhan is to focus on setting standards for the orderly and professional development of the Indian microfinance sector, they could potentially incorporate efforts to develop technology standards into their goals.

These findings also have implications for national-level policy-makers policymakers who regulate MFIs. Efforts are currently underway in the Indian microfinance sector to address the challenge of regulatory reforms such as a more favorable tax environment. One of Sa-Dhan's primary interests is regulatory reform. However, organizations with a national-level perspective such as Sa-Dhan have the potential to misrepresent local administrators. This is reflected in the differences and inconsistencies that were found between local-level and national-level respondents. While these inconsistencies were not major, it is critical that policy-makers policymakers clearly understand the intricacies and limitations of the MFIs they are regulating.

As this research focuses specifically on the possibilities for, and limitations of, a system for sharing clients' credit information among MFIs in India, it is particularly interesting to consider the challenges related more directly to CIS. Two of the challenges listed as possible barriers to the expansion of microfinance in India were "Over-indebtedness of borrowers" and "Poor performance of MFI loan portfolios." (See Appendix C for a copy of the survey.) As discussed in the review of the literature and case studies, CIS is a proven solution to overcome these two challenges. It is noteworthy that survey respondents assigned relatively little importance to these two challenges. Comparing the mean importance ratings across all survey respondents, "Over-indebtedness of borrowers" ranked last with a mean score of 2.8, and "Poor performance of MFI loan portfolios" was the second least important challenge with a mean score of 2.9. As noted in the literature review and case studies, these two challenges were critical stimuli for the development of CIS in global microfinance sectors. For example, Bolivia's over-indebtedness crisis sparked the development of that microfinance sector's credit bureau (Campion). The lack of importance given to these two challenges by survey respondents implies a low level of urgency for the development of CIS for the Indian microfinance sector. Subsequent research questions offer deeper exploration of Indian microfinance practitioners' experiences with, and views on, CIS.

Question 2: *"What information is collected by microfinance institutions about borrowers and prospective borrowers? What procedures do microfinance institutions practice in the collection of this information?"*

> *One can imagine that out of 700 MFIs around, 100 may have systematic record keeping and member-level records readily available. A majority do not have such data available in a very systematic manner and certainly not on all advisable parameters. Many still do not keep records at all.* – Rewa Shankar Misra, Policy and Research Manager at CARE India

> *We don't know who is repaying on behalf of whom. Sometimes groups even repay for each other within the center, but Spandana doesn't know about that.* – Keerthi Kumar, Research Associate from the Centre for Micro Finance Research (Spandana Project)

> *Lending methodologies widely vary from institution to institution…. Thereby, collection of information in its depth varies from the type of lending methodology used and the task of comparing such information is a challenging task.* – P. Sai Gunarajan, Manager at BASIX

Question 2: solicits a description of MFIs' operational practices regarding client information. Interview responses described actual current practices. (See Appendix B for of interview questions.) When discussing the potential for developing a credit information sharing system, it is important to have a deep understanding of current practices to formulate potential solutions that will accommodate MFI's existing workflow. Only then will there be incentive or willingness to adopt such a solution. However, the purpose of Question 2's open-ended version and its two associated survey questions was to determine which elements of these operational practices are most important. Understanding the important characteristics of current MFI practices is more interesting and valuable than simply constructing a detailed picture of all their current practices.

One-on-one interview results

The most common response across interview subjects was that the information collected about borrowers is quite rich, yet most of the information is qualitative; microfinance borrowers very rarely have any records of cash flow such as income histories, bill payments or past loans. Therefore, information collected is more demographic and descriptive than quantitative or financial (16 of the total of 25 respondents, 9 of the 12 local-level respondents, and 7 of the 13 national-level respondents expressed this view). Some interviewees added that any quantitative or financial information about credit and cash flow is generated as the borrower develops a credit history over a long-term relationship with the MFI (8 of the total of 25 respondents, 4 of the 12 local-level respondents, and 4 of the 13 national-level respondents expressed this view).

However, while data about borrowers is often rich, responses were consistent about the lack of standardization across MFIs regarding the information collected and the processes for collecting it. Rules for information collection practices are vague, even given the standards set by the National Bank for Agriculture and Rural Development (NABARD), one of the main government bodies guiding policies that affect MFIs in India (12/25 total respondents, 3/12 local-level respondents,

and 9/13 national-level respondents expressed this view). Furthermore, there is much variability in responses regarding the use of technology in collecting information. Management information systems (MIS) and software or hardware for collecting client information are either completely lacking or have a high degree of variability across institutions (11/25 total respondents, 7/12 local-level respondents, and 4/13 national-level respondents expressed this view).

Responses given by interview subjects reflected their areas of familiarity. National-level practitioners responded generally about the nature of information collection practices across institutions, whereas local-level administrators responded in more detail about their particular organization's practices. Although only three local-level respondents emphasized the varied nature of practices, the descriptions of their own organizations' practices given by local-level respondents revealed this variability. Many interview subjects emphasized the importance of collecting information on the client's family demographics and income (8 of the 12 local-level respondents). Some also noted the importance of collecting housing information, usually by the loan officer actually visiting the home of each potential borrower (5 of the 12 local-level respondents). There was less consistency regarding the importance of collecting information about the proposed use of the loan (4 of the 12 local-level respondents noted this as important). Only a small group of respondents included inquiries about loans from other institutions or informal moneylenders as part of their information collection (3 of the 12 local-level respondents).

Because microfinance borrowers lack financial capital and collateral, MFIs rely on their social capital or collateral in making lending decisions; i.e., MFIs assess the creditworthiness of potential borrowers based on their reputation among existing borrowers or within their local community (9 of the 12 local-level respondents expressed this view when describing their organizations' practices). MFIs especially rely on individuals' local reputations to assess creditworthiness when employing group lending and joint liability models. Over 80% of India's microfinance lending goes to groups rather than individuals. Two respondents noted the importance of records of individual-borrower rather than group-level information as MFIs grow their use of individual- rather than group-loan products. These individual loans are more common for larger loans, because it is too costly for MFIs to administer tiny individual loans (Gunarajan interview). Individual loans are also more common in urban settings, because migration is more common in urban slums and it is therefore harder to develop the same reputational and social capital that rural villagers develop with their longer-term relationships (P.S. Mukherjee interview).

While qualitative demographic and reputation information used in lending decisions is rich, this information may not be formally documented or stored. Loan officers visit the homes of potential borrowers, meet their families, and talk to their neighbors and other group members, but this rich information is often not systematically recorded. Even if this data is recorded, it is most often kept in paper form rather than electronically, and the data is stored at the local branch level rather than transmitted to the MFIs' headquarters. Data that is actually entered into electronic files and stored centrally is funneled and severely truncated compared to the rich data that remains

locally in hard-copy form (7/12 local-level respondents explained this practice in their responses). Two respondents added that these paper-based collection, storage and auditing practices require large amounts of labor and result in high operating costs (Kumar interview; P.S. Mukherjee interview). Two other respondents also noted the risks to data security due to these practices. Data stored on paper at dispersed local sites is at risk of being lost, damaged or destroyed by floods or other accidents, and there is no electronic backup of the client information (Ruchismita interview; Rose interview).

In general, the interview responses reveal several findings. Firstly, there is a high degree of variability in processes for collecting borrower information used in decision-making. The findings also reveal that most of the information collected is qualitative and that there is a heavy reliance on social reputation among the local community. Other important findings are that the use of technology is severely lacking and that the depth of information about borrowers diminishes dramatically as it is transmitted from local sites to central MFI offices.

Survey results

Two survey questions relate to interview Question 2, and these are labeled Question 2A and Question 2B. Question 2A asks participants about the relative importance of different types of information when making lending decisions about a new potential borrower for the first time, whereas Question 2B asks participants about the relative importance of different types of information about existing borrowers applying for subsequent loans. Participants were asked to rank each type of information on a scale from one to five, with one indicating "almost no importance" and five indicating "great importance". (See Appendix C for survey questions.) Given that a primary purpose and benefit of CIS is to provide detailed information about potential borrowers to facilitate lending decisions, it is essential to understand the types of information important or ideal to loan administrators in making these decisions.

The means, medians and modes of these scores were calculated for (1) local-level MFI administrators and (2) national-level practitioners at support institutions within the microfinance sector. These descriptive statistics were used to rank responses according to importance-ratings no hyphen assigned by study participants within each group. For questions 2A and 2B from the survey, both the most important and least important rankings are highlighted. (See tables for rankings.)

For Question 2A, regarding new potential borrowers, local-level respondents considered the most important type of information to be "Name, address and other identification information" (mean importance rating of 4.6). Information types of second and third level importance were, respectively, "Default history with other lending institutions" (4.3) and "Employment history and income" (4.1). The median and mode importance ratings were consistent with the mean importance ratings. "Name, address and other identification information" was ranked as having highest importance. However, according to these ratings, various information types are closer in importance to one another.

According to local-level respondents, the least important type of information to collect from new potential borrowers was any "Record of credit from other sources (e.g., stores)" (mean importance rating of 3.4). The two types of information that were both considered to be of second least importance were "Detailed record of past loans (including interest rate, amount, date, etc.) with other institutions" (3.6) and "Reputation among the community in general (outside of the MFI's existing borrowers)" (3.6).

The study's findings regarding the least important types of information seem to contradict the interview results. Especially among local-level respondents, there was emphasis on the use of qualitative reputation information in making lending decisions; however, the survey results suggest that local-level respondents consider reputation information to be of low importance. This does not necessarily represent an inconsistency because, in the interviews, respondents described their organizations' practices regarding the collection of information types, while in the survey, participants were expressing their views on the importance of collecting various information types. The survey results show that local-level respondents view reputation as having low importance compared to the high importance of loan default or income history. However, their practices do not mirror these views because default and income data is infrequently (and almost never) available.

For Question 2B, regarding information types for existing borrowers applying for subsequent loans, local-level respondents considered "Default history with your MFI" to have the highest level of importance (mean importance rating of 4.8). The information type of second highest importance was "Detailed record of past loans (including interest rate, amount, date, etc.) with your MFI" (4.3). The third level of importance had a mean importance rating of 4.1 and was shared by three types of information: 1) "Name", 2) "Address", and 3) "Income history." The median and mode importance ratings indicate the same top ranking information types; however, according to median and mode scores, "Name" and "Address" are considered closer in importance to "Default history with your MFI" and "Detailed record of past loans (including interest rate, amount, date, etc.) with your MFI."

Local-level respondents considered "Tax statements" to be the least important type of information about existing borrowers (mean importance rating of 2.0). The second least important type of information was "Any form of identification number or card" (3.4). Two types of information were considered to be third least important, namely "Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions" (3.5) and "Record of credit from other sources (e.g., stores)" (3.5). Median and mode scores consistently ranked "Tax statements" as the least important, but the median scores resulted in "Family information" sharing the second lowest importance level with "Any form of identification card or number."

National-level respondents' views were consistent with local-level respondents' views regarding the importance of information types in Question 2A regarding new potential borrowers; the same three types of information were considered most important. However, the relative importance among these top three differed between the national- and local-level groups. For national-level

respondents, "Default history with other lending institutions" had the highest importance (mean importance rating of 4.9). Second-level importance was assigned to "Employment and income history" (4.8), and "Name, address and other identification information" (4.6) was considered to have third level importance. Median and mode scores produced rankings consistent with these top three.

There was less consistency between the local- and national-level respondents regarding the least important types of information. The national group considered "Reputation among the community in general (outside of the MFI's existing borrowers)" to have the least importance (mean importance-rating of 3.3). Both "Family information" (3.8) and "Family employment and income history" (3.8) were considered to be the second least important types of information, according to national-level respondents. Median and mode scores also corroborated these rankings for least importance.

For Question 2B, regarding existing clients, the order of highest importance assigned to information types by national-level respondents was 1) "Detailed record of past loans (including interest rate, amount, date, etc.) with your MFI" (4.8), 2) "Default history with your MFI" (4.7), and 3) "Default history with other lending institutions" (4.4). Median and mode scores reflected the same views, but also indicated that "Income history" and "Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions" had a high, yet not primary, level of importance.

The least important type of information for existing clients, according to national-level respondents, was "Tax statements" (2.7), the same as according to local-level respondents. However, national- and local-level respondents do not agree on what the second and third least important types of information are. National-level practitioners ranked "Family information" (2.8) and "Family employment or business" (2.9) as the second and third least important, respectively.

When deciding whether or not to give a loan, an MFI may gather various types of information that are not identification information and that do not directly relate to the potential client's loan history. These supplementary types of information that help an MFI assess creditworthiness may be qualitative lifestyle data such as housing information or quantitative financial data such as records of bill payments. Some of these types of information are actually collected in India today and others are not, but subjects responded to what would be most important or idea.

Observing which types of information respondents consider least important reveals an interesting difference between local- and national-level groups. As noted above, the national-level respondents see less importance than do local-level respondents in information about a potential or existing clients' families. By contrast, the local-level respondents saw less importance than national-level respondents in information from other credit sources, whether other MFIs or other sources such as stores. There seems to be a distinction between local-level respondents who favor qualitative lifestyle information about potential borrowers and national-level respondents who favor

quantitative financial information. The data was further analyzed to assess whether or not this perceived difference was an actual trend.

For Question 2A and 2B, these supplementary types of information were broken down into the two categories of qualitative and quantitative. (See table.)

Some further calculations were done for each category of supplemental information (qualitative and quantitative). The means of the previously calculated mean importance ratings –were calculated for each category of information to produce the qualitative category mean and the quantitative category mean. The same procedure was used to calculate the qualitative category median and the quantitative category median. These category means and medians were calculated for 1) local-level respondents, 2) national-level respondents, and 3) all subjects. Then the "difference between category means" and the "difference between category medians" were produced by subtracting the quantitative category mean or category median score from the qualitative one. Then the differences for the local- and national-level groups were compared to the difference across all subjects in order to determine any relative preferences of the respondent groups for either category of supplementary information, qualitative or quantitative; e.g., if responses from a particular group yield a difference in category means that is more positive than the overall difference in category means, this indicates a preference of that group for qualitative information. The category means were used to compare between groups for Question 2A, but the category medians were used to compare between groups for Question 2B. The median was used for Question 2B in order to avoid the skewing effects of the outlier "Tax statements" which had an unusually low mean importance rating. (See table.)

While an even more rigorous measure through an in-depth study on this particular qualitative versus quantitative difference could be useful, this measure is at least useful to observe the general tendencies of the two groups. Hence, local-level microfinance administrators put more weight on supplemental information of a qualitative nature, whereas national-level practitioners tend to favor the use of quantitative supplemental information for making lending decisions. This is shown by the following calculations. For Question 2A, the local-level group has a difference between medians that is 0.36 points more positive than the difference between medians of the group of all subjects (0.08 - (-0.28) = 0.36). The national-level group has a difference between medians that is 0.30 more negative than the difference between medians of the group of all subjects ((-0.58) - (-0.28) = (-0.30)). This indicates that, when making decisions about lending to new potential borrowers, local-level respondents found qualitative supplementary information more important, whereas national-level respondents found quantitative supplementary information more important. This finding was consistent for Question 2B regarding the importance of information about existing clients. Local-level respondents have a difference between means that is 0.25 more positive than the difference between means across all subjects (0.13 – (-0.12) = 0.25). Also, national-level respondents have a difference between means that is 0.23 more negative than the difference between means of all subjects ((-0.35) – (-0.12) = (-0.23)).

Local-level microfinance administrators consider qualitative lifestyle information to be more important; however, this preference may reflect the importance of qualitative information according to actual practices rather than ideal practices. In contrast, there are indications that national-level practitioners prefer quantitative data because it is ideal (albeit not realistic) to use this category of information in lending decisions. Financial models using quantitative data would more accurately calculate the optimal loan size, interest rate, etc., given a potential borrower's profile. However, perhaps local-level administrators realize that this quantitative data is hard to find and often not accurate. Unlike commercial sector borrowers, microfinance clients do not have credit cards, phone bills or other quantitative indicators of cash flow that would be useful in optimizing loan administration. Furthermore, most MFIs are administering relatively simple loan products. Perhaps more sophisticated microfinance products would increase the importance of quantitative information in local-level respondents' views. However, as responses to Question 1 indicated, India currently is lacking innovative or sophisticated microfinance products. National-level respondents may prefer quantitative data in the ideal world of a richer host of microfinance products, but in practice, MFIs may not yet have the capacity to process this information.

Additionally, the preference of local respondents for qualitative information could reflect the relative capabilities of MFIs. MFIs have very few technical tools whether in terms of technology or finance. However, MFIs rely more on human capital and have a huge advantage in local knowledge. The capabilities of Indian MFIs are more oriented towards the collection of qualitative data. An MFI loan officer may have familiarity regarding a potential borrower's family, house and reputation, yet the MFI may not have the technical tools in order to process quantitative data in a valuable way. Hence in the Indian microfinance sector's current state of development, qualitative information may be more effective assessing credit-worthiness. Whereas these are possible explanations for respondents' views on importance of information, a more systematic comparative study could better determine the actual impact of qualitative versus quantitative supplementary information in lending decisions.

It is interesting to consider the importance of types of information across dimensions other than qualitative/quantitative. Analysis of the mean importance scores allows for a comparison across positive credit information (about good credit events and histories of repayment) versus negative credit information (about default and bad credit events). In Question 2A, the item representing negative credit information was "Default history with other lending institutions", and the item representing positive credit information was "Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions." In Question 2B, there were two pairs of questions representing negative and positive credit information. "Default history with your MFI" and "Detailed record of past loans (including interest rate, amount, date, etc.) with your MFI" are items describing negative and positive credit information, respectively. "Default history with other lending institutions" and "Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions" also represent negative and positive credit information, respectively.

The mean importance ratings each of these three pairs of items (one pair from Question 2A and two pairs from Question 2B) were compared. The difference between the mean importance rating for each pair was calculated for each group of respondents (local-level, national-level, and all subjects). (See table.)

Across all subject groups for each of the three pairs of negative and positive information items, there is only one negative difference in mean importance rating. The difference scores were calculated using the following formula: mean importance rating for negative client information – mean importance rating for positive client information. Furthermore, this negative difference is smaller than any of the positive differences. Hence, there is a trend towards a preference for negative information, such as default history, when making decisions about new or existing borrowers.

Like the group differences regarding preferences for qualitative versus quantitative information, this pattern may reflect the relatively limited sophistication of microfinance products in India. Negative credit information may offer a very clear basis for decision-making; i.e., borrowers who have defaulted before will not receive a loan. However, the use of positive credit information may require more sophisticated technology and financial tools. For example, a client's detailed lending history including loan amounts, any late payments, etc. may determine the optimal loan structure for a subsequent loan. This detailed history may also better indicate the likelihood of default for clients who have not defaulted. However, utilizing this information may require more technical tools than most Indian MFIs currently possess. While not determinate of the actual impact of either type of information on decision-making, there is a preference for the negative credit information that is more easily processed.

The patterning of survey results indicates another difference between local- and national-level respondents regarding identification information and loan history information. For Question 2A, the two groups have the same top three types of information; however, the local-level respondents rank identification information first among these three, whereas national-level respondents rank identification information third among these three. Considering identification information may seem irrelevant, but it is important in the Indian context where there is no unique identifier for individuals. Local-level administrators seeing more relative importance in this type of information could reflect their day-to-day understanding of the importance of identification information commonly know as "Know Your Customer" documentation. National-level practitioners may be removed enough from day-to-day microfinance operations to put less emphasis on identification information which actually had significant implications in the field.

Furthermore, for Question 2B, both groups agree that information on loan history "with your MFI" is most important; yet, the next most important type of information differs between the two. Local-level respondents see more importance in identification information, and national-level respondents more highly value loan history information "with other lending institutions." In fact, local-level respondents rank information on lending with other institutions as being of medium-

or low-importance. Hence, there is evidence that national-level respondents more highly value information on lending history with other institutions over identification information, while local-level respondents' relative preferences are the opposite.

One possible explanation for this difference is that local-level respondents have a more personalized relationship with borrowers and hence care more about the information identity of clients. Local microfinance administrators have familiarity with their clients and the local knowledge of qualitative indicators and reputation that help make lending decisions. National-level practitioners who do not have this personal relationship with borrowers see a relatively greater importance in financial data being shared among organizations.

Furthermore, national-level respondents have a sector-wide perspective and hence may better see the possibility and importance of sharing information across MFIs. Local-level practitioners' responses may reflect a more tactical perspective. Other than in the state of Andhra Pradesh where MFIs are most abundant, MFIs in India are almost always the sole lender within their particular areas of operation (excluding informal money-lenders moneylenders). In practice, it is currently highly unlikely that clients actually have a lending history with other institutions, and therefore local-level respondents see this unavailable information as less important.

The complete explanation for this pattern is likely a combination of these and other factors. However, one important observation to note is the change in importance of lending history information from other institutions once a client has developed a relationship with the MFI. Local-level respondents may still consider information from other MFIs to be important, yet this information loses substantial importance when the MFI has its own lending history with the client. Rather than local-level respondents viewing third party information as fundamentally less important, this information may just lose importance faster for local-level respondents than for national-level respondents once they know a client better

Local-level respondents consider some, but not all, types of identification information to be of high importance. "Name" and "Address" hold third level importance for Question 2B, yet "Any forms of identification number or card" is the second least important type of information. This identification card information would be considered unimportant primarily because it does not exist. There is no unique identifier of Indian citizens. There have been some attempts at creating identification card systems based on voting or employment, but these programs are far from accurate or comprehensive. This topic will be raised again in a later discussion of the barriers to building a credit information system for microfinance in India.

Implications of results

One general finding from Question 2 is that there is some discrepancy between local- and national-level respondents regarding the relative importance of various types of information. For example, local-level administrators value qualitative data more than national-level practitioners, and

they also differ in how much they value information from other MFIs. Given that national-level practitioners in organizations such as Sa-Dhan are more likely than locally focused loan administrators to actually build a system for sharing credit information, it is important for national-level practitioners to maintain close communication with local-level administrators. If the design and implementation of any system for sharing credit information does not fit well into the workflow and constraints of MFI operations, then such a system will not be useful. This need for active communication is a theme implied by the results to Question 1 as well.

Not only is it important to tailor the design to local practitioners, it is also important to create a holistic solution for sharing credit information. For example, if detailed financial information and quantitative indicators are collected and shared as part of the CIS that develops, it is important to ensure that MFIs have the tools and capabilities to process and utilize this information. If the technical capabilities of MFIs (whether based on technology or on sophistication of financial products) are limited, it may be more effective for CIS in India to provide these capabilities. For example, it may be more useful to MFIs to have a credit score calculated by the central CIS system rather than the system producing a detailed, yet unprocessed, set of information on each client that the MFIs themselves must then process.

Most importantly, any CIS needs to be flexible and adaptable. The most consistent message revealed in the interview results was that lending models and current practices of collecting information about clients vary widely. Thus, reducing a client's credit information down to a single score rather than producing a detailed profile may be too limiting for MFIs. Furthermore, there is momentum building in the Indian microfinance sector around the development of new financial products. The types of information that are important are likely to change as the range of products changes. In order to achieve a widely useful and sustainable system for sharing credit information, adaptability must be taken into account.

These implications are important for any researchers, practitioners and policy-makers policymakers, as all of these groups are likely to be involved in the design and implementation of any CIS that develops in the Indian microfinance sector.

Question 3: *"What information about borrowers is shared with other microfinance institutions? What are the procedures for sharing this information?"*

> *We do publish client case studies on our website and with our partners, but credit information is never shared.* – Rashmi Singh, Area Manager at SKS Microfinance

> *Reputation checking happens informally during group formation…. Often groups have longer-term relationships with multiple activities, taking funds again and again.* – Jaidev Singh Lohchab, Manager of Financial Sector Ratings at CRISIL

> *The idea is good, but it will still take time to build up demand for the system.* – Shiva Nageswara Rao, Planning Manager at SHARE Microfin

Question 3 assesses current practices in information sharing among MFIs in India. (See Appendix B for interview questions.) It is important to have a full understanding of current practices such that any new systems developed are applicable to current operations. Survey Question 3 corresponds to interview Question 3 and probes deeper into the frequency of sharing different types of information.

One-on-one interview results

Nearly all interview subjects affirmed that there was no formal system for sharing borrower credit information among MFIs in India (24 of the 25 overall respondents, 11 of the 12 local-level respondents, and 13 of the 13 national-level respondents).

A small number of interview subjects mentioned informal sharing of lists of defaulters as the extent of sharing borrower credit information (4 of the 25 overall respondents, 2 of the local-level respondents, and 2 of the national-level respondents). For example, P.S. Mukherjee, the founder of DISHA, an MFI operating in Pune, India, described how his organization shares lists of defaulters with other MFIs within the InterAid network of MFIs operating in the Pune region. However, these MFIs do not share information about the identity of all their defaulters, but only the names of urban clients. In rural areas around Pune, there are no villages with more than one MFI; therefore, there is no intersection of client bases. Also, clients living in urban slums tend to migrate more. Thus, group lending is more difficult and urban clients cannot develop the same kind of community reputation. These factors increase the need for sharing lists of defaulters. Other than sparse informal sharing practices like those of DISHA, credit information about Indian microfinance borrowers largely stays within individual MFIs.

Any sharing of information among MFIs is kept to the institutional level. Interviewees noted that MFIs share performance data regarding their loan portfolios and best practices information about their lending models with MFI networks like Sa-Dhan and with commercial bank partners like ICICI Bank (12 of the 25 overall respondents, 7 of the 12 local-level respondents, and 5 of the 13 national-level respondents).

Subjects also mentioned that case studies on individual borrowers are sometimes shared on the MFIs' websites or with corporate partners and funding organizations (2 of the 12 local-level respondents). However, these case studies are merely stories of the impact of loans on clients' lives, rather than detailed credit information profiles.

One other type of informal sharing mentioned was the group formation process for group loans. Often groups do not take out only one loan, but they have a longer-term relationship that spans various financial transactions and activities. These relationships among groups and the internal screening involved in group formation is a kind of informal system for sharing information about credit-worthiness creditworthiness (2 of the 13 national-level respondents expressed this view).

Survey results

Survey Question 3 investigated whether any types of information was shared more often than others within the infrequent information sharing that is practiced. Participants were asked to rank each type of information on a scale from one to five, with one indicating "never shared" and five indicating "very widely shared." (See Appendix C for survey questions.)

The results of the survey corroborate the feedback from interviews that there is almost no sharing of credit information among MFIs. According to the mean, median and mode frequency ratings given for each type of information by all three groups of respondents (local-level MFI administrators, national-level practitioners at support institutions, and all subjects combined), none of the information types is shared with much frequency. None of the information types is shared more than "not shared much." Because of very little variation, it is not especially interesting to compare the rankings of specific information types.

However, one interesting finding is the difference between the types of information that local- versus national-respondents considered are shared most often. (See tables below.)

According to mean, median and mode scores, local-level administrators responded that the types of information shared most are related to reputation among other existing borrowers within the general community. However, national-level practitioners responded that the types of information shared most were related to default history and more detailed lending histories.

Implications of results

While generally consistent about the lack of information sharing, the difference noted between local- and national-level respondents again indicates the importance of clear communication about operations; national organizations developing CIS for India must utilize the experiences and opinions of local microfinance administrators.

The general lack of information sharing also implies that there are many barriers to CIS in India. Subsequent questions asked of study participants revealed some of the factors that are currently hindering, or might hinder in the future, the development of CIS for India's microfinance sector.

Question 4: *"What are the major barriers to the development of a credit information sharing system for microfinance in India?"*

> *The real issue of why there is no credit bureau in India is that there is no demand for it. There is not enough data to make it worth it….MFIs say theoretically that they want it, but do they want it now or in ten years?* – Puneet Gupta, Manager at ICICI Social Initiatives Group

> *MFIs need common IT solutions so they have better agility to aggregate data.*
> – P Sai Gunarajan, Manager at BASIX

> *MFIs have rich data, and their whole business functions around having this data. What a credit bureau does may seem immediately contradictory to the interests of MFIs as they are paying a cost in order to expose their clients to potential poachers.* – Rupalee Ruchismita, Manager at ICICI Social Initiatives Group

Given the exceptional lack of information sharing revealed in Question 3, Question 4 explores the reasons for this very small amount of formal or informal CIS activity in India. (See Appendix B for interview questions.) Interview responses were used to explore the barriers to CIS. It is more interesting to paint a descriptive picture of the issues than to attempt to statistically analyze opinions and predictions about barriers to the development of a system that is not yet in existence and is only a concept at this time.

One-on-one interview results

The most common response regarding the barriers to developing CIS for microfinance in India was lack of demand (19 of the 24 total respondents, 8 of the 12 local-level respondents, and 11 of the 13 national-level respondents expressed this view).

There is currently little demand for CIS because there is a very low level of competition among MFIs and hence the benefits of such a system for sharing credit information are unclear. When more than one MFI competes for the same client base, borrowers have the potential to take out multiple loans and therefore have less incentive to pay back any one loan. However, only in the state of Andhra Pradesh is there any competition among MFIs at all. Throughout the rest of the country, there is rarely more than one MFI operating in a single village or urban slum. So much of India still has no microfinance at all. Therefore, MFIs focus on expanding to untapped geographies rather than entering areas where another MFI is already operating. Many MFIs subscribe to the view that non-competition provides mutual benefits. This lack of competition results in a lack of clarity about the likely or possible advantages of CIS, because no MFIs currently suffer from the over-indebtedness of clients due to competition that would create a demand for CIS.

Another reason for a lack for demand for CIS stems from the current lending models that predominate; i.e., group lending is much more common than individual lending in India (5 of the 25 total respondents, 1 of the 12 local-level respondents, and 4 of the 13 national-level respondents expressed this view). Group lending models have exceptionally high repayment rates because of joint liability and clients paying back loans for their defaulting group members. Individual lending models create more demand for CIS because there is a higher likelihood of default. Individual models also facilitate CIS because each borrower's credit history is isolated and tracked rather than hidden within a group's performance. Even though much of the need for CIS is circumvented by using group-lending models, lending solely to groups has limitations. Good clients risk subsidizing bad clients and are not being completely rewarded for their good credit histories. Hence, good clients may eventually become frustrated and remove themselves from the lending process. Furthermore, because it is harder to isolate individual creditworthiness, loans are never structured in an optimal

way to suit clients' potential, and it is more difficult for clients to graduate to larger loans and more access to capital. Due to these limitations of group lending, growth in individual lending will continue, according to interview respondents. Thus, the need for CIS is also expected to grow.

There were other reasons why MFIs lack demand and incentives for building CIS in India. Operating costs are already high, and few organizations would spend resources on building CIS when the benefits are unclear (7 of the 25 total respondents, 3 of the 12 local-level respondents, and 4 of the 13 national-level respondents expressed this view). Also, MFIs fear that good clients will be "poached" or attracted away by other potential MFI competitors if entire credit histories are exposed by a system for sharing credit information (6 of the 25 total respondents, 3 of the local-level respondents, and 3 of the national-level respondents expressed this view).

Another set of barriers to building CIS relates to the lack of common lending models, information systems, and infrastructure in the Indian microfinance sector.

Respondents commonly mentioned the lack of a unique identifier for individual citizens in India (13 of the 25 total respondents, 4 of the 12 local-level respondents, and 9 of the 13 national-level respondents mentioned this barrier). There is no equivalent of a social security number or national identity card, and similar to other developing nations, a vast number of people in India do not even have an official birth record. There have been attempts at creating a standard national unique identifier using voting cards or employment cards for migrant workers, yet these initiatives are far from comprehensive or effective. In order to compensate for the absence of a unique identifier, MFIs create their own versions of "Know Your Customer (KYC) documents" that include very detailed information about the person's name, address, family, etc. However, there are still problems with borrower identification because the KYC data collected can be inaccurate. For example, the majority of microfinance clients in India are illiterate, so names and other information can be misspelled, and clients often do not know their age or birth date. This lack of a unique identifier and the widely varied KYC practices of different MFIs create huge barriers for the integration of data and for the accuracy of the system.

As noted in Question 2 about various important types of information, lending models also vary widely across institutions. There is very little standardization of the types of information collected as well as the incorporation of this information into decision-making about borrowers. This presents a barrier because there is currently no common platform or system on which to build an integrated CIS across MFIs, and one would have to be developed (8/25 total respondents, 5/12 local-level respondents, and 3/13 national-level respondents share this view).

Some subjects also noted a similar lack of technology infrastructure as a barrier to the development of CIS (8/25 total respondents, 5/12 local-level respondents, and 3/13 national-level respondents share this view). In a similar way, some technology standards would have to be developed and integrated to build CIS for microfinance in India. According to interview subjects, the only known efforts around creating such a technology standard is being headed up by the Social Initiatives

Group within the ICICI Bank, a commercial bank that is recently pioneering new funding models for MFIs. However, as of the fall of 2005, this initiative is still mainly conceptual.

Some other less significant barriers mentioned touched on additional issues that would arise with the development of CIS. There is a potential problem of data security with most of the data on clients currently being stored on paper in branch offices where it is subject to floods or other destructive forces (1 local-level respondent and 1 national-level respondent mentioned this barrier). Additionally, there are concerns about the difficulties of getting the consent of borrowers to share their information (2 local-level respondents expressed this view). There is also some concern about how to structure any CIS to account for the migration of borrowers around the country (2 national-level respondents expressed this view).

Barriers to the development of CIS focus mainly on the lack of demand for CIS and on the lack of common infrastructure on which to build such a system. Demand for CIS is low primarily for four main reasons: 1) a low level of competition among MFIs, 2) the low levels of default with group lending models, 3) little incentive to make the necessary short-term increases in already high operating costs, and 4) a fear of losing good clients to other MFIs when the records of good clients are shared. There are three main components of the barriers related to infrastructure: 1) the lack of a unique identifier of individuals in India, 2) widely varying lending models and practices around the use of client data, and 3) the lack of standardization of technology and information systems across MFIs.

Implications of results

These sets of barriers imply different approaches to solutions.

At the present time, it is not necessary to actively seek ways to overcome these barriers, due to lack of demand for CIS. However, there is evidence of growing demand for CIS, especially in the competition among MFIs developing for the first time in Andhra Pradesh and in sector-wide efforts to increase individual lending and provide more innovative loan products. The current lack of demand for CIS is not a problem, but rather an indication that the time is not yet right to build such a system.

However, solutions should be actively pursued for the barriers to CIS regarding lack of infrastructure. The lack of a unique identifier affects much more than just the microfinance sector. Policymakers have attempted to solve this problem with voting cards, but efforts thus far have failed. A national system of identification is fundamental to the distribution of many social and commercial services, the collection of tax revenue, national security issues, and many other government functions. Facilitating the distribution of microfinance and the development of CIS are just two areas that would benefit from a solution to this problem. The Indian government should continue its efforts here. Furthermore, private third party corporations or organizations could try developing solutions, and policy-makers policymakers should facilitate these efforts.

The barriers to CIS related to the lack of standardization of lending models and information systems could be solved by a number of approaches. A top-down approach to standardization would involve regulating standards and deploying common technology platforms. This top-down standardization could have benefits in other ways, but this approach may not be necessary for the development of CIS. It may be more effective and efficient to develop a system of lowest common denominator standards for sharing credit information that allows adaptability to the varying models rather than enforcing a common structure and technology platform across all MFIs. One example of this approach is the Mifos project to build management information systems for MFIs. This point will be discussed further below. The costs of implementation and operations are reduced and the utility of the system is increased the less MFIs have to change their current operations. Local- as well as national-level practitioners, microfinance researchers, and even third party private or commercial institutions should explore entrepreneurial and innovative designs for the adaptability of CIS solutions.

Conclusions and Applications

Conclusions and applications for challenges to the expansion of microfinance

The two most important challenges to the expansion of microfinance in India, namely the need for regulatory reforms and the need for infrastructure and technology improvements, are not being addressed with the same degree of focus and effort, according to study participants. The need for regulatory reform was highlighted as a challenge of primary importance, but many interview subjects also noted that efforts are steadily underway to address this challenge and that it would just be a matter of time for the necessary regulatory changes to come about. However, interview and survey responses reveal that there is not yet enough effort behind solving the challenges related to infrastructure. This is indicated by the fact that local-level respondents also ranked the lack of funding for infrastructure as having the highest tier of importance.

Further research is necessary on the reasons why challenges around infrastructure seem neglected relative to challenges around regulatory reform. However, one possible explanation is that regulatory reforms are easier to address because there is a very clear problem and target for a solution. If these laws must be changed to facilitate the development of microfinance, then the government is an obvious target for lobbying.

On the other hand, it is less clear how to solve the problem regarding infrastructure and technology challenges. Stakeholders and complicating factors in the infrastructure problem are so diverse that an obvious solution is harder to achieve. There is a wide range of infrastructure problems from lack of information technology to inadequacy of roads. It is harder to pinpoint a responsible party for developing a solution. MFIs do have internal initiatives to improve their own use of technology, but there is not an obvious accountable party for problems with sector-wide infrastructure. Infrastructure for the sector is like a public good, and no single party has very strong incentives to bear the cost alone.

One possible solution to this incentive problem is to involve the government, but MFI practitioners in this study indicated a general dislike for government corruption and inefficient bureaucracy. Another option is for a third-party corporate entity to create a business around technology and infrastructure solutions for Indian MFIs; an innovative business model around the delivery of technology products and infrastructure facilities for microfinance could solve this incentive problem. Similarly, corporate partners like ICICI Bank that are investing in MFIs in order to access microfinance markets have a longer-term incentive to invest in infrastructure in order to increase the efficiency and effectiveness of their MFI partners.

Another major challenge highlighted in the study results was the need to expand the range of products and services offered by MFIs. Researchers specializing in economic development and finance could combine their expertise with the local knowledge of microfinance practitioners to drive product innovation.

The importance of training and increasing human capital capabilities in the microfinance sector was also important to study participants. However, there was some discrepancy over who exactly needed to be trained. Local-level respondents found it more important to train micro-entrepreneurs, yet national-level respondents felt that MFI administrators' capabilities are lacking. Because resources in the sector are limited, it is important to invest in training programs with the highest degree of effectiveness. Empirical studies should be done comparing the effects on performance of various training programs before large amounts of resources are invested in implementing these programs.

The findings most relevant to the topic of CIS are actually the low importance of challenges that would necessitate a CIS solution. Study participants saw relatively less importance in the challenges of over-indebtedness of clients or difficulties in graduating clients into larger loan sizes. However, this does not mean that there will never be demand for CIS in India's microfinance sector. As discussed more comprehensively below, competition between MFIs is increasing, and innovations are developing around lending models that would benefit more from better credit information.

Conclusions and applications for the collection of borrower information

As described in the Results section, there are some discrepancies over the importance of various types of information that could possibly be collected about a potential borrower. Local-level respondents saw greater importance in qualitative lifestyle information than did national-level respondents, while national-level respondents preferred quantitative financial data for making lending decisions. This discrepancy is an indication of potential problems in the eventual development of a system for sharing credit information. National-level practitioners are likely to actually build such a system, yet local-level administrators run the MFIs that would participate in the system. In order to develop an effective solution, national- and local-level practitioners need to be in close communication. These discrepancies should be resolved in any CIS design.

Just as practitioners have opinions about the importance of qualitative and quantitative data about clients, there are many other types of information that have more or less importance in making lending decisions. Understanding these preferences of practitioners is important when considering possible designs for a CIS solution. For example, both groups of participants showed a preference for negative information over positive information. Given that collecting and storing information in greater detail can increase the costs of the system, perhaps this preference reveals that only negative information should be collected. The exact costs involved in collecting, storing and managing more comprehensive data would have to be weighed directly against the benefits to decision-making. This study is not at all conclusive on this point, but it is a good example of the tradeoffs of design and costs that will be important in the development of CIS.

Question 1 revealed the lack of technology and human capital capabilities that MFIs suffer from. These capabilities are important to consider when creating a CIS solution. Any system should be as simple as possible in order to fit into the workflow and limited resources of Indian MFIs.

Furthermore, the high degree of variation that exists between the lending models and credit information practices of MFIs also has implications for the design of any CIS solution for India. Attempting to standardize practices from the top-down is likely to be a slow, costly process with significant negative implications. For example, enforcing a common technology platform may be too costly to implement for smaller, newer MFIs. They will either suffer under the high costs of integration or they will not participate in the CIS and hence not realize the improved lending decisions and other benefits of participation. In this way, top-down standards have a risk of marginalizing smaller MFIs and artificially forcing consolidation in the sector. Furthermore, a top-down approach with strict, detailed standards and practices is likely to suit only a small number of MFIs. Given the high degree of variation among MFI practices regarding information collection and lending models, it will be extremely difficult to find consensus around standards, and any that are achieved are likely to require costly adjustment on the part of the member MFIs in the form of technology integration, training of staff, etc.

However, there are many important and valuable characteristics of the top-down approach to developing CIS especially around security and privacy protection issues. Privacy and the proper use and exposure of information should still be guided from the top to ensure protection of client information.

However, these goals can still be achieved while allowing for adaptability and programmability at the implementation level. A central body such as the government or a third party CIS entity acting within the bounds of regulation should set standards for information collection and use, but these should be the lowest common denominator for standards rather than dictating exact operations that MFIs must follow. For example, as there is no unique identifier in India, standards around identification information are important. However, there may be more variation around the types of credit information collected such as qualitative versus quantitative information, positive versus

negative information, or how much historical data to maintain in the system. Setting lowest-common-denominator standards are important to be able to generate centralized comparisons between clients based on these standards. However, any CIS system should be adaptable to any MFIs current practices and allow for the collection and potentially sharing of information above and beyond what is necessary yet also moderated by privacy restrictions. Adaptability will allow for better integration into current practices thus easing integration costs and enhancing likelihood of participation of MFIs.

Similarly, a technology platform should be developed rather than a closed CIS application, and MFIs should be empowered to alter and adapt specific applications for information collection and use according to each MFI's particular practices, lending models and capabilities. If the client information collected and the systems for sharing that information are flexible, then the cost and effort for MFIs to participate will be greatly diminished. This philosophy is employed by Mifos, a management information system (MIS) currently being developed by the Grameen Foundation USA. Mifos is an MIS developed in the Open Source Framework as a base software that MFIs can program on top of to craft the most relevant MIS applications. The team leading the Mifos project sees it as a common denominator for a flexible and scalable MIS that will answer many of the issues facing MFIs (www.mifos.com). A national CIS solution developed with a philosophy and strategy similar to the Mifos project has the potential to provide the protection of lowest-common-denominator standards while increasing participation and usefulness of the system for participating MFIs.

Conclusions and applications for the sharing of borrower information

Differences between responses of local- and national-level respondents regarding practices of sharing credit information again indicate the importance of clear communication in the eventual development of a CIS solution; national organizations developing CIS for India must utilize the experiences and opinions of local microfinance administrators.

In general, there is very little activity around credit information sharing in India. The general lack of information sharing also implies that there are many barriers to CIS in India.

Conclusions and applications for the barriers to the development of CIS

The primary set of barriers hindering the development of CIS in India is the current lack of demand for such a system due to reasons discussed earlier. However, two trends mentioned in interviews with research subjects indicate that demand for CIS will increase over the next several years. As the interest of commercial banks in microfinance grows, the rate of funding for microfinance will increase dramatically. This impending influx of funds is intended to spark the expansion of microfinance throughout the country. Expansion will lead to increased competition and subsequently increased demand for CIS. Furthermore, increasing efforts to expand to product offerings to include individual loans and other microfinance products will also increase demand

for CIS. Hence, these barriers should not really be considered barriers, but rather conditions limiting demand that will change over time.

However, there is a set of barriers related to sector standards that do need to be addressed. The Indian government should continue its efforts to solve the problem of the unique identifier. Given the lack of success in this area so far, perhaps the corporate sector could step in with more innovative and effective solutions that do not involve government mandates but take better advantage of incentives. There are also problems with the lack of standardization of lending models and technology among MFIs. As discussed above, it is important for the design and implementation of any CIS solution to be flexible and adaptable to the wide range of MFI practices.

One conceptual solution to the barriers that arise from lacking sector standards is to empower borrowers and give them responsibility over their own credit information records. Currently there are international examples of government and private sector initiatives regarding the storage and use of medical records that put the power and responsibility of maintaining one's medical records with the patient. For example, a person may have his or her medical records stored on a smart card that can be transported to any health care facility and immediately accessed. An analogous solution could be effective for credit information about microfinance borrowers in India. Borrowers could be given some form of smart card with all of their personal information and credit history, and MFIs could be equipped with technology for reading these records. A solution such as this could be effective in overcoming some of the CIS barriers related to lacking sector standards. The need for a unique identifier could be reduced as long as the proper identity checking is implemented. However, even though each borrower carries his or her own records, there is still potential for fraud. An analogy could be the practices around credit cards and risk of fraud and identity theft. However, these problems are much easier to resolve than exposure of a client's banking and financing records. An additional benefit to this smart card approach in regards to infrastructure standards is related to technology standards and costs. There is less need to integrate the varying technology standards of MFIs because data is not pulled from a centralized database. The model could also overcome barriers related to variation between lending models, because MFIs could create customized systems to process the data relevant to them; i.e., each MFI could use and process any subset of information determined to be important for making lending decisions. This concept presents obvious concerns with data security and privacy, but it does address some of the other major barriers to the sharing of credit information in India.

Demand for CIS in India's microfinance sector will continue to grow, and as it does innovative solutions will require a deep understanding of the experiences, practices, opinions, and limitations of the parties involved. This study attempts to highlight these important experiences, practices, opinions and limitations as well as analyze their implications for the eventual development of a CIS solution for microfinance in India.

Appendix A

List of Research Subjects

Local-level administrators

- P. Sai Gunarajan (interview) is a Manager at BASIX, an MFI operating in Andhra Pradesh. Mr. Gunarajan's primary focus is the insurance business at BASIX.
- Keerthi Kumar (interview and survey) is a Research Associate from the Centre for Micro Finance Research assigned to a project for Spandana, an MFI operating in Andhra Pradesh.
- K. Loganathan (interview and survey) is the Chief Executive Officer of the Association for Sustainable Community Development, an MFI operating in Tamil Nadu.
- Rewa Misra (interview) is the Policy and Research Manager at CARE India, an MFI operating in New Delhi.
- George V. Mathew (survey) is the Senior Manager of Operations and Human Resources at Krishna Bhima Samruddhi Local Area Bank (KBSLAB), an MFI operating in Andhra Pradesh.
- P. S. Mukherjee (interview and survey) is the founder and Secretary General of DISHA, an MFI operating in Pune.
- Reema Nanavaty (interview) is the Director for Economic and Rural Development at SEWA Bank, an MFI operating in Gujarat.
- Prem Cheand (interview) is the Secretary General at Krushi, an MFI operating in Andhra Pradesh.
- V. Chandar Rao (interview and survey) was a Manager at BASIX, an MFI operating in Andhra Pradesh.
- G. Shiva Nageswara Rao (interview and survey) is the Head of Planning at SHARE Microfin, Ltd., an MFI operating in Andhra Pradesh.
- D. Sattaiah (survey) is the Associate Vice President at BASIX, an MFI operating in Andhra Pradesh.
- Rashmi Singh (interview) is an Area Manager at SKS Microfinance, an MFI operating in Andhra Pradesh.
- Reeva Sood (interview) is the Secretary General at Indcare Trust, an MFI operating in New Delhi.
- Santosh Vaidya (interview) was a Manager at BASIX, an MFI operating in Andhra Pradesh.

National-level administrators

- Rituparno Bhattacharyya (interview) is Chief Executive Officer and Secretary General of AHAN, a non-governmental organization with research and funding efforts within the microfinance sector in India.
- Puneet Gupta (interview and survey) is a Manager in the Social Initiatives Group at ICICI Bank, a commercial bank operating throughout India that is most active in funding Indian MFIs.
- Niket Kamdar (interview and survey) is a Manager in the Technology Group at ICICI Bank, a commercial bank operating throughout India that is most active in funding Indian MFIs.
- Jaidev S. Lohchab (interview) is a Manager at CRISIL, a corporate ratings firm that serves MFIs in addition to commercial corporations.

- Raj Kamal Mukherjee (interview and survey) is a Manager at Sa-Dhan, the national network of MFIs in India.
- Berenice de Gama Rose (interview and survey) is a Manager in the Social Initiatives Group at ICICI Bank, a commercial bank operating throughout India that is most active in funding Indian MFIs.
- Rupalee Ruchismita (interview and survey) is a Manager in the Social Initiatives Group at ICICI Bank, a commercial bank operating throughout India that is most active in funding Indian MFIs.
- Ashish Kumar Sahu (interview and survey) is a Manager at Sa-Dhan, the national network of MFIs in India.
- M. Sarat (interview and survey) is a Manager at Sa-Dhan, the national network of MFIs in India.
- T. Raj Sekhar (interview) is a Manager at CRISIL, a corporate ratings firm that serves MFIs in addition to commercial corporations.
- Daksha Shah (interview and survey) is the Program Manager of Credit at Friends of Women's World Banking, an international organization with economic development and other social programs throughout the developing world.
- M. Sudhir (interview and survey) is a Manager at Sa-Dhan, the national network of MFIs in India.
- Niyatendra Tripathy (interview and survey) is a Chief Manger in the Technology Group at ICICI Bank, a commercial bank operating throughout India that is most active in funding Indian MFIs.

Appendix B

Interview Questions

1. What are the biggest challenges in the movement to expand the provision of microfinance in India?

2. What information is collected by microfinance institutions about borrowers and prospective borrowers? What procedures to microfinance institutions practice in the collection of this information? (Please describe both more formal efforts such as records kept by the microfinance institutions as well as informal efforts such as a borrowers reputation within a lending group.)

3. What information about borrowers is shared with other microfinance institutions? What are the procedures for sharing this information? (Please describe both formal and informal sharing of information.)

4. What are the major barriers to the development of such a credit information sharing system for microfinance in India?

Appendix C

Written Survey

NOTE: This survey is part of the collection of data for a qualitative study on the potential for building a system for collecting and sharing credit information about borrowers among microfinance institutions in India. Any opinions and information expressed in this study will be attributed only to you and not to the organization to which you are affiliated. Valerie Rozycki is conducting this research for her honors thesis from Stanford University. Thank you for your time.

General Information:

Name	
Title	
Organization	
Telephone	
Email	

Survey Questions:

1. How important are the following challenges to the expansion of microfinance in India? (Please rate the following according to the scale: 1-almost no importance, 2-limited importance, 3-some importance, 4-substantial importance, 5-great importance)

   a. Lack of funding for loan disbursement ____

   b. Lack of funding for infrastructure ____

   c. Lack of capacity to absolve existing funds ____

   d. Lack of training and capabilities of staff ____

   e. Lack of sharing of best practices ____

   f. Lack of technology infrastructure ____

   g. Need for regulatory and policy reforms ____

   h. Overindebtedness of borrowers ____

   i. Poor performance of MFI loan portfolios ____

   j. Any others? _____

2a. When making lending decisions about a **new potential borrower for the first time**, how important are the following types of information? (Please rate the following according to the scale: 1-almost no importance, 2-limited importance, 3-some importance, 4-substantial importance, 5-great importance)

   a. Name, address and other identification information ____

   b. Family information ____

c. Employment and income history ____

d. Family employment and income history ____

e. Default history with other lending institutions ____

f. Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions ____

g. Record of credit from other sources (e.g. stores) ____

h. Savings history ____

i. Reputation among other existing borrowers ____

j. Reputation among the community in general (outside of the MFI's existing borrowers) ____

k. Any others? _____

2b. When making lending decisions about **existing borrowers for subsequent loans,** how important are the following types of information? (Please rate the following according to the scale: 1-almost no importance, 2-limited importance, 3-some importance, 4-substantial importance, 5-great importance)

a. Name ____

b. Address ____

c. Any form of identification number or card ____

d. Family information ____

e. Employment or business

f. Income history ____

g. Family employment or business

h. Family Income history ____

i. Tax statements ____

j. Any legal actions involving the borrower ____

k. Default history with **your MFI** ____

l. Detailed record of past loans (including interest rate, amount, date, etc.) with **your MFI** ____

m. Default history with **other lending institutions** ____

n. Detailed record of past loans (including interest rate, amount, date, etc.) with **other lending institutions** ____

o. Record of credit from other sources (e.g. stores) ____

p. Savings history ____

q. Reputation among other existing borrowers ____

r. Reputation among the community in general (outside of the MFI's existing borrowers) ____

s. Any others? _____

3. How often are following types of borrower information shared between MFI's? (Please rate the following according to the scale: 1-never shared, 2-not shared much, 3-shared somewhat, 4-shared widely, 5-very widely shared)

   a. Name ____

   b. Address ____

   c. Any form of identification number or card ____

   d. Family information ____

   e. Employment or business

   f. Income history ____

   g. Family employment or business

   h. Family Income history ____

   i. Tax statements ____

   j. Any legal actions involving the borrower ____

   k. Default history with **your MFI** ____

   l. Detailed record of past loans (including interest rate, amount, date, etc.) with **your MFI** ____

   m. Default history with **other lending institutions** ____

   n. Detailed record of past loans (including interest rate, amount, date, etc.) with **other lending institutions** ____

   o. Record of credit from other sources (e.g. stores) ____

   p. Savings history ____

   q. Reputation among other existing borrowers ____

   r. Reputation among the community in general (outside of the MFI's existing borrowers) ____

   s. Any others? _____

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Table 1: Local-level Respondents:

Response (in order of importance ranking)	Mean Importance Rating	Median Importance Rating	Mode Importance Rating
Need for regulatory and policy reforms	4.6	4.5	5.0
Lack of funding for infrastructure	4.2	4.5	5.0
Lack of technology infrastructure	4.2	4.0	5.0
Lack of training and capabilities of staff	4.0	4.0	4.0
Lack of sharing of best practices	3.6	3.5	3.0
Lack of funding for loan disbursement	3.1	3.5	3.0

Table 2: National-level Respondents:

Response (in order of importance ranking)	Mean Importance Rating	Median Importance Rating	Mode Importance Rating
Lack of technology infrastructure	4.4	4.5	5.0
Need for regulatory and policy reforms	4.2	4.0	5.0
Lack of training and capabilities of staff	4.2	4.0	4.0
Lack of sharing of best practices	3.8	4.0	4.0
Lack of funding for infrastructure	3.6	4.0	4.0

Table 3: Question 2A: Local-level Respondents:

Response (in order of *greatest* importance)	Mean Importance Rating	Median Importance Rating	Mode Importance Rating
Name, address and other identification information	4.6	5.0	5.0
Default history with other lending institutions	4.3	4.0	4.0
Employment and income history	4.1	4.0	4.0
Family information	4.0	4.0	4.0
Reputation among other existing borrowers	3.9	4.0	4.0

Table 4: Question 2A: Local-level Respondents:

Response (in order of *least* importance)	Mean Importance Rating	Median Importance Rating	Mode Importance Rating
Record of credit from other sources (e.g., stores)	3.4	3.0	3.0
Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions	3.6	3.5	3.0
Reputation among the community in general (outside of the MFI's existing borrowers)	3.6	4.0	4.0

Table 5: Question 2B: Local-level Respondents:

Response (in order of *greatest* importance)	Mean Importance Rating	Median Importance Rating	Mode Importance Rating
Default history with your MFI	4.8	5.0	5.0
Detailed record of past loans (including interest rate, amount, date, etc.) with your MFI	4.3	4.5	5.0
Name	4.1	4.5	5.0
Address	4.1	4.5	5.0
Income history	4.1	4.0	4.0

Table 6: Question 2B: Local-level Respondents:

Response (in order of *least* importance)	Mean Importance Rating	Median Importance Rating	Mode Importance Rating
Tax statements	2.0	2.0	3.0
Any form of identification number or card	3.4	3.0	3.0
Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions	3.5	3.0	3.0
Record of credit from other sources (e.g., stores)	3.5	3.5	3.0
Family information	3.8	3.5	3.0

Table 7: Question 2A: National-level Respondents:

Response (in order of *greatest* importance)	Mean Importance Rating	Median Importance Rating	Mode Importance Rating
Default history with other lending institutions	4.9	5.0	5.0
Employment and income history	4.8	5.0	5.0
Name, address and other identification information	4.6	5.0	5.0
Savings history	4.3	4.5	5.0

Table 8: Question 2A: National-level Respondents:

Response (in order of *least* importance)	Mean Importance Rating	Median Importance Rating	Mode Importance Rating
Reputation among the community in general (outside of the MFI's existing borrowers)	3.3	3.0	3.0
Family information	3.8	4.0	4.0
Family employment and income history	3.8	4.0	4.0

Table 9: Question 2B: National-level Respondents:

Response (in order of *greatest* importance)	**Mean Importance Rating**	**Median Importance Rating**	**Mode Importance Rating**
Detailed record of past loans (including			
interest rate, amount, date, etc.) with your MFI	4.8	5.0	5.0
Default history with your MFI	4.7	5.0	5.0
Default history with other lending institutions	4.4	4.5	5.0
Income history	4.3	4.5	5.0

Table 10: Question 2B: National-level Respondents:

Response (in order of *least* importance)	**Mean Importance Rating**	**Median Importance Rating**	**Mode Importance Rating**
Tax statements	2.7	2.5	2.0
Family information	2.8	2.5	2.0
Family employment or business	2.9	3.0	2.0

Table 11: Question 2A:

Qualitative Information Category	**Quantitative Information Category**
Family information	Employment and income history
Reputation among existing borrowers	Family employment and income history
Reputation among the community in general (outside of the MFI's existing borrowers)	Record of credit from other sources (e.g., stores)
	Savings history

Table 12: Question 2B:

Qualitative Information Category	**Quantitative Information Category**
Family information	Income history
Employment or business	Family income history
Family employment or business	Record of credit from other sources (e.g. stores)
Any legal actions involving the borrower	Tax statements
Reputation among other existing borrowers	Savings history
Reputation among the community in general (outside of the MFI's existing borrowers)	

Table 13: Question 2A:

	Qualitative Category Mean	Quantitative Category Mean	Difference between Category Means
Local-level	3.83	3.75	0.08
National-level	3.70	4.28	–0.58
All Subjects	3.76	4.04	–0.28

Table 14: Question 2B:

	Qualitative Category Mean	Quantitative Category Mean	Difference between Category Means
Local-level	3.75	3.63	0.13
National-level	3.15	3.50	–0.35
All Subjects	3.44	3.56	–0.12

Table 15:

	Negative Info Mean Importance Rating	Positive Info Mean Importance Rating	Difference of Mean Importance Ratings
	Default history with other lending institutions	Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions	Difference
Local-level	4.25	3.63	0.62
National-level	4.90	4.00	0.90
All subjects	4.61	3.83	0.78
	Default history with your MFI	Detailed record of past loans (including interest rate, amount, date, etc.) with your MFI	Difference
Local-level	4.75	4.25	0.50
National-level	4.70	4.80	-0.10
All subjects	4.72	4.56	0.16
	Default history with other lending institutions	Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions	Difference
Local-level	3.88	3.50	0.38
National-level	4.40	4.20	0.20
All subjects	4.17	3.89	0.28

Table 16:

Local-level Respondents:

Response (in order of frequency ranking)	Mean Frequency Rating	Median Frequency Rating	Mode Frequency Rating
Reputation among other existing borrowers	1.8	2.0	2.0
Reputation among the community in general (outside of the MFI's existing borrowers)	1.8	2.0	2.0
Address	1.6	2.0	2.0
Default history with your MFI	1.6	2.0	2.0
Detailed record of past loans (including interest rate, amount, date, etc.) with your MFI	1.6	2.0	2.0

National-level Respondents:

Response (in order of frequency ranking)	Mean Frequency Rating	Median Frequency Rating	Mode Frequency Rating
Default history with your MFI	2.2	2.0	1.0
Detailed record of past loans (including interest rate, amount, date, etc.) with other lending institutions	1.6	1.0	1.0
Reputation among other existing borrowers	1.6	1.0	1.0
Family income history	1.5	1.0	1.0
Detailed record of past loans (including interest rate, amount, date, etc.) with your MFI	1.5	1.0	1.0