

Journal_{of} Microfinance

Volume Six, Number Two
Winter 2004

CENTER FOR ECONOMIC
SELF-RELIANCE
MARRIOTT SCHOOL
BRIGHAM YOUNG UNIVERSITY
PROVO, UTAH

SCHOOL OF BUSINESS
BRIGHAM YOUNG UNIVERSITY-HAWAII
LAIE, HAWAII

Journal of Microfinance
is a joint publication of
The Center for Economic Self-Reliance,
Marriott School, at
Brigham Young University
Provo, Utah, USA
and the School of Business
Brigham Young University–Hawaii
Laie, Hawaii, USA

www.microjournal.com

Copyright ©2004 Journal of Microfinance
All rights reserved. Printed in the United States of America
on acid-free paper.
ISSN: 1527–4314

Journal of Microfinance thanks the following for their contributions:

The Marriott School at Brigham Young University

The BYU Humanities Publication Center, for editing and production services.
Professor Melvin J. Thorne, director; student assistants:
Sarah Bylund, Melinda Keefe, Becca Brodegard.

The *Journal of Microfinance* has adjusted its editorial calendar to more accurately reflect actual publishing and delivery dates. Therefore, this issue (vol. 6, no. 2) is the “Winter 2004” issue, and the next issue (vol. 7, no. 1) will be the “Summer 2005” issue. This is a technical change that will not impact the total number of issues subscribers receive each year.

SUBSCRIPTIONS AND SUBMISSIONS

Journal of Microfinance (ISSN 1527-4314) is published semiannually by Brigham Young University. Second-class postage paid at Provo, Utah, and at additional mailing offices. Postmaster: please send address changes to Journal of Microfinance, 712A TNRB, Marriott School, Brigham Young University, Provo, UT 84602.

Subscriptions: The subscription rate for subscribers in the U.S. and Canada for two issues is the following (in U.S. dollars):

	Individuals	Libraries
On-line	\$25	\$60
Hard Copy	\$45	\$125
Combination	\$60	\$170

Add \$10 for non-U.S. / Canada hard copy or combination subscriptions. All claims on issues not received must be made within three months of publication if within the United States, or within six months for subscriptions outside the United States. Please send all correspondence regarding subscriptions to microjournal@byu.edu or Journal of Microfinance, 712A TNRB, Marriott School, Brigham Young University, Provo, UT 84602, USA; visit us online at <http://www.microjournal.com>; or call (801) 422-9009.

Submissions: *Journal of Microfinance* is pleased to accept submissions for publication sent to the special attention of the editor. All communications dealing with articles should be sent by email to microjournal@yahoo.com or to Journal of Microfinance, 712A TNRB, Marriott School, Brigham Young University, Provo, UT 84602, USA.

Content: All citations conform to the standards of American Psychological Association. Views expressed herein are to be attributed to their authors and not to *Journal of Microfinance* or Brigham Young University unless otherwise indicated.

Copyright: Except as otherwise noted, *Journal of Microfinance* is pleased to grant permission for copies of articles to be made for classroom use, provided that (1) a proper notice of copyright is affixed to each copy, (2) the author and source are identified, (3) copies are distributed at or below cost, and (4) *Journal of Microfinance* is notified of the use.

Copyright ©2004 Journal of Microfinance

EDITORS

Norman Wright
Brigham Young
University–Hawaii

Beth Haynes
Book Review Editor
Brigham Young
University–Hawaii

EDITORIAL BOARD

Craig Churchill
International Labour Organisation

Sam Daley-Harris
Microcredit Summit

Christopher Dunford
Freedom From Hunger

Elaine Edgcomb
Aspen Institute

Jason Friedman
Association for Enterprise Opportunity

Kathleen Gordon
MicroBusiness USA

John Hatch
FINCA International

Gerald Hildebrand
Katalysis North/South Development
Partnership

Mildred Robbins Leet
Trickle Up

David Richardson
World Council of Credit Unions

Mark Schreiner
Washington University, St. Louis

Hans Dieter Seibel
International Fund for Agricultural
Development

J. D. Von Pishke
Frontier Finance International

Muhammad Yunus
Grameen Bank

CONTENTS

ARTICLES

- 1 **Realizing Mission Objectives: A Promising Approach to
Measuring the Social Performance of Microfinance Institutions**
Katarzyna Pawlak and Michal Matul
- 27 **Impact of Microfinance Programs on Children's Education: Do
the Gender of the Borrower and the Delivery Model Matter?**
Nathalie Holvoet
- 51 **Foreign Exchange Risk Management Practices of Microfinance
Institutions**
Peter R. Crabb
- 65 **Scoring Arrears at a Microlender in Bolivia**
Mark Schreiner
- 89 **The Transformation of the Microfinance Sector in India:
Experiences, Options, and Future**
M. S. Sriram and Rajesh S. Upadhyayula
- 113 **The Experience of Financial Institutions in the Delivery of
Microcredit in the Philippines**
Maria Abigail Carpio
- 137 **Microleasing: The Grameen Bank Experience**
Asif Ud Dowla

Realizing Mission Objectives

A Promising Approach to Measuring the Social Performance of Microfinance Institutions

Katarzyna Pawlak

Michal Matul

Print your mission statement on the back of your business card to remind your people, your prospects, and your customers of what your company stands for.

—Philip Kotler

Abstract: This paper proposes a new approach for measuring the social performance of microfinance institutions. The key to developing sustainable social performance measurement (SPM) systems and practices is to consider their design from the perspective of the organizational mission. The fact that the SPM system is built on the organizational mission ensures its cost-effectiveness and facilitates its institutionalization. It not only stimulates an MFI to verify the fulfillment of its social mission and to innovate in the search for optimal solutions to address development needs in a given intervention context, but it also can improve its financial condition through client segmentation and risk management leading to increased efficiency, better product development, and strategic decision-making on the competitive microfinance markets.

This paper proposes a new approach for measuring the social performance of microfinance institutions (MFIs). The term “social performance” refers to social and economic impact that, together with financial performance, constitutes an MFI’s “double bottom line” (Simanowitz 2003). Based on

Microfinance Centre (MFC) field experience with different partners in Central and Eastern Europe (CEE), it appears that the key to developing sustainable social performance measurement (SPM) systems and practices is to consider their design from the perspective of the organizational mission. Building the SPM into institutional mission and goals is a promising way to ensure it is institutionalized and cost-effective. This new approach promises to help practitioners fulfil their social mission. Just as there is a need to have financial performance indicators to guide the effort to achieve profitability, the same applies to the social aspect of microfinance. If there is no system in place to support improvement in social performance, the MFI's social mission may be lost in the sole pursuit of financial targets. Moreover, combining social and financial measurements can potentially increase financial returns in the long term through a better understanding of target clients and through allocating scarce resources in a more efficient way, thus avoiding the unnecessary costs of ineffective actions. Combining social and financial indicators will enable managers to successfully balance institutional and development impact trade-offs while striving to achieve the “double bottom line” and improve overall performance.

In order to advance the ongoing debate about developing practical methods for measuring and improving social performance of MFIs,¹ this paper summarises ideas for the mission-driven SPM concept—its rationale, development process, necessary elements, use, costs, and benefits. It starts with some reflections on the inefficiencies of current practices for measuring social performance that inspire further thinking about social measurement principles.

Current Practice

In the majority of cases, MFIs do not have a systematic process to monitor whether their social goals are being fulfilled. Social and

Katarzyna Pawlak and Michal Matul work in the Research Unit at the Microfinance Centre for Central and Eastern Europe and the New Independent States (MFC). Emails: kasia@mfc.org.pl and michal@mfc.org.pl

financial goals have been treated separately, the latter gaining more attention than the former. Efforts to monitor social performance have focused more on tracking commonly used standard lists of social indicators. Typically these indicators have been replicated from other institutions or imposed by donors without any attempt to understand their relevance to a particular organization and culture or to adapt them accordingly. A corollary of this approach is that monitoring or assessment has not been integrated into other organizational processes. There has thus been a missing link between social performance indicators and organizational mission—the driving force for the organization, reflecting the beliefs put behind its activities.

Impact Assessment

The aim of the Impact Assessment (IA) concept is to assist microfinance practitioners in measuring their impact at the client level and consequently to give some insights into how an MFI's social performance could be improved. The main goal of IA methods is to investigate the attribution of changes in target client well-being to microfinance intervention. However, given the lack of awareness among microfinance industry stakeholders about IA methods when they were initially introduced, there was a clash between expectations and the methodology applied. Practitioners thought that IA would contribute substantially to improving their services and boosting their operations in a cost-effective and long-term way, but the design of the IA methods was not ready to meet these expectations. Therefore, IA has unfortunately gained a bad reputation. Most practitioners who invested in assessing the impact of their services did so in an ad-hoc manner. The majority of those who tried would agree that it was costly and simplistic, was not useful for management, did not provide timely information, and did not bring groundbreaking changes in the MFI's operations, although it did enable staff to see that their work was bringing positive changes to people's lives. The failure of IA to meet all these expectations was mainly due to the following factors:

- In the majority of cases the design of a study has been replicated from other institutions operating in different contexts; there has been no internal participatory process to design appropriate IA. When impact hypotheses, pathways, and indicators are simply borrowed from other institution the level of understanding and further use of results, even if they are positive, is very poor.
- The results of practitioner-led impact studies are very often overestimated. Firstly, the number of people leaving the program is seldom taken into account but is very important information. If 60%–70% of clients leave the program after taking only one or two working capital loans, this would seem to indicate that they either did not benefit from the service or were adversely affected by it, so it is important to include them in the analysis.² Showing the results of impact on the current—“strongest”—clients presents a very simplistic overview. Secondly, the unintended outcomes of microfinance—whether positive or negative—are rarely considered, but if an attempt is made to track them, much can be learned about the impact of services. Everybody knows about the spiral of debt, but hardly anyone considers negative impact pathways and incorporates relevant indicators in the study design.
- There is virtually no segmentation in the impact studies. It is accepted that disaggregation by different variables (e.g., age, sex) is key in “commercial” market research and marketing strategy development. In the same way, it cannot be assumed that the impact of microfinance is the same on each and every group of clients. Furthermore, considering business and development imperatives, it would be interesting to identify those groups which register low or negative impact and ask them what could be improved in the services provided.
- Last but not least, the IA efforts are not institutionalised. Unless IA is designed internally and becomes part of the institution’s ongoing operations, there will be no buy-in among staff, and it is difficult to see how it can contribute to easy-to-manage, innovative changes.

These lessons provide important insights that should guide the development of SPM systems and practices. The Assessing Impact of Microenterprise Services (AIMS) initiative³ led to discussions about practical ways of measuring the impact of microfinance. It contributed extensively to promotion and better practice in impact assessment and, in general, in client assessments of microfinance. Current discussions on social performance are building on cutting-edge practitioner-led and middle-range methods for IA developed by AIMS and work undertaken through the Imp-Act program to develop practitioner-friendly IA systems.⁴

Mission-Based Approach to Measuring Social Performance of Microfinance

To create and develop a successful institution, there is a need for clear goals that will drive the institution forward. Clarity is needed to direct not only the staff, management, and clients but also the actions of other stakeholders. These goals are reflected in the organizational mission, which therefore is a good starting point for the development of institutional performance systems.

The role of microfinance differs from one context to another: filling the gap in the financial market, giving risk management tools to vulnerable groups or individuals, allowing micro-entrepreneurs to benefit from economic opportunities, facilitating a return to work for the unemployed, building social networks, etc. Based on a needs assessment, each microfinance practitioner aims to develop services for selected target groups and to manage its social performance successfully to address their development needs. Consequently, when we look across the missions of different MFIs, it can be seen that they vary considerably; some claim to focus on serving poor clients, others talk about improving economic well-being of a more broadly defined target group, and some aim to address social as well as economic issues. Each institution perceives its role in a different way and wants to achieve different objectives within a wide development agenda of microfinance as a whole. As a consequence, they need different systems and approaches for measuring social performance. Such systems would reflect an

institution's uniqueness and stimulate its effectiveness. Whatever the design, there is a need to answer two fundamental questions:

- Verification: How successful are we in fulfilling our mission?
- Improvement: What can we do to better fulfil our mission?

Given up-to-date practice and the mission-based concept, the SPM should have the following functions:

- Identifying target clientele
- Monitoring client status change among target clientele (both current and exiting clients)
- Stimulating the search for new solutions to improve the fulfilment of the organizational mission through targeting tools, new products, partnerships, delivery channels, etc.

It is important to note that SPM does not have the function of attributing changes within target groups to the microfinance intervention. This is probably the biggest difference between IA and SPM. SPM has predominantly an internal use.⁵ In this context it is more appropriate to refer to “monitoring client status change” rather than “impact assessment” (IA).⁶ It is widely known that monitoring financial performance can help an institution improve its financial condition. This is possible thanks to the measures that help verify the current situation and provide information on where an organization can do better. In the same way the SPM works by looking at inefficiencies or areas for further improvement—creating an institutional drive for ongoing learning and innovation.

Developing Sustainable SPM

The link between cost and revenue and their relationship to financial performance is relatively clear. The relationship between an organization's actions and its social performance is not so self-evident, however. To be able to link inputs to the social results, there is a need to conceptualize how expected changes may occur. This will depend on the MFI's mission, context, and methodology, but it should be embedded in the perceived role microfinance can

play in a given setting. Such an approach makes it important for the institution to select performance indicators that will reflect the way expected changes within their target group occur in the context of its operations.

To select such “valid” indicators, it is important to go through a rigorous selection process following the suggested steps. This process is a key to building a sustainable SPM for an MFI.

Getting Consensus on the Institutional Goals and Needs

Before starting any work related to SPM it is necessary for an MFI to better understand what kind of information is really needed. This clarity allows efficient allocation of resources and enhances the usefulness of the collected information. The key element in assessing needs for the SPM is a thorough analysis of the MFI’s mission, taking into account the broader picture of current program design and potential areas for future development intervention.

Identifying the Target Group

The mission reflected in the institutional goals determines specific target groups for intervention. The target groups should be selected in terms of both financial and social goals. They will differ across contexts and MFIs. It is important for each microfinance practitioner to have a tool to identify these groups. Usually, clear indicators should be defined in order to identify the target groups. Additionally, psychographic segmentation can be run to further separate specific target groups into more detailed segments by their behavior and socio-demographic profile. This disaggregation is crucial, as MFIs should develop services based on an understanding of the needs of potential clients in the area where the MFIs operate. In addition, it allows an estimation of costs of serving different target groups and managing trade-offs to achieve the double bottom line. As shown in the Prizma example, mentioned below, the client poverty level is one possible indicator to identify target groups. There is a growing impetus to develop practical tools to measure the poverty level of microfinance clients.⁷ It is important to note that

not necessarily all MFIs should claim poverty outreach and use poverty level criteria in setting their target groups.

Conceptualizing Impact Pathways

Once an organization is clear about its goals, operational rationale, and target group(s), the next step is to be clear about the way the expected changes within its target group(s) will occur. As proposed in the SEEP/AIMS manual (Nelson 2000) the following elements should be investigated: intervention inputs, effects, and expected and unintended outcomes. When the pathways are being investigated, it is very important to include a variety of information sources that will increase the quality of the information. Triangulation provides a more complex picture through cross-checking different perspectives on the same issue. It may involve techniques such as brainstorming with staff, analyzing information from widely available country-level data, receiving clients' feedback, and conducting sophisticated research studies and analysis; it may also require various informants: staff, management, board, clients, other stakeholders, academics, and experts. The degree of rigor required will depend on the needs of the end users of the systems.

While establishing pathways, it is important to think beyond the MFI's current operating model and services offered. It is essential to consider the target client's behaviors, needs, and attitudes; to analyze how those aspects link to development goals; and to define what those development goals mean in the wider context of micro-finance. This will result in more indicators and social performance measures that are broadly applicable and relevant in the long-term.

Identifying Indicators and Relevant Measures

The pathways inform the selection of indicators corresponding with the expected outcomes. Indicators should be:

- Sustainable: valid in the long-term and able to withstand changes in services and institutional environment.
- Universal: relevant for all target clients, rather than only for a specific group.

- Sensitive to change: able to reflect the changes associated with the MFI's intervention over a specified period of time.
- Easy to measure: ensure low cost and ease of information collection, and provide reliable data.

Once the indicators are identified there is a need to develop reliable, easy-to-use measures.

Identifying the Best Ways to Collect, Validate, Analyze, Report, and Use the Information

Identified indicators should drive the selection of data collection method and the development of tools. At this point it is very important to assess the institutional capacities. The system needs to be adjusted to the existing institutional resources in order to use them effectively. Consequently, more detailed issues should be addressed internally, such as how data is collected, who collects and inputs data, and how data should be stored and analyzed. If these operational aspects are well adapted and integrated with other operational systems and processes, the SPM will be cost-effective.

Depending on capacities, some of the approaches and tools may be beyond the reach of some smaller, less developed institutions. To allow for effective SPM usage, a well-operating management information system (MIS) is an advantage. In addition, there is a need for appropriate data collection and analysis skills within the institution or from outsourcing possibilities. An effective management structure that will oversee the data collection and the use of information is also very important, as are the human and financial resources that will be devoted to system design, maintenance, and development.

Institutionalizing Social Performance

Indicators, methods, and tools alone will not provide an institution with useful information in a cost-effective manner. SPM must be a part of institutional operations and use existing resources; this will enable operational and timely use. The organization should make continuous efforts to institutionalize social performance measurements from the very beginning of the development

process. Therefore, special attention must be paid to senior staff commitment, staff buy-in, incentive systems, participatory meetings, planning and system development processes and relevant training.

Necessary Elements in the SPM System

To fulfil SPM functions and methodological aspects mentioned in two previous sections, the following outline is suggested (see Figure 1):

- A routine impact monitoring component tracks changes appearing among target clientele, including current, exiting, and rejected clients, and enables the portfolio segmentation. This gives a picture of patterns of client change and behavior. However, it does not explain the reasons behind those changes.
- A periodic decision making component ensures that the collected information is analyzed and used by management and other internal stakeholders. SPM data combined with ongoing monitoring of internal and external changes enables better understanding of the institutional and client-level impact of an organization's actions. In addition, at this stage areas for improvement are identified and automated. This allows them to be translated into well-defined, specific research objectives for exploratory follow-up research.
- A follow-up systematic research component investigates further and clarifies issues around the signals identified through the routine component. This to some extent enables an MFI to isolate the effect of its intervention from externalities through providing better understanding of the factors underlying observed phenomena. Qualitative research, in triangulation with the existing secondary data and anecdotal information (staff feedback), leads to an understanding of why changes are happening. It also follows up on new ideas coming from the routine monitoring results. Exploratory research prompted by routine monitoring findings results in the refinement of policies and services and the development of new products, leading to better mission fulfilment.

- Ad-hoc research can be undertaken in response to opportunities or challenges as well as any new ideas that an MFI may have, regardless of the signals from the routine component. This component ensures that the institution does not limit itself to the signals emerging from the monitoring of the “attracted,” current clients but opens up the space for innovation and institutional inspiration that help further improve mission fulfillment. Such ad-hoc research may involve exploratory market research on other segments, loyalty studies, or client satisfaction studies, which might be incorporated into the routine monitoring system and further increase institutional effectiveness in reaching its mission.

This framework is deliberately very general to allow every organization to adapt it to its needs, taking into consideration its mission and, consequently, social performance monitoring needs, operational model, and current capacities.

Figure 1. SPM system framework

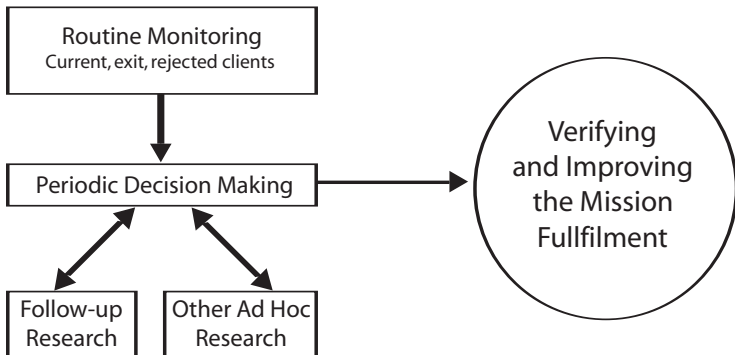


Figure 2 continued

Changes in Status of Existing Clients

	Security index			Changes comparing to previous period					
	Negative	Stagnant	Positive	Well-being index			Other variables, indexes, domains		
				Negative	Stagnant	Positive	Negative	Stagnant	Positive
All	5%	55%	40%	20%	70%	10%			
high-target group	5%	55%	40%	70%	25%	5%			
standard-target group	5%	55%	40%	40%	55%	5%			
nontarget group	5%	55%	40%	10%	65%	25%			
early cycles (1-2)	5%	55%	40%	20%	70%	10%			
medium cycles (3-5)	5%	55%	40%	20%	70%	10%			
high cycles (6+)	5%	55%	40%	20%	70%	10%			
using only 1 product	15%	85%	0%	20%	70%	10%			
using 2 products	10%	70%	20%	20%	70%	10%			
using 3 and more products	0%	50%	50%	20%	70%	10%			
... other breakdowns									

Actions

Follow-up research on previous data

Summarized findings addressing information gaps and research questions from previous mission fulfillment reports (investigations realized by internal research team).

Ad-hoc Research

For example: Research team during its regular market research activities identified a priority need for asset building term savings product among its high-target group clientele. Responding to this need the internal research team segmented further the market and designed the concept of the new product.

Financial Performance

Standard financial indicators demonstrating to what extent the organization meets the goal to be institutionally viable. Note. Security index refers to client household vulnerability (dynamic); well-being index refers to its poverty level (static).

Potential Use of the SPM System

What can management get out of the SPM system? One can imagine very simple, periodic reporting that shows not only figures but also actions, as shown in Figure 2.⁸

Figure 2 provides an example of how changes in target clientele composition can be isolated and tracked. It shows that, although the socioeconomic situation is stable, there is a mission drift away from serving target clientele due to the high dropout rate of dissatisfied target clients. The client status information is even more worrying, indicating that there has been no increased security of target households. Further exploration of these results will enable the organization to better understand factors behind these phenomena and develop appropriate strategies to improve the double bottom line. One can imagine an initiative addressing client dropout in the target group. A well designed loyalty strategy directed at this group will not only result in a social return in terms of reducing the mission-drift, but will also affect financial returns through the increase of client repeat purchases, referrals, cross-selling, up-selling, client emotional connectedness, etc.⁹ In other words, such a report enables the MFI to see worrying trends and preempt possible problems, enabling the MFI to investigate the underlying causes. The information gathered can have implications for several institutional areas, such as product development, human resources, credit application procedures, and loyalty strategies and promotion—all having implications for both financial and social performance.

Costs and Benefits

The highest costs of measuring social performance are associated with the system development, implementation, and integration with other institutional functions and processes. These costs are considerable, because they are usually linked to a significant change in the organizational culture. However, an important point is that once the SPM systems and practices are in place, additional costs are very minor in relation to the benefits. It can be argued that

implementation of SPM should further cut organizational costs through more efficient allocation of resources.

The SPM, which is built on the institutional mission in a structured process, performing all the functions and taking into account all the methodological issues, has the following potential benefits to an MFI:

- Facilitating decision making processes: the SPM enables in-depth analysis of “microfinance trade-offs” and reveals the best solutions.
- Providing information needed to improve the service: the SPM is not static but action-oriented, thanks to trend analysis, periodic discussion, and follow-up.
- Increasing understanding of social performance: the SPM is based on clear pathways and robust, contextually adapted indicators.
- Opening up new dimensions in client segmentation and target group identification: the SPM has a smaller number of strong impact and well-being proxies, which enables the segmentation of the portfolio by target group variables. Combining the use of good target variables with standard psychographic segmentation enriches the analyses. In addition, it provides another source of data that can later be mined.
- Verifying outcomes of programmatic changes: the SPM provides a simple tool for trend analysis that can be used to evaluate outcomes of internal changes made to improve performance. It goes beyond current clients, taking exiting and rejected clients into consideration. It points to reasons behind product adaptation failure and other inefficiencies.
- Indicating social performance to external stakeholders: the SPM system is linked to the mission and uses carefully selected and adapted indicators. In this way, it can provide a reliable means to justify the MFI’s existence and intervention to external stakeholders. Moreover, it shows them how services are being improved to better fulfil an organizational mission and demonstrates how their investment contributes to

development. Consequently, it allows an MFI to better position itself in a competitive market for funding.¹⁰

- It should be easier to institutionalize: the SPM is driven by institutional goals and based on actual informational needs and operational capacities of an institution.
- It can be sustained with low additional cost: the SPM can be integrated with existing systems and processes at low cost and with efficient use of time and other resources.
- Providing timely information: the SPM is ongoing and automated.
- Having a wide range of institutional uses: collected variables can be used for other institutional purposes, such as risk management, staff incentives, identifying new market opportunities, etc.

Two Examples from the Field

Opportunity International, Serbia

Opportunity International Serbia (OIS) is a young microfinance bank that works to create employment opportunities and improve the standard of living among its clients and their families, regardless of ethnicity, religion, or political affiliations. OIS strives to provide stability for its clients, allowing them to help themselves in dignity, with self-confidence, and to rebuild confidence in financial institutions. The OIS identified its key impact areas focusing mainly at the household level as priority and in particular was interested in driving development in the following areas:

- employment creation and opportunities
- standard of living and stability
- self-confidence

Therefore, the conceptual framework was created around these three areas and focused on household well-being, defined as its stability and ability to provide for various needs. Household stability was analyzed from the perspective of the household assets accumulation and possessions (human, social, physical, and

financial), which determine its stability through the role they play in protecting from and coping with crises.

In the proposed framework (see Figure 3) increased household stability is an objective in itself but also leads to increased employment opportunities (employment opportunities usually grow along with accumulating assets). Improving living standards is also an objective in itself, which leads to increased self-confidence. In such a defined framework, the role of OIS is to provide such products and services that will build necessary assets and provide a low stress-coping mechanism.

Necessary information is provided through MIS reports. The required information is generated from the set of indicators chosen in a rigorous selection process by means of application forms registered with new, follow-up, and rejected clients as well as monitoring forms with dropping out clients.

Such a framework provides the starting point for segmenting the target group, based on household well-being, and for identifying the most underdeveloped areas as an indication of the need to improve service. Based on this information from the impact monitoring system, OIS may adjust its products or develop new ones to have a better impact on household well-being and on other areas of development.

The segmentation based on household stability is also very useful from the point of view of managing institutional risks (thus helping to link the social and financial goals). OIS is able to keep their risks low and serve target clientele through attracting a mix of vulnerable, nonvulnerable, poor, and nonpoor clients that will maximize its social goals at the minimal possible level of risk, thanks to appropriate client base diversification.

Prizma in Bosnia and Herzegovina

Prizma (www.prizma.ba) is still a relatively young institution intervening in Bosnia and Herzegovina with a great deal to learn and the capacity to grow. Prizma's vision is to enable people to make choices to improve their lives; its mission is to improve the well-being of poor and low-income women and their families by

Figure 3. SPM indicators—Example of OI Serbia



Area	Indicator	Measure
SELF-CONFIDENCE		
Self-confidence	Individual satisfaction from the quality of life	How are you satisfied with your current quality of life? 
STANDARD OF LIVING AND STABILITY		
1. Household Security		
Financial Assets	Stability of household income	How many adults have no regular source of income (cannot work, have no job or only seasonal job/income)?
	Monthly family income per capita	What is your family's average monthly income? (in dinar)
Physical Assets	Ownership of a house/apartment	Where does your family live? 1. sharing rented apartment/house with other families 2. renting apartment/house 3. sharing your own apartment/house with other family(ies) 4. own apartment/house 5. own newly built apartment/house (last 5 years)
	Ownership of a car and its condition	How old is the car(s) owned by your family? (if you have more than one car, please put the number of cars under relevant categories) We don't have a car _____ Less than 6 years old _____ 6–15 years old _____ Older than 15 years _____
	Value of productive assets	If you were to sell your productive (business) assets, how much would you get for them (cars used mainly for business, buildings, machines, livestock, etc.)? (in dinar)
Human Assets	Individual satisfaction from the quality of life	How are you satisfied with your current quality of life? 
	Experience in current work	How many years of working experience do you have in the area of your current job/business?
	Skills upgrade in the last 12 months	Have you gained any new skills/knowledge (attended any training, language course, professional literature, continuation of education, computer course, etc.) in the last 12 months? 0 = No 1 = Yes

Figure 3 continued

Social Assets	Availability of help from the family	In case of family financial problems would you be able to get help from your relatives? 1. rather not 2. there is a chance 3. rather yes 4. almost in any situation 5. definitely yes
	Availability of help from friends	In case of family financial problems could you get help from friends? 1. rather not 2. there is a chance 3. rather yes 4. almost in any situation 5. definitely yes
2. Needs Satisfaction		
Basic Needs Satisfaction	Family diet	How would you describe your family's diet? 1. we can afford only basic food 2. we can afford slightly diversified food 3. we can afford everything we need 4. we can afford everything we want (including eating in restaurants)
Luxury Needs Satisfaction	Going for a holiday	Have you or any of your family members gone for a holiday during the last 12 months? 0 = No 1 = Yes, in ex-Yugoslavia 2 = Yes, outside ex-Yugoslavia
CREATION OF EMPLOYMENT AND EMPLOYMENT OPPORTUNITIES		
Employment Creation	Jobs created Jobs sustained	Number of current workers in the business (including full-time, part-time, paid-in-cash, students, etc.)
Employment Opportunities	Experience in current work Skills upgrade in the last 12 months	How many years of working experience do you have in the area of your current job/business? Have you gained any new skills/knowledge (attended any training, language course, professional literature, continuation of education, computer course, etc.) in the last 12 months? 1 = No 2 = Yes

providing long-term access to quality financial and nonfinancial services. Since its inception, Prizma has embraced social performance and financial sustainability as core values, which has led to constant clarification of the essential indicators of its effectiveness as a social enterprise. In fact, the premise of Prizma's work under Imp-Act has been that social and institutional performance are mutually enforcing goals. Within this principal framework, Prizma has focused on three critical strategies: (1) measuring and deepening outreach in an environment of poverty and growing inequality, (2) improving service quality and institutional performance in an environment of growing competition, and (3) measuring and improving impact. Consequently, the organization has sought to enhance social performance by institutionalizing organizational learning and deepening poverty outreach, focusing fundamentally on leadership, organizational culture, incentives, and systems (Kline 2003). To these ends, Prizma has worked together with MFC over the past 18 months developing a poverty assessment and impact monitoring system intended to support the organization's developmental and institutional imperatives. Developed as a scorecard, this system specifically seeks to meet the following overarching needs:

- First, it enables the organization to assess clients' poverty status relative to other clients and non-clients across different segments of its clientele, to understand who is being served—who joins, stays, and leaves—and to refine targeting strategies, incentives, and product attributes.
- Second, it enables the organization to report on every client's poverty status in absolute terms in relation to the national poverty line and the widely referenced international benchmark of \$1 and \$2 a day.
- Third, it enables the organization to measure discrete change in clients' well-being over time.¹¹

The scorecard is a composite measure of household poverty level based on nonincome indicators, reflecting some of the strongest and most robust poverty proxies in Bosnia-Herzegovina

identified using 2002 Living Standards Measurement Survey (LSMS), United Nations Development Program (UNDP) data, a Consultative Group to Assist the Poorest (CGAP) Poverty Assessment, and focus group research findings. The scorecard is composed of two sets of indicators. The first three—education level, residence, and family size—reflect poverty risk categories. For example, if the female household head, spouse, or partner¹² has primary level education or less, the likelihood that the household is classified as poor increases significantly. The second four

Figure 4. Prizma’s Poverty Scorecard

Prizma Poverty Scorecard		Scale		
Indicator	Measure	0	1	2
Education	What is the education level of female household head/spouse/partner?	≤ Primary	> Primary	
Residence	Where does family reside?	Rural/Peri ≤ 10,000	Urban > 10,000	
Family Size	What is household size?	≤ 5	< 5	
Consumption: meat	On average, how often does family consume meat each week?	Rarely 0–2 x/wk	Sometimes 3–5 x/wk	Often 6+ x/wk
Consumption: sweets	On average, how often does family consume sweets with main meal each week?	Rarely 0–2 x/wk	Sometimes 3–5 x/wk	Often 6+ x/wk
Asset: household durables	Does family possess a stereo/CD player?	No	Yes	
Asset: transport	Does family possess a transport vehicle?	No	Yes	
Total score (sum): 0–9				

indicators represent more or less discrete measures of household well-being. Thus, in addition to contributing to the poverty risk profile of each applicant’s household, these second four enable Prizma to measure change in status over time.

Simple ranges for each of these seven indicators were defined based on the multiple data sources indicated above. Each point in

these ranges reflects one, two, or three points towards a score ranging from zero to nine. Within this range of nine, three ranges have been defined that correspond to the poverty categories outlined below:

1. Poor: Score 0–2, living below LSMS poverty line
2. Vulnerable Nonpoor: Score 3–4, living between 100–150% of LSMS poverty line
3. Nonpoor: Score 5+, living beyond 150% of LSMS poverty line

These ranges mirror categories of client poverty status validated using LSMS data. The scorecard thus provides a relative measure for the organization to assess its depth of outreach in each area of operation. For example, a household that has a composite score of two can clearly be said to be poorer than a household that has a score of four. Just as data sources identified above can be used to identify indicators and determine appropriate ranges for each, LSMS or other national datasets, or data generated from a short survey focused on key areas of interest, can be used to define cut-off points for absolute poverty status categories.

While this system does not, on its own, capture the complex, dynamic, multidimensional, and context-specific nature of poverty in Bosnia-Herzegovina, it does enable the organization to understand and demonstrate more clearly and on a regular basis the extent to which it is (1) reaching who it seeks (and claims) to be reaching and (2) fulfilling its social mission. Additionally, it stimulates further learning and, in turn, stronger strategic positioning and development of sound operating policies and pro-poor products and services.

Conclusion

This paper argues that microfinance can be more efficient in reaching the double bottom line if it is equipped with a mission-based Social Performance Measurement system. The fact that the SPM system is built on the institutional mission ensures its cost-effectiveness and facilitates its institutionalisation. Successful

SPM—an output of a thorough, bottom-up, internal, and participatory process—should be integrated with other operational systems and processes. It is based on a mix of routine and ad-hoc components that supports systematic monitoring, research, and decision making. Upfront costs of the SPMs development and implementation and the management of the associated organizational changes are considerably high. However, as the paper argues, this investment is compensated by low usage costs, better allocation of resources, and other multiple benefits for an MFI. It not only stimulates an MFI to verify its social mission fulfilment and innovate in the search for optimal solutions to address development needs in a given intervention context, but it also can improve its financial condition through client segmentation and risk management, leading to increased efficiency, better product development, and strategic decision-making on the competitive micro-finance markets.

Notes

More information about research work conducted by the Microfinance Centre for Central and Eastern Europe and the New Independent States (MFC) can be found at www.mfc.org.pl/research. The authors are very grateful to Anton Simanowitz, Graham A. N. Wright, Laura Foose, and Caroline Tsilikounas for their comments on the first draft.

1. See Cohen (1999), Hulme (1999), Morduch (2000), Schreiner and Woller (2000), Zeller et al. (2003), Brody et al. (2003) and Tulchin (2003) for more reflections on social performance of microfinance.

2. The methodological problems caused by dropouts encountered in impact assessments—incomplete sample and attrition bias—are discussed in more detail in Karlan (2001).

3. <http://www.usaidmicro.org/pubs/aims/>

4. <http://www.imp-act.org/>

5. However, the authors believe that if the relevant SPM is in place, an MFI is empowered to justify its intervention to external stakeholders as well. More discussion is included further in the text in the section “costs and benefits.”

6. See Copestake (2001) for differences between IA and client monitoring.

7. <http://www.seepnetwork.org/povertyassess.html>; <http://www.povertytools.org/>

8. This is just an example to illustrate potential outputs from the SPM system. It is assumed that an MFI has an SPM including all the necessary elements listed in the previous section. It should also be integrated with other client-level monitoring systems, for example client satisfaction, desertion, and loyalty. Moreover, the reporting format should be extended by trend analysis over longer period of time and profitability analysis for all target groups. The report presented is simplified only for the sake of presentation.

9. For more information on client loyalty and related social and financial benefits, see Pawlak and Szubert (2004).

10. It is difficult to come up with a set of standardized indicators applicable for all MFIs because they have different profiles and work in different contexts. However, if the process of developing indicators is standardized, there is a social performance audit and some overlap of customized solutions allowing some standardization. It is believed that investors and donors can justify social return on their actions using this mix of information.

11. See Matul and Kline (2003) for more detailed description of Prizma's poverty scorecard.

12. Female-based measures turn out to be more powerful than or at least as powerful as aggregated household measures. Prizma decided to use them as they limit number of questions on the application form.

References

- Brody, A., Copestake, J., Greeley, M., Kabeer, N., & Simanowitz, A. (Eds.). (2003). Microfinance, poverty and social performance. *IDS Bulletin*, 34(4), 1–155.
- Cohen, M. (1999). *Opening up the impact assessment agenda*. Washington DC: AIMS. Retrieved from www.usaidmicro.org/pubs/aims
- Copstake, J. (2001). *Towards a general framework for client monitoring within micro-finance organisations* (Imp-Act Guidelines No. 3). Retrieved from www.imp-act.org
- Karlan, D. (2001). Microfinance impact assessments: The perils of using new members as a control group. *Journal of Microfinance*, 3(2), 75–85.
- Kline, S. (2003). Sustaining social performance: Institutionalizing organizational learning and poverty outreach at Prizma. *IDS Bulletin*, 34(4), 34–43.
- Hulme, D. (1999). *Impact assessment methodologies for microfinance: Theory, experience and better practice*. University of Manchester, Institute for Development Policy and Management.
- Matul, M., & Kline, S. (2003). *Scoring change: Prizma's approach to assessing poverty* (MFC Spotlight Note #4). Warsaw: Microfinance Centre for Central and Eastern Europe and the New Independent States. Retrieved from www.mfc.org.pl/research

Realizing Mission Objectives

- Morduch, J. (2000). The microfinance schism. *World Development*, 28(4), 617–629.
- Nelson, C. (Ed.). (2000). *Learning from Clients: Assessment Tools for Microfinance Practitioners*. Washington: SEEP/AIMS.
- Pawlak, K., & Szubert, D. (2004). *Counting (on) your prospective clients: Guiding principles in measuring microfinance client satisfaction and loyalty* (MFC Spotlight Note #8). Warsaw: Microfinance Centre for Central and Eastern Europe and the New Independent States. Retrieved from www.mfc.org.pl/research
- Schreiner, M., & Woller, G. (2000). *Poverty lending, financial self-sufficiency, and the six aspects of outreach*. Washington: Poverty Lending Working Group of the Small Enterprise and Education Promotion Network. Retrieved from http://www.ids.ac.uk/impact/Publications/ProgrammeReports/Microfinance_&_Poverty_Seminar/GaryWoller_poorest.doc
- Schreiner, M. (2002). Aspects of outreach: A framework for discussion of the social benefits of microfinance. *Journal of International Development*, 14(5), 1–13.
- Simanowitz, A. (2003). Microfinance, poverty and social performance: Overview. *IDS Bulletin*, 34(4), 1–9.
- Tulchin, D. (2003). *Microfinance's double bottom line* (Working Paper on Measuring Social Return for the Microfinance Industry). The MicroCapital Institute. Retrieved from www.socialenterprise.net/resources.html
- Zeller, M., Lapenu, C., & Greeley M. (2003). *Social performance indicators initiative (SPI)* (Initiating Memorandum). Comite d'Echange, de Reflexion et d'Information sur les systemes d' Epargne-credit (CERISE).

Impact of Microfinance Programs on Children's Education

Do the Gender of the Borrower and the Delivery Model Matter?

Nathalie Holvoet

Abstract: This article highlights the effects particular features of microfinance programs have on childhood education. Using data from a South India household survey, the article examines how microfinance impacts schooling and literacy, how credit enters the household, and who brings it in. Regression results show that, in the case of direct bank-borrower credit delivery, it does not matter whether credit enters the household through the mother or the father. However, large differences occur when mothers obtain credit through women's groups. Analysis indicates that combined financial and social-group intermediation leads to higher educational inputs and outputs, mainly for girls. Individual interviews with borrowers and interviews with women's groups suggest that changes in underlying allocative rules that are provoked by group membership could be explanatory for the results obtained.

Nowadays, a broad-based consensus has emerged that children's education, and in particular the education of girls, is one of the crucial ingredients for a country's economic growth and its sustained human and economic development. That the international consensus should also be considered as a guideline for policy making may be read from the fact that two of

the UN Millennium Development Goals are directly linked to children's education. They stipulate that by the year 2015, "all boys and girls should complete a full course of primary schooling" and that "the gender disparity in primary and secondary education should preferably be eliminated by 2005, and at all levels by 2015" (IMF, OECD, UN, & World Bank, 2000). In this context, one of the pressing issues for policy makers in the international and national arena is to find effective ways to reach the goals set.

It is against this background that we explore the possible role microfinance could play. In the last decade microfinance has been extolled as a panacea for poverty alleviation and increasing human well-being. Over the years, studies have compiled evidence regarding the effect of microfinance schemes on a variety of factors, including household expenditures, household assets, women's contraceptive use, women's empowerment, and children's human capital investment in health and education. Success stories such as those of the Grameen Bank and the Bangladesh Rural Advancement Committee (BRAC) in Bangladesh, the BancoSol in Bolivia, and Bank Raykat Indonesia's Unit Desa in Indonesia (BRI) have been widely reported on (see, for instance, Chaves & Gonzalez-Vega, 1996; Hashemi & Schuler, 1994; Hulme & Mosley, 1996; Khandker, 1998), and some of the achievements have also been put into perspective (see e.g., Goetz & Sen Gupta, 1996; Mosley, 2001; Navajas, Schreiner, Meyer, Gonzalez-Vega, & Rodriguez-Meza, 2000; Rahman, 1998).

Putting all the evidence together, it is clear that there is no clear-cut or definite answer regarding the impact of microfinance schemes. Conclusions might differ because of different methodologies used, because of diverse subjective interpretations given to the same research findings, or because of the particular features of the program one is studying. While studies that focus on the net, and particularly the gross, impact of microfinance programs are

.....
Nathalie Holvoet is a lecturer and researcher at the Institute of Development Policy and Management, University of Antwerp. Her fields of interest are organizational and institutional aspects of aid policy and evaluation, and in particular gender and development and microfinance. Email: nathalie.holvoet@ua.ac.be.

many, there are few studies that compare the impact of slightly diverging credit schemes. These kinds of exercises could, however, provide us with highly relevant information for policy making. They might indicate what particular features of programs are successful, and which modalities should be replicated, and which are redundant or even counterproductive.

If the aim of policy is to promote children's education, then it might be interesting to explore whether it matters for children's schooling if credit is given in the hands of the mother or the father. Other features of interest could be the particular delivery channel that is used, the quantity of credit, or the type of credit provided. Does consumptive credit produce the same effects as credit whose use is restricted to productive activities? Are schemes that extend higher amounts of credit more effective than those whose credit ceilings are lower? Does channelling of credit through a financial and social intermediary impinge differently on children's schooling than direct bank-borrower lending? In particular, because girls' education is high on the agenda, policy relevance may further be sharpened by differentiating between effects on boys and girls.

In the present study, we attempt to test the importance of the borrower's gender and the delivery channel for boys' and girls' education. More specifically, firstly, we have compared the impact of direct bank-borrower credit in the hands of mothers and fathers on selected indicators of children's educational status. Secondly, we have tested whether channelling individual credit to mothers through women's groups created differential effects as compared to the case where no intermediary was used at all. In doing this, we have used data from our 1998 survey of 300 rural South-Indian households living below the poverty line who received credit in slightly different ways.¹ As the validity of impact assessment results are highly influenced by the underlying research methodology, we have devoted considerable attention to research design. We have mainly used quantitative methodologies for the data collection and analysis, while data gathered through qualitative techniques has provided us with interesting insights on possible explanatory factors. Before elaborating on this, we set out a framework that might

help us to explore better the relationship between microfinance and children's education.

Microfinance and Intrahousehold Allocation

There is a growing body of literature focusing on the determinants of children's education and that of girls in particular (see, for instance, King & Hill, 1993; World Bank, 2001). While influences seem to be many and their interplay complex, it is commonly understood that the level of investment in children's education is the result of a number of supply factors and an individual household's demand for education. While a nation's human capital efficiency may influence the level and quality of the supply, decisions regarding children's schooling result predominantly from an implicit cost-benefit analysis made within the household. Costs include direct financial costs, indirect or opportunity costs which result from income foregone, and possibly also nonpecuniary costs that individual parents have to put up with when their choices deviate from the norms regarding children's, and in particular girls', schooling. Benefits include returns to the family arising from higher earnings to children that may be partly returned to parents (King & Hill, 1993, pp. 21–34). Which costs and benefits are entered in the calculus, as well as their relative importance, largely depends on the perception of household decision makers. It is further not necessarily so that individual parents exhibit identical preferences, and they may perceive costs and benefits differently. There is for instance evidence from diverse cultural settings about mothers preferring to allocate a higher percentage of the household budget to children's human capital goods as compared to fathers (Kennedy & Peters, 1992; Mencher, 1988; Phipps & Burton, 1998; Thomas, 1997). These findings are particularly interesting from a policy point of view. If the preferences of one of the parents are closer to those of policy makers, it may be worthwhile investigating routes to increase this person's leverage in the decision-making process.

The possible impact of microfinance on children's education might be better explored when put against this framework of intra-household allocation. Microfinance schemes do not target children directly, but the influence of the scheme goes through the nonneutral intermediary of the household. Credit enters the household and might influence several of the factors that determine children's education, including the overall financial budget as well as the individual parent's budget, the time allocation, the individual parent's degree of participation in household decision making, and the perceptions regarding the importance of children's education. Besides, it is highly hypothetical that diverging schemes will affect the same factors in the same way. Productive and consumptive credit will probably impinge differently on time allocation and income generation, while credit targeted to one particular parent might in particular influence that parent's financial and time budget and his/her leverage in decision making.

Notwithstanding the policy relevance of exploring the importance of particular features of microfinance programs, comparative empirical studies remain scarce. For instance, impact assessment of gender-specific credit is exceptional. One of the few exceptions is the study of Pitt and Khandker (1998) that explicitly tests whether Grameen Bank and similar group-based lending credit programs have effects on allocative outcomes that are related to the gender of the borrower. They found that credit allocated to mothers had a higher impact on boys' and girls' (ages 5–17) schooling than credit to fathers, but differences failed to be statistically significant.

While there is a vast literature documenting the importance of a group's financial and social intermediation for the lowering of transaction costs and the increase in repayment rates (see, for instance, Hoff & Stiglitz, 1990; Hulme & Mosley, 1996; Huppi & Feder, 1990; Sharma & Zeller, 1997), there is no study that has explicitly compared the impact of direct bank-borrower and group-mediated credit on intrahousehold allocative behavior. It is, however, unlikely that group membership would leave intrahousehold behavior unchanged. Originally organized around the fulfilment of a practical gender need, such as the easing of a credit constraint,

groups often engage in collective action and extra-household bargaining with the community, strengthening in this way a member's position within the household (Agarwal, 1994, pp. 421–504; Kabeer, 1995, pp. 223–263).

The present study also disaggregates data for boys and girls. This enables us to test whether a borrower's gender has differential effects on boys and girls and similarly whether group membership has any such effects. In her study about the empowerment potential of the Small Enterprise Development Project in Bangladesh, Kabeer (2001, pp. 77–78) found that among male loanee households, the gross enrollment rates were on average higher for boys than for girls, while the opposite pattern occurred among female loanee households. Although these findings are at first sight surprising, they endorse previous research conclusions that have indicated that the preferences of mothers and fathers as regards investment in boys and girls may differ. Thomas (1997) for instance found evidence for Brazil on the phenomenon of gendered preferences, with mothers preferring to invest more in their daughters' health and education, while fathers preferred to devote more resources to improve their sons' nutritional status and schooling.

While our research agenda is straightforward, the validity of our conclusions will to a large extent depend on the methodologies used for measuring impact. As the threat of selection bias is particularly plausible in credit impact assessment, we have drawn special attention to this issue. The next section sets out in more detail the survey design and the data source used.

Survey Design and Data Source

Most impact studies of credit programs highlight “selection bias” as one of the most serious threats to internal validity. Selection bias may occur because of nonrandom program placement, through selection by program staff, or because of self-selection by program participants. It puts into perspective the impact of credit programs, because one does not know whether effects may be attributed to program participation or whether initially existing differences among different groups, which eventually led to program participation, are responsible for the observed negative or positive effects.

In the underlying research, the issue at stake is whether households that received credit in different ways had initially significantly different scores on relevant background characteristics, which might explain why they became beneficiaries of particular programs in the first place and which might eventually also explain differences in later scores on children's education. Did credit programs applying different delivery models for instance operate in different kinds of villages (the direct bank-borrower schemes in larger villages where banks—and schools—are available)? Did credit programs directed at women (un)deliberately target those women with a higher schooling status who already had a higher stake in household decision making?

The only way in which to rule out completely the possibility of selection bias is through an experimental design with random assignment of individuals over the different credit programs. As it was impossible to find highly similar credit schemes with the necessary differences in the borrower's gender and delivery channel that were in a takeoff stage, it was impossible to proceed this way. We instead opted for a quasiexperimental design using matching on some important characteristics during the design phase of the research while controlling statistically for remaining differences at the moment of analysis.² Matching between different credit programs at the design phase was done through the selection of credit programs that were highly similar in outlook (except for the needed variation in the gender of the beneficiary and the delivery model), that targeted households with similar socio-economic characteristics (below poverty line, less than two acres of landholdings), and that were randomly implemented over villages in the same area. Once we had identified in this way the research population, we randomly selected from each group a sample of 50 households. We subsequently made a more detailed profile of different subsamples of households and we tested formally how successful our matching during the design phase had been. Remaining statistically significant differences were controlled for during the regression analysis. In what follows, we subsequently describe the selection of credit programs, the research area, the

study population, the sample, and the dependent variables. Table 1 at the end of this section summarizes relevant background characteristics of different subsamples and gives an overview of test results.

Selection of Credit Programs

Microfinance programs were selected on the basis of a review of schemes that were operational in southern India. We thereby focused on a number of criteria, such as characteristics of the target group, eligibility and financial criteria, delivery model, placement strategy, and member selection processes. We finally selected the Integrated Rural Development Programme (IRDP) and the Tamil Nadu Women's Development Programme (TNWDP), programs that are highly similar in outlook except for the needed difference in the borrower's gender and in the delivery model. The Integrated Rural Development Programme (IRDP) is a country-level poverty alleviation program launched throughout India in 1978. It directly targets credit and earmarks loans for productive purposes only. Clients are both men and women below the poverty line³ and with maximum landholdings of two acres. Although IRDP guidelines emphasize the importance of the follow-up of beneficiaries, the assistance provided has proved to be largely inadequate (Gaiha, Imai, & Kaushik, 2001, pp. 314; IFAD, 1989, pp. 9; World Bank, 1991, pp. 162–168). As a consequence, IRDP in practice provides a one-shot credit intervention, a fact that has contributed to its failure. Different studies have highlighted the considerable misuse of IRDP loans (on average, 20% to 40%), the extremely low repayment (on average, 24% to 40%), as well as the low percentage of beneficiaries (on average, 28% to 35%) who manage to improve their financial situation and to cross the poverty line (Ghosh, 1998; IFAD, 1989, pp. 9).

The IFAD-funded Tamil Nadu Women's Development Programme (TNWDP) has been conceptualized to remedy IRDP deficiencies in the selection, monitoring, and enforcement process.⁴ It is operational in the southern state of Tamil Nadu since 1990 and started off in those districts where the score on social

indicators of female status was lowest (i.e., first in Dharmapuri and later on in South Arcot, Salem, Ramanathapuram, and Madurai). Within districts, program placement is at random and no evidence could be found that the program has, for instance, only started off in more accessible and larger villages, leaving aside more remote villages. The program targets households with a similar socio-economic profile as the IRDP and uses similar financial conditions regarding interest rates, subsidies, loan repayment period, and loan use requirements. The main innovative element of the TNWDP is the use of women's groups, often called self-help groups, for the channelling of the individual IRDP loans and other services, such as information-sharing; training in technical areas, management, and leadership; and awareness-raising activities related to gender and social development issues. Non-governmental organisations are heavily involved in the TNWDP. They establish women's groups and link them to rural bank branches after they have functioned as savings and credit groups for a short period. Members contribute compulsory savings to their individual savings account and to the group fund that is used to provide small consumption and emergency loans to its members. NGOs operational in the research area are the Mysore Resettlement and Development Agency (Myrada) and the Rural Integrated Development Organisation (Rido). The former has a more developed organizational and management structure and brings women together every week, whereas Rido groups meet only every other week. While both organizations provide social welfare services, Myrada invests more in building up human resources of marginalized groups, transforming women's groups into actors of local institutional change. The TNWDP was first implemented in the Dharmapuri District, where groups were formed from 1990 until 1994. We have selected this research area because it allowed testing the importance of membership duration.

In summary, the following five credit program variables were used:

1. Direct credit to men extended through IRDP in 1993–1994 (IRDP Male)

2. Direct credit to women extended through IRDP in 1993–1994 (IRDP Female)
3. Credit extended in 1993–1994 to women member of Myrada groups since 1993–1994 (TNWDP Myrada Young)
4. Credit extended in 1990–1991 to women member of Myrada groups since 1990–1991 (TNWDP Myrada Old)
5. Credit channelled in 1990–1991 to women member of Rido groups since 1990–1991 (TNWDP Rido Old)

Comparing the impact of IRDP Male and IRDP Female (schemes 1 and 2) allows testing the importance of the borrower's gender, whereas a comparison of the impact of the IRDP Female and TNWDP Myrada Young (schemes 2 and 3) highlights the importance of financial and social group intermediation. Aside from these two issues, which are the scope of this article, comparing the effect of Myrada Young and Myrada Old schemes provides insights into the impact of longer group membership, while the effect of organizing an NGO may be tested through a comparison of impact on Myrada and Rido beneficiaries.⁵

Research Site

One particular area within the Dharmapuri District, Morappur Block, was selected where IRDP and TNWDP loans are extended through three bank branches of the Indian Bank that use the same standard regulations and that are partly staffed by the same persons. The research area is an exclusive agricultural area where the 1991 Household Survey identified about 42% of the overall population living below the poverty line. Morappur Block is part of the Baramahal area, where Tamil is the dominant language. While South India is characterized by the Dravidian culture, which in general poses less severe limitations on girls' and women's behavior than the Aryan culture of the North, any such appreciation should be set against the general background of female discrimination. Even within Tamil Nadu, sex ratios are below 1000 and results of subsequent household surveys suggest a worsening over time. Although in 1961 there were 992 women for every 1000 men, the

ratio declined to 977 in 1981 and 972 in 1991 (Subrahmanyam & Rao, 1995).

Study Population and Sample

In an effort to avoid the confounding (spillover) effects of credit schemes, households were excluded that received credit through both IRDP and TNWDP. While there is mutual exclusivity between the different credit programs, diffusion effects may take place in more subtle ways. Merely living in a village where women's groups are operational, without being a member oneself, could be enough to undergo part of its effects (see, for instance, Hashemi & Schuler, 1994). The study population of IRDP beneficiaries was thus restricted to villages where women's groups were not present but that were highly similar in outlook. In addition, the survey included a section on the degree of interface between non-TNWDP beneficiaries and women's groups.

In 1990–1991, about 497 women living in the Morappur Block received loans under the TNWDP. Of the 497, about 397 belonged to Myrada groups and 100 to Rido groups. In the period 1993–1994, about 200 women received loans through Myrada groups (MAHAM, 1996). Bank staff estimated that in the same period about 420 men and 180 women benefited from IRDP loans, of which 250 men and 100 women lived in non-TNWDP villages. Out of each group we have drawn a random sample of 50 households. Aside from the differential impact of different credit schemes, we were also interested in their net impact. We consequently also included a comparison group of 50 below-poverty-line households living in Morappur Block who were eligible candidates for IRDP credit and TNWDP membership but who had so far not received any credit. Data on school enrollment was only collected for children in the age group four to seventeen years (a sample of 759 children), whereas data on the kind of schooling was collected for those children who were ever enrolled in schools (a sample of 635 children).

Once the six subsamples of 50 households were selected, we made a detailed profile of each subsample on the basis of in-depth interviewing using retrospective questions on relevant household

and individual-level characteristics. A comparison of the profile of the different subsamples shows that the beneficiaries did not have a significantly different profile at the moment of credit receipt. The large majority of all households belonged to the most-backward castes, were landless, or owned only a small piece of land. The majority of the women were illiterate, whereas on average about 50% of the husbands could read and write. In-depth interviewing further revealed that the majority of the TNWDP beneficiaries did not decide themselves to become a member of a women's group. Most of them had actually been "forced" by their husbands who had been attracted themselves by the selective incentive of future credit receipt.

As this study focuses on the differential impact of firstly IRDP Male versus IRDP Female and secondly TNWDP Myrada Young versus IRDP Female (and IRDP Male), we have restricted the comparative analysis to those groups. Statistically significant differences resulting from t-tests are presented at the bottom of Table 1. Differences between the subsamples are at the level of the household landownership, the literacy status of the female respondents, and the literacy status of their husbands. More specifically, children in IRDP Male households had a higher chance of having literate parents (as compared to children in IRDP Female and TNWDP Young), while female members of a women's group tended to belong more to landed households (as compared to IRDP Female and Male households). If anything, our data does not support the idea that women's groups recruited women who had a higher literacy status: of the 50 Myrada Young beneficiaries, only six were literate at the outset (against 15 wives of IRDP Male beneficiaries). They do seem to have recruited among the slightly better off: landownership among TNWDP households was higher than it was among IRDP beneficiaries. Statistical analysis and qualitative information from interviews, however, suggest that landownership has no unequivocally beneficial effect on children's schooling. Children are engaged at younger ages in all kinds of agricultural labor tasks, in particular where supervision of hired laborers is difficult or expensive, and moral hazard problems occur.⁶ Our own data suggest that a household's landownership

Table 1. Sampling information and scores on selected background characteristics

	IRDP Male	IRDP Female	TNWDP Myrada Young	TNWDP Myrada Old	TNWDP Rido Old	Control Group
Sampling Details						
Number of households	50	50	50	50	50	50
Number of children (4–17 years)						
girls	50	56	67	72	63	49
boys	58	66	69	81	73	55
Number of children ever enrolled in schools						
girls	30	38	56	61	51	32
boys	54	60	62	77	67	47
Background characteristics						
Mean age of children	14 (5.4)	16 (5.2)	15 (4.9)	18 (5.4)	17 (5.1)	12 (4.7)
Caste						
% most backward	92	82	94	86	84	84
% scheduled	8	18	6	14	16	16
Landownership ^a						
% yes	56	46	66	58	62	46
% no	44	54	34	42	38	54
Mean quantity of land owned (in acres)	2.12 (1.6)	1.91 (2.1)	1.98 (1)	1.75 (1.2)	1.83 (1.12)	1.97 (1.5)
Literacy status of female respondent ^b						
% yes	30	12	12	20	30	28
% no	70	88	88	80	70	72
Literacy status of husband ^c						
% yes	66	56	46	54	50	54
% no	34	44	54	46	50	46

Note. Figures in parentheses are standard deviations.

^a Difference between TNWDP Myrada Young and IRDP Female is statistically significant at 5% level (t-value: 2.157).

^b Difference between IRDP Female and IRDP Male is statistically significant at 1% level (t-value: 3.028); difference between TNWDP Myrada Young and IRDP Male is statistically significant at 1% level (t-value: 3.026).

^c Difference between TNWDP Myrada Young and IRDP Male is statistically significant at 5% level (t-value: 2.040).

lowers school enrollment but increases the probability that when children are sent to school it will be to a more expensive and qualitatively better private school instead of to a public one. The abovementioned statistically significant differences among subsamples were controlled for when analyzing impacts of different credit schemes on children's education through regression analysis.

Dependent Variables

The choice for particular indicators has been guided by existing secondary literature (see, for instance, Drèze & Sen, 1995, pp. 109–139; King & Hill, 1993, pp. 1–50) and by the financial and time constraints of the study. Aside from a categorical variable, “incidence of schooling,” we have included a numerical variable “number of years of schooling” to capture the effect of differential dropout rates of boys and girls (King & Hill, 1993, pp. 6–9). We have further differentiated between private and public schooling, the former being considered of higher quality by parents. Sending children to a private school entails a number of direct costs, such as tuition and travelling expenditures, that can be avoided if children go to public schools that are more widely available and free of direct costs. Attention for the output of schooling was captured through the inclusion of the “incidence of literacy” measured by “the ability to read and write.”

Data collection was restricted to children in the age-group four to seventeen years. Data was primarily gathered through self-reporting by the mother, complemented by on-the-spot visits in schools and cross-checking of self-reported information with schooling records.

Regression Analysis and Findings

Assessing the impact of different credit programs on the different input and output indicators of children's educational status (ages 4–17) was done through the use of logistic regression models in the case of the categorical dependent variables (“incidence of schooling,” “kind of schooling,” and “incidence of literacy”) and through ordinary least squares regression in the case of the numerical dependent variable “number of years of schooling.” As the main

interest of our research is testing the differential impact of different credit programs (and not so much the net impact of a program versus a nontreatment group) on children's educational status, we have calculated statistics that summarize the effect of one credit program versus another. In the case of logistic regression models, we calculated odds ratios, while differences in coefficients were calculated in the case of the numerical dependent variable.

*Gender and Birth Order Effect in Educational
Inputs and Outputs*

Although it was not the primary focus of this research, the data collected supports earlier findings on the existence of a widespread pro-male bias in children's educational status (see, for example, World Bank, 2001, pp. 31–72). Regression results furnish evidence that there exists in our sample a severe pro-male bias in children's educational investments and literacy outcomes. It proves to be about 3.9 times more likely that boys rather than girls are enrolled in schools. On average, girls receive two years less of schooling than boys, while, in general, no evidence was found that girls, if being sent to school, had less chance of being in a private rather than a public school. The sex-differential pattern of investment in girls' schooling results in a female literacy rate that is only one-third of that of boys.

In addition to a gender effect, a birth order effect seems to play a role. Our data suggest that being born earlier (higher birth order) significantly reduces the average number of years of schooling. Interestingly, the birth order and gender effects seem to reinforce each other: being the eldest daughter makes it the least likely to be enrolled in school. Compared to the eldest son, the eldest daughter is about 12 times less likely to be enrolled in school. A second born daughter is about 1.7 times more likely to be enrolled compared to her elder sister. Observations during field research indicated that elder daughters are strongly engaged in all kinds of household activities, such as cleaning, sweeping, water, fuel collection, and childcare.

Table 2. Contrasts in effects of different credit programs

Dependent Variables	Null-hypothesis: IRDP Female = IRDP Male	Null-hypothesis: TNWDP Myrada Young = IRDP Female	Null-hypothesis: TNWDP Myrada Young = IRDP Male	Failure to reject	Rejection
	Failure to reject	Failure to reject	Rejection	Failure to reject	Rejection
Incidence of Schooling (yes=1)					
All children	1.401	2.194			2.686**
Boys	0.975	1.059		1.033	
Girls	1.35		3.842**		5.191***
Kind of Schooling (private=1)					
All children	0.827		3.923***		3.245**
Boys	0.770	3.036		2.337	
Girls	0.993		5.938**		5.894*
Incidence of Literacy (yes=1)					
All children	1.307		2.656***		3.473***
Boys	1.228	1.124		1.381	
Girls	1.265		7.121***		9.007***
Number of Years of Schooling					
All children	+0.612		+1.054*		+1.666***
Boys	+0.106	+0.083		+0.189	
Girls	+0.836		+2.445***		+3.281***

Note. For categorical variables (“incidence of schooling,” “kind of schooling,” “incidence of literacy”), odds ratios are given. For numerical variables (“number of years of schooling”), differences in coefficients are given. T-tests are used to check whether differences in effects of credit programs are statistically significant at 10% (*), at 5% (**), or at 1% (***).

Does Direct Credit to the Mother and the Father Affect Children’s Schooling Differently?

Results of regression analysis summarized in Table 2 indicate that it does not matter for children’s education whether credit enters the household through the mother or the father. For almost all educational inputs and outputs, slightly higher scores are recorded when the mother receives the credit (odds ratios IRDP Female/IRDP Male >1 for the categorical dependent variables, positive differences for the numerical dependent variables) but the differences are minor and fail to be significant. Going back to the original estimates of the IRDP Male and IRDP Female impact even suggests that there are no statistically significant effects at all of direct credit on children’s schooling or literacy. Whether the loan

was used productively and generated additional revenues, or whether it was considered a gift from the government that was used for consumptive purposes (in about 42% of the cases for IRDP Male and 60% of the cases for IRDP Female), additional resources have not led to an increase in children's schooling or literacy.

The Importance of the Mother's Group Membership

Not only does using women's groups as intermediaries seem beneficial from the point of view of the credit supplier, there are also strong indications that it significantly increases the probability that children are kept in school longer, are sent to private schools, and become literate. Table 2 (third and fourth columns) shows that compared to children whose father or mother received credit directly, children living in households where credit entered through women's groups, remain on average about one to one-and-a-half years longer in school. It is about 3.2 to 3.9 times more probable that they will be enrolled in private rather than in public schools, and about 2.7 to 3.5 times more probable that they will be able to read and write.

Do Effects Play Out Differently for Girls and Boys?

Results of regression analysis summarized in Table 2 (third and fourth columns) show that only girls reap the benefits of their mother's group membership. Contrasts of net effects show that, for boys, we cannot reject the null-hypothesis that there are no additional effects of mother's group membership. This strongly contrasts with our findings for girls, where we reject the null-hypotheses for all variables. Compared to their counterparts in IRDP Female and Male households (third and fourth columns), it is about 3.8 to 5 times more probable that girls are sent to school rather than being kept at home, about 5.9 times more probable that they are in private rather than in public schools, and about 7 to 9 times more likely that they will become literate. They benefit from 2.4 to 3.3 additional years of schooling. In a context of a severe male bias, this induces a weakening of the existing gap in educational inputs and outputs, but fails to wash it out.

Exploring Possible Explanatory Factors

While these research findings are not unique and are supported by Kabeer (2001, pp. 77–78), among others, they are at least surprising. Conventional theory of income and substitution effects clearly fails to explain the sharply contrasting results of slightly diverging credit programs. On the contrary, as there is a close substitutability between mother's and daughter's labor, we would normally expect that the positive income effect of mother's borrowing and resulting employment would partially be outweighed by a negative substitution effect in the case of girls. It seems that in the case of the mother's group membership, other effects are at work than the pure income and substitution effects. Information from individual interviews combined with data from group interviews taken from selected women's groups suggest that at least part of the explanation may be sought in the influence of group membership on decision-making processes in the household.

During interviews, mothers often stressed the importance of their daughters' education. They explicitly pointed out that they always had thought that female education was crucial but that it was only because of their participation in women's groups that they were able to increase their say in household decision making and get their ideas implemented. According to them, women's groups were especially important in liberating access and control over resources from men's mediation. Consider the following statements made by individual members:

While the access to credit was important at the outset, it is the access and control over other resources that has become much more important. Because of my membership, I was able to put some of my own personal income on a personal savings account. Because all administrative formalities that are linked with this account are performed within the group, my husband has no access to this account.

The respect I get from my mother-in-law has increased because I'm the one who has access to money [from the group common

fund] when there are urgent household expenditures to be made.

Aside from the access to material resources, they also gained access and control over intangible, nonmaterial resources. Particularly important for most of them was the fact that group membership had expanded the “female space” by opening access to more heterogeneous spheres of public life, such as the village council, the teacher-parents association, the dairy cooperative society, or the forest committee. This participation in extrahousehold decision-making bodies clearly has an effect on intrahousehold decision-making processes. Consider the following statement:

Because of the linkage project I have become a member of the teacher-parents association in my son's school. Before, my husband would not have allowed and I would not have been bold enough to participate. Now, he is even proud that I go to talk with the others [women of higher castes]. He even believes that I know more now and he listens more to me.

This evidence does not stand alone. It is supported by evidence from earlier studies (see, for instance, Agarwal, 1994, pp. 421–504; Kabeer, 1995, pp. 223–263), which have shown that group membership and collective action may act as powerful levers to change underlying allocative rules, which might eventually contribute to alterations in observed intrahousehold outcomes if parents exhibit different preferences.

Conclusions and Policy Implications

Comparing the effects of slightly diverging credit programs that are operational in South India leads to the conclusion that in the case of direct bank-borrower credit it does not matter for children's education whether credit is in the hands of mothers or fathers. Results from regression analysis even suggest that direct individual bank-borrower lending does not induce any effects at all on children's educational inputs and outputs. This conclusion is strongly put into perspective when we focus on the impact of group-

mediated credit. Data from our household survey indicates that women's group membership strongly affects girls' schooling and literacy while it leaves that of boys largely unchanged. In a context of a severe pro-male bias, women's group membership helps to reduce the existing gap in children's schooling and literacy, even if it fails to close it completely.

Individual interviewing with borrowers and interviews with focus groups suggest that the impact of women's group membership could be mediated through changes provoked in underlying decision-making processes. Women's group membership deliberates access and control over material and nonmaterial resources from men's mediation, which seems to increase their leverage within household decision making. Women's increased participation in household decision making has enabled them to see their preferences for their daughters' schooling more reflected in the final decisions regarding the allocation of educational inputs.

In a context of a growing consensus on the importance of girls' education for overall allocative efficiency, as well as for human development, these findings have important policy implications. For girls' education, it clearly matters who decides and who controls resources in the household. One of the most direct routes towards increasing girls' education seems to increase their mothers' intrahousehold decision making. Our research shows that channelling credit through well functioning women's groups could trigger this effect.

Notes

Thank you to Prof. Dr. R. Renard and anonymous referees of the journal for the valuable comments and suggestions. All errors remaining are the sole responsibility of the author.

1. See Holvoet (1999) for more details about this survey.
2. Sophisticated impact assessment studies often use two-stage estimation models (such as Heckman's econometric approach) to arrive at unbiased estimates of impact. Crucial (and a major problem) in these models is the selection of an instrumental variable that summarizes well the "selection effect." In my research, it was impossible to identify reasonable candidates, which prevented the use of a two-stage estimation model.

Impact of Microfinance Programs on Children's Education

3. In 1989, households below poverty line were identified as those whose annual household income was below Rs. 6400; from 1996 on the cut-off point was Rs. 11000.

4. While transaction costs have declined under the TNWDP both for borrowers and banks, repayment problems remain. Bennett, Goldberg, et al. (1996) blame the lack of group ownership of the financial service system, which partly comes from the essential nature of donor funding in the generation of loan capital. The disproportionate role of an NGO in the financial intermediation process, leaving little responsibility for the groups, further exacerbates this problem, negatively affecting repayment performance. Recently, however, the TNWDP has begun to shift more responsibility for financial intermediation to the groups, limiting NGOs to the role of social intermediary.

5. For an overview of these results, see Holvoet (1999).

6. Children of small farmers were, for instance, often engaged in animal herding. De Janvry et al. (1992, p. 433–434) report similar findings for Morocco and blame the imperfect substitution of the families' own children's labor for hired labor in animal herding.

References

- Agarwal, B. (1994). *A field of one's own: Gender and land rights in South Asia*. Cambridge: Cambridge University Press.
- Amin, R., Becker, S., & Bayes, A. (1998). NGO-promoted microcredit programs and women's empowerment in rural Bangladesh: Quantitative and qualitative evidence. *Journal of Developing Areas*, 32(2), 221–237.
- Chaves, R.A., & Gonzalez-Vega, C. (1996). The design of successful rural financial intermediaries: Evidence from Indonesia. *World Development*, 24(1), 65–78.
- De Janvry, A., Sadoulet, E., & Fafchamps, M. (1992). Structural adjustment and the peasantry in Morocco: A computable household model. *European Review of Agricultural Economics*, 19, 427–453.
- Drèze, J., & Sen, A. K. (1995). *India: Economic development and social opportunity*. Delhi: Oxford University Press.
- Gaiha, R., Imai, K., & Kaushik, P. D. (2001). On the targeting and cost-effectiveness of anti-poverty programmes in rural India. *Development and Change*, 32, 309–42.
- Ghosh, J. (1998). *Assessing poverty alleviation strategies for their impact on poor women. A study with special reference to India*. UNRISD Discussion Papers DP 97. Geneva: UNRISD.
- Goetz, A. M., & Sen Gupta, R. (1996). Who takes the credit? Gender, power and control over loan use in rural credit programs in Bangladesh. *World Development*, 24(1), 45–64.

- Hashemi, S. M., & Schuler, S. R. (1994). Credit programs, women's empowerment and contraceptive use in rural Bangladesh. *Studies in Family Planning*, 25(2), 65–76.
- Hoff, K., & Stiglitz J. E. (1990). Imperfect information and rural credit markets: Puzzles and policy perspectives. In K. Hoff, H. Braverman, & J. E. Stiglitz (Eds.), *The Economics of Rural Organization: Theory, Practice and Policy* (pp. 33–52). Oxford: Oxford University Press.
- Holvoet, N. (1999). *Intrahousehold resource allocation: Impact of credit and women's groups. Case-study for rural north Tamil Nadu*. Unpublished PhD dissertation. Antwerp: Institute of Development Policy and Management, University of Antwerp.
- Hulme, D., & Mosley, P. (Eds.). (1996). *Finance against poverty: Effective institutions for lending to small farmers and microenterprises in developing countries*, 2 Vols. London: Routledge.
- Huppi, M., & Feder, G. (1990). The role of groups and credit cooperatives in rural lending. *World Bank Research Observer*, 5(2), 187–204.
- International Fund for Agricultural Development (IFAD), Organisation for Economic Co-operation and Development (OECD), United Nations (UN), and World Bank. (2000). *2000: A better world for all—Progress towards the international development goals*. Washington, DC. Retrieved from <http://www.paris21.org/betterworld/>
- International Fund for Agricultural Development (IFAD). (1989). *India. Tamil Nadu Women's Development Project: Appraisal Report*. Rome: IFAD, Project Management Department.
- International Fund for Agricultural Development (IFAD). (1995). *India. Tamil Nadu women's development project: Mid-term evaluation report*. Rome: IFAD, Office of Evaluation Studies.
- Kabeer, N. (1995). *Reversed realities: Gender hierarchies in development thought*. London: Verso.
- Kabeer, N. (2001). Conflicts over credit: Re-evaluating the empowerment potential of loans to women in rural Bangladesh. *World Development*, 29(1), 63–84.
- Kennedy, E., & Peters, P. (1992). Household food security and child nutrition: The interaction of income and gender of the household head. *World Development*, 20(8), 1077–1085.
- Khandker, S. R. (1998). *Fighting poverty with microcredit: Experience from Bangladesh*. New York: Oxford University Press.
- King, E. M., & Hill M. A. (1993). Women's education in developing countries: An Overview. In E. M. King & M. A. Hill (Eds.), *Women's Education in Developing Countries. Barriers, Benefits and Policies* (pp. 1–50). Baltimore and London: The Johns Hopkins University Press.

Impact of Microfinance Programs on Children's Education

- Mencher, J. (1988). Women's work and poverty: Women's contribution to household maintenance in two regions of South India. In B. Dwyer & J. Bruce (Eds.), *A Home Divided—Women and income control* (pp. 99–119). CA: Stanford University Press.
- Mosley, P. (1996). Metamorphosis from NGO to commercial bank: The case of BancoSol in Bolivia. In D. Hulme & P. Mosley (Eds.), *Finance against Poverty Vol. 2* (pp. 1–31). London: Routledge.
- Mosley, P. (2001). Microfinance and poverty in Bolivia. *Journal of Development Studies*, 37(4), 101–132.
- Navajas, S., Schreiner, M., Meyer, R. L., Gonzalez-Vega, C., & Rodriguez-Meza, J. (2000). Microcredit and the poorest of the poor: Theory and evidence from Bolivia. *World Development*, 28(2), 333–346.
- Pitt, M., & Khandker S. R. (1998). The impact of group-based credit programs on poor households in Bangladesh: Does the gender of participants matter? *Journal of Political Economy*, 106(5), 958–996.
- Phipps, S.A., & Burton P. S (1998). What's mine is yours? The influence of male and female incomes on patterns of household expenditure. *Economica*, 65, 599–613.
- Rahman, A. (1998). Micro-credit initiatives for equitable and sustainable development: Who pays? *World Development*, 27(1), 67–82.
- Sharma, M., & Zeller, M. (1997). Repayment performance in group-based credit programs in Bangladesh: An empirical analysis. *World Development*, 25(10), 1731–1742.
- Subrahmanyam, S., & Rao, R. N. (1995). Gender bias in nutrition: Some issues. *The Journal of Family Welfare*, 41(3), 1–9.
- Tamil Nadu Corporation for Development of Women Ltd. (MAHAM). (1996). *Notes on IFAD assisted MAHAM, project implementation unit Dharmapuri*. Dharmapuri: MAHAM.
- Thomas, D. (1997). Incomes, expenditures, and health outcomes: Evidence on intra-household resource allocation. In L. Haddad, J., Hoddinott, & H. Alderman (Eds.), *Intrahousehold resource allocation in developing countries. Models, methods and policy* (pp. 142–64). Baltimore and London: John Hopkins University Press.
- World Bank. (1991). *Gender and poverty in India: A World Bank country study*. Washington, DC: World Bank.
- World Bank. (2001). *Engendering development: Through equality in rights, resources and voice*. Washington, DC: World Bank.

Foreign Exchange Risk Management Practices of Microfinance Institutions

Peter R. Crabb

Abstract: Foreign exchange risk remains a significant problem for microfinance institutions (MFIs). Many sources of potential funding for MFIs remain untapped due to the high risks of currency devaluation faced by these funding sources. Specifically, debt capital is available for MFIs but foreign exchange risk is a potential deterrent. This paper reviews current practices in the management of foreign exchange risk for and by MFIs. The advantages and disadvantages of these practices are discussed and alternative practices proposed.

Microfinance institutions (MFIs) generally raise capital denominated in hard currencies (U.S. Dollars, Euros, etc.). However, MFIs must lend these funds in their local currency, immediately creating foreign exchange rate risk. Furthermore, these institutions operate primarily in developing countries where the risk of local currency devaluation is the highest. These risks prevent access to many potential funding sources, including debt capital. Foreign exchange risk management remains a significant problem for any international financial institution, but the problem is much greater for MFIs that are forced to borrow abroad and operate in an unstable economic environment, preventing access to many potential funding sources.

In this study, I review the existing foreign exchange risk management practices of MFIs. Information for the report was gathered through a review of existing literature, personal interviews of practitioners, and a study of the foreign exchange volatility in the Opportunity International Network. From the review of existing literature and personal interviews, I found that the existing practices fall into two broad categories. First, MFIs may pass foreign currency risks onto clients through the indexation of loans to hard currencies. This first method of addressing foreign exchange risk is discouraging because it transfers risk onto the party that is least capable of bearing such risk. The second category of existing practices is a transferring of hard currency loans into local currency loans. This practice involves the use of commercial banks and/or government agencies that back the local currency loans. It is reported that this practice is not more widespread because the costs are too high—the loans to clients must be made at higher rates to cover the commercial bank fees.

From this review, I draw three general conclusions. First, MFIs need additional funding to meet demand, and debt capital is the most likely source for this funding. Many reports indicate that the demand for microlending is high and that existing equity capital is insufficient to meet the demand. Second, foreign exchange rate risk is significant, and though it is only one factor in a decision to lend to an MFI, it is a strong deterrent. The currencies in which most MFIs operate are highly susceptible to devaluation against most major currencies such as the U.S. Dollar and the Euro. It is in these currencies that any new debt capital would likely be denominated. Finally, the existing foreign exchange risk management practices are prohibitively expensive, either to the client or the institution.

Based on these conclusions, I propose three new practices designed to encourage lending to MFIs in hard currencies: diversifying across the network both the source of debt capital and the use

Peter R. Crabb is a Professor of Finance and Economics in the School of Business and Economics, Northwest Nazarene University. Email address: prcrabb@nnu.edu.

of debt capital, insuring the risk of devaluation in the network, and using currency swaps at individual institutions. Each of these three practices has its advantages and disadvantages, and similar strategies are currently in use by many commercial organizations. What is unknown at this point, however, is the cost of these programs. Further study is necessary to better quantify both the advantages and costs of each practice.

Current Practices

Following is a review of the existing foreign exchange risk management practices gathered from existing literature, both academic and trade related, and from personal interviews of Opportunity International personnel. The academic literature focuses on how financial institutions can manage foreign exchange risk through derivative and other capital markets, the trade literature discusses how some MFIs have partnered with commercial banks to create some operational hedges, and the personal interviews provided details on the advantages and disadvantages of both the standard models in the academic literature and the existing operational hedges.

An intensive review of the academic literature on the risk management practices of small financial institutions was not successful. In particular, a benchmark for MFI foreign exchange risk management was not found in the risk management practices of small financial institutions. Most models of financial risk management for financial institutions follow a standard framework that does not distinguish between the sizes of the institutions. The standard framework has three main components: measuring value at risk to exchange rate fluctuations, purchasing derivatives or adjusting portfolios to offset this risk, and continuously monitoring the risk position.

Most academic models direct the financial institution to first measure its exposure to foreign currency fluctuations. The most popular methodology for this first step is to apply a value-at-risk (VAR) measurement. VAR is a statistical measure of the largest expected loss to a portfolio from a particular risk variable (in this

case, currency fluctuations) at a given level of confidence. The VAR measure warns managers of the potential maximum loss that could occur. For example, a MFI could calculate the VAR of their loan portfolio at a 90% level of confidence. This may result in an estimated 5% loss on any given day due to fluctuation in exchange rates. This means that the manager can be confident that on any given day there is only a one in ten chance that the portfolio could incur a 5% maximum loss. The higher the level of confidence desired, the larger the maximum expected loss that could occur.

The second step in this model for the financial institution manager is to decide if the level of risk is acceptable, and if not, to make changes to the portfolio to reduce the risk or take offsetting positions in the capital markets. A financial institution with exposure to fluctuations in the exchange rate value of their local currency can purchase forward contracts, options, futures, or currency swaps. Each of these foreign exchange contracts can quickly minimize or eliminate foreign exchange risk. The MFI could also put in place operational hedges by denominating their debt in the same currency as their assets (loans).

The third step in the standard model of foreign exchange risk management for financial institutions is to continuously monitor the exchange rate risk. A drawback to this model is that applying VAR analysis to a portfolio requires the use of historical data, both actual changes in value or descriptive statistics such as standard deviation. Currency markets are, however, volatile, and the level of volatility is constantly changing. During strong economic conditions, volatility tends to be low, but geopolitical tensions and changes in capital flows can quickly lead to higher volatility and greater risk of loss. Therefore, it is necessary to constantly update VAR measurements and make appropriate changes to hedge positions, raising the cost of hedging.

Extensive capital markets exist for financial institutions to offset currency risks. These markets are large and widespread. The Bank of International Settlements (BIS, 2003) reported that between June 2000 and June 2002, the gross notional values of outstanding, over-the-counter (OTC) foreign exchange contracts

rose 36%, from 94,008 billion to 127,564 billion. Thus, markets exist for MFIs to offset their foreign exchange risk, but many do not participate. The reason is cost, and this high cost is driven by two factors. First, forward and futures contracts are primarily denominated in large quantities of hard currency. One forward or future contract could easily be larger than the entire loan portfolio of the MFI. Forward contracts normally trade in values of \$1 million or more, and the futures contracts are also traded for higher levels of currencies. For example, Mexican pesos trade on the Chicago Mercantile Exchange (CME) for \$500,000 pesos per contract. These levels of cash flow are much higher than what most MFIs could produce in any one period. Smaller contracts are available, particularly for forwards, but this again raises the cost of the hedge.

The second factor is that most MFIs operate in currencies that are not actively traded. For currencies to be actively traded there must be substantial trade between the country and the rest of the world. This is not often true in developing countries. Since the market is not active and the risk of devaluation is high, forward contracts in these currencies are normally priced at substantial forward discounts. When the forward rate is lower than the spot rate, the foreign currency is selling forward at a discount; or the exchange rate is at a forward rate discount. In this case, the foreign currency is expected to depreciate against the base currency, usually the U.S. dollar. Commercial banks operating in the forward markets for developing countries generally price in heavy forward discounts. Therefore, this derivative contract may protect the MFI against a complete devaluation of the local currency, but it does not eliminate much of the risk and essentially locks in a higher cost of debt repayment.

Many MFIs have turned to operational hedges for foreign exchange risk management. An operational hedge involves restructuring the debt so that repayments are made in the local currency of the MFI, completely eliminating their foreign exchange risk. This approach is consistent with the standard framework, but once again, it is not without a cost. For example, MFIs in Colombia

have successfully covered their foreign exchange risk by denominating all their borrowings in local currency. To do so, they arrange for commercial banks to accept the proceeds from a dollar-denominated loan as a deposit. A local bank then uses this deposit as collateral for a loan of Colombian pesos to the MFI. The MFI can then repay the dollar denominated loan using the proceeds from its local currency lending; the risk has been transferred to the banks. According to MicroRate, these transactions have been successfully used in Colombia at a reasonable cost. However, this reasonable cost may be due to the interest rate regulation in Colombia, protecting the MFI from high bank fees and large spreads. This protection may not exist in other markets.

Similar operating hedges have been used for other MFIs. In one example, proceeds from a dollar-denominated loan are used as collateral for a letter of credit issued by a U.S. commercial bank. The letter of credit is issued to a commercial bank in the MFI's home country and is used as collateral for a loan denominated in the home currency. The cost of this type of operational hedge is explicit—the fee charged by the U.S. commercial bank for issuing the letter of credit. Letter of credit fees generally range from 1% to 3% of value. This fee significantly raises the cost of funds to the MFI or lowers the return to the U.S. lender. Another cost with these types of arrangements is the spread between the collateral loan and the local currency loan, also significantly raising the cost of funds to the MFI. Some government-backed programs exist for MFIs to obtain these types of agreements at subsidized rates. Examples include programs through the International Finance Corporation (IFC) and the U.S. Agency for International Development. It is not, however, certain that these programs reduce the above mentioned costs.

A common foreign exchange risk management practice on the part of MFIs is to index their client loans to a hard currency, such as the U.S. dollar or the euro. Many Opportunity International Implementing Partners in the East European region use this approach. An index loan sets the rate of interest on the clients' loans based on the exchange rate value of the local currency. When

the local currency experiences a devaluation, the clients' interest payments rise, providing the additional cash flow necessary for the MFI to repay its U.S. dollar obligations. Passing foreign exchange risk on to the borrower in this manner is both dangerous for the client as well as the institution. The client may be able to handle this burden if the currency experiences a slow devaluation; a gradual rise in the client's interest rate payments may be accompanied by higher cash flow from his or her growing business. However, if the currency experiences rapid devaluation, normally caused by hyperinflation in the home country, the client will assuredly have difficulty meeting the obligations and since this will be true for all clients of the MFI's, the institution is likely to fail (see Vander Weele & Markovich, 2001).

Another common practice for managing foreign exchange risk is to do nothing at all. At the institutional level this means that the MFI is bearing all of the risk. This of course is dangerous given the low capital base of most MFIs, but it does not mean it will not be successful. There are examples of MFIs that have been able to bear the risk of changes in currency value. They have achieved this by earning a high return on assets. One such example is Finde of Nicaragua, an MFI with a portfolio of only \$7.3 million. This institution has hard currency denominated obligations but achieves such a high rate of profitability that foreign exchange rate volatility has not caused any significant loss (MicroRate, 2002). Essentially, a good rate of return of the portfolio can cover a multitude of problems. Therefore, if the MFI can focus its energy on producing a strong rate of return on assets (reducing default, controlling operating expenses, monitoring its costs of funds, etc.) it is likely to achieve a sufficient capital base that will absorb volatile swings in the exchange rate value of its debt obligations.

Alternative Practices

In this section, I propose three new practices designed to encourage lending to MFIs in hard currencies: (1) diversifying both the source of debt capital and the use of debt capital, (2) insuring the risk of devaluation in the network, and (3) using currency swaps. The first proposal is for the network to borrow substantial funds in

hard currencies and allocate these funds across many different MFIs operating in many different currencies. This proposal for managing foreign exchange risk rests on the possibility that significant diversification benefits are possible across the network. If this is so, the network could raise debt capital for all of its implementing partners and any foreign exchange risk is likely to be absorbed in the pool of cash flows generated by these partners and used to meet the obligations. Therefore, it is first necessary to get an idea of the level of risk in the network portfolio.

To look at the level of foreign exchange risk in the Opportunity International Network I measured the correlations in the U.S. dollar value of the outstanding loan portfolio of the network for the three-year period beginning January 2000 and ending December 2002. Table 1 contains the correlation coefficient matrix for the U.S. dollar value of the outstanding loans in the four regions of the network.

Table 1. Correlation coefficients for dollar value of outstanding loans by region

	Latin Am.	Asia	Africa	E. Europe
Latin Am.	1			
Asia	0.813916353	1		
Africa	0.919008966	0.929036997	1	
E. Europe	0.944411757	0.929378653	0.974647687	1

Note. From Opportunity International Network Partner Reports, 2002, Q4 (Oct–Dec).

The table shows a high level of correlation across the regions, suggesting that there are little diversification effects in the network portfolio. It should, however, be noted that much of the correlation is due to tremendous growth in each region's portfolio over this period. The strong upward trend in lending activity for each region creates a portion of the high correlation effects. To partially correct for this trend, an ANOVA test of the regions was conducted and the results suggest some level of diversification in the portfolio. The F-test for the source of variation concludes that there is significant variation across the different regions

(F-value = 44.86, p-value = .0001). This result suggests that diversification benefits are possible—currency volatility in one region of the network does not imply equal volatility in another. Of course this is only a one-factor test and many factors other than the currency changes may be driving the differences in variances across regions. Further testing in this area is necessary to identify sources of variation.

Despite the possible diversification from differences in currency changes across the network, substantial risk remains. Some currencies could incur such a large devaluation in a given period that the cost of servicing the debt for that MFI could not be absorbed by the cash flow from the other institutions. For example, over the period beginning January 2000 and ending December 2002, the cedis of Ghana exhibited a devaluation against the U.S. dollar of more than 50%. The cost of servicing any debt obligations for the Partner would be substantial, and it would be necessary for other currencies in the network to exhibit high rates of appreciation against the U.S. dollar to cover the costs.

Given the risks across the network it would seem that the first proposal—borrowing in hard currency by the network and allocating the funds across many different MFIs operating in many different currencies—would not reduce foreign exchange risk. However, another source of substantial diversification effects exists. It is possible to reduce risks by diversifying across the sources of funds. Table 2 contains the correlation coefficient matrix for the U.S. dollar relative to three major currencies over the same period, January 2000 and ending December 2002.

Table 2. Correlation coefficients for the dollar relative to major currencies

	U.S./U.K.	U.S./Euro	Japan/U.S.
U.S./U.K.	1		
U.S./Euro	0.920643805	1	
Japan/U.S.	-0.409738758	-0.175827971	1

Note. From Board of Governors of the Federal Reserve System, Release: G.5 Foreign Exchange Rates, March 2003.

This table shows that although the pound sterling and the euro are highly correlated, there exists a strong negative correlation between the yen and the pound sterling, and the yen and the euro, relative to the U.S. dollar. Therefore, if the network incurs debt in three major currencies such as the U.S. dollar, the euro, and the yen, and then distributes these funds across many different currencies, a reduction in the risk of exchange rate changes is possible. Although it is possible that each of the developing market currencies would move against all three hard currencies in the same manner, any higher debt service costs in one hard currency can be offset against lower costs in another.

The second proposal combines the diversification benefits just described with insurance products designed to protect against catastrophic loss. As was mentioned above, one currency could incur such a large devaluation in a given period that the cost of servicing the debt for that MFI could not be absorbed by the cash flow from the other institutions. Insurance products exist to assist multinational firms operating in countries with high levels of geopolitical and economic risks. These products are primarily public agency guarantees, but some private insurance companies are now offering many different types of catastrophic loss policies. In this case, the insurance company bears the risk that a major devaluation occurs in one of the countries. The public agency products of this type generally cover war and political turmoil, two events likely to lead to currency devaluations, but other economic risks could be negotiated with under private insurance contracts. Potential companies for this type of insurance product include AIG and National Indemnity.

The possibility of self-insurance also exists. For example, Oikocredit raised six million euros to create a fund that will cover the risk of currency losses on loans to three MFIs in the Asia region. The fund reimburses Oikocredit whenever exchange rate changes lower the value of the local currency debt payments needed to meet hard currency debt obligations. In this program, interest rates on the local currency loans are higher than the hard

currency program, covering some of the exchange rate risk, but passing some of the cost of this protection onto the client.

A third possibility for reducing foreign exchange risk in MFIs exists at the institutional level. MFIs in the network could begin using currency swaps. A currency swap is a financial contract where a borrower swaps their debt obligations in one currency for the obligations of another borrower in a different currency. Currency swaps immediately remove currency risk since the institution's assets and liabilities are as a result denominated in the same currency. For example, a MFI operating in Colombia could borrow in U.S. dollars and then swap their debt obligations with an organization that has debt obligations in the local pesos but is receiving cash flow denominated in U.S. dollars. One such organization might be an exporting firm that has debt and other expenses in Colombian Pesos but sells its goods in the U.S. for dollars. Most commercial banks operate in the swap market and could act as intermediaries. The cost of these swaps may be prohibitive as the commercial bank may view the MFI as a greater risk than the exporting firm. This greater risk implies that the bank spread would be as high as that in the case of the collateralized loans discussed earlier. A possible means of reducing these costs is a government agency guarantee. The World Bank currently provides currency swaps for many of its programs, but there is no report of these contracts being used by MFIs. It is possible that the opportunities for such swap agreements are minimal for the currencies where MFIs operate. Many developing countries do not have the high level of foreign trade necessary for sufficient counterparties to exist.

Conclusions and Plans for Further Study

Three general conclusions can be drawn from this study of foreign exchange risk and MFIs. First, MFIs need additional funding to meet demand, and debt capital is the most likely source for this funding. Second, foreign exchange rate risk is significant, and though it is only one factor in a decision to lend to an MFI, it is a strong deterrent. The risk of devaluation against most major

currencies such as the U.S. dollar and the euro is high, and it is in these currencies that any new debt capital is likely to be denominated. Finally, the existing foreign exchange risk management practices are prohibitively expensive, either to the client or the institution.

Further research on this issue is necessary. Case studies can expand on this research by providing numerical analysis of different foreign exchange risk management practices. For example, a numerical analysis of an individual MFI in the network would look at existing portfolio structures and estimate how varying denominations of loans would benefit the institution under different currency exchange rate values. It would be of further benefit if many institutions could be studied so as to look at any correlations across different regions and currencies. These types of analytical studies serve to both measure the extent of risk and address the best practices in risk management.

Additional research is necessary to identify potential intermediaries and/or counterparties to any potential currency swap agreements. As described, the World Bank provides currency swaps for its programs but no such program exists for MFIs. Money center banks and other international lending organizations may be able to find counterparties for currency swaps in the developing countries where MFIs operate.

The results of this study are not conclusive but do lay some groundwork for further study that may lead to an effective exchange rate risk management tool or pooling mechanism. Your comments and suggestions are most welcome.

Notes

I am grateful to Ken Vander Weele, Clay O'Brien, Roy Pratt, Rick John, Tim Head, and Desiree Green of the World Bank for their valuable contributions and suggestions. All errors and omissions are my own and any comments are welcome.

References

- Branch of International Settlements. (2003). "BIS Quarterly Review, March 2003." Table 19, Statistical Annex, A99. http://www.bis.org/publ/qtrpdf/r_qa0303.pdf.
- Ledgerwood, J. (1999). *Microfinance handbook: An institutional and financial perspective*. Washington, DC: World Bank.
- Madura, J. (2003). *Financial markets and institutions (6th ed.)*. New York: Thomson/South-Western Publishing.
- MicroRate. (2002, October). *The finance of microfinance*. MicroRate, <http://www.microrate.com>
- Ramos, J., Staking, K., Beato, P., O'Shea, E., Calle, A., Melia, M., & Carrasco, B. (2000). *Financial risk management—A practical approach for emerging markets*. Inter-American Development Bank. Washington, DC: Johns Hopkins University Press.
- Reed, L. (2002). *Banks for the poor: Creating an upward spiral*. Chicago: Opportunity International Network.
- Shapiro, A. (2003). *Multinational financial management (7th ed.)*. Boston: John Wiley & Sons, Inc.
- Vander Weele, K., & Markovich, P. (2001, August). *Managing high and hyper inflation in microfinance: Opportunity International's experience in Bulgaria and Russia*. Microenterprise Best Practices. Washington, DC: Development Alternatives, Inc.

Scoring Arrears at a Microlender in Bolivia

Mark Schreiner

Abstract: Can scoring models help microlenders in poor countries as much as they have helped credit-card lenders in rich countries? This paper presents a scorecard that predicts the probability that loans from a microlender in Bolivia will have arrears of 15 days or more. Although arrears in microfinance depend on many factors difficult to include in scorecards, the paper shows that inexpensive, simple-to-collect data does have some predictive power. In microfinance, scoring will not replace loan officers, but it can flag high-risk cases and act as a cross-check on loan officers' judgment.

Microlenders make small, short, unsecured loans to the self-employed poor. Few of these borrowers have standard collateral, credit-bureau records, or formal wage jobs. Historically, lenders lacked low-cost ways to judge the risk of lending to these borrowers. If lenders set interest rates to cover the high per-dollar costs of small loans, then they were accused of usury, but if they set lower rates, then they lost money.

Microfinance has been defined by new ways to cut the cost of judging the credit risk of the self-employed poor. For example, group lenders tap the knowledge of risk held as a sunk cost by neighbors of a potential borrower. Likewise, individual lenders control risk through detailed evaluations of the borrowers and their

businesses, frequent repayments, stepped loan sizes, and chattel collateral (Bond & Rai, 2002).

Scoring is new to microfinance, but it may help reduce the costs of making loans to the self-employed poor. Scoring compares simple-to-observe quantified data about the borrower, loan, and lender with similar past cases. The share of similar past cases that had repayment problems is an estimate of the risk that a current case will also have repayment problems.

Credit-card lenders in rich countries make massive numbers of small, short, unsecured loans each year at very low costs because data-based scorecards inexpensively and accurately forecast the risk of potential borrowers (Lewis, 1990). In high-income countries, the microloan is often the credit card, and most home loans and car loans are made based almost entirely on scoring. Of course, microlenders also use a type of implicit, subjective “scoring” in that they evaluate borrowers based on their own historical experiences and prejudices. Data-based scoring differs only in that it is explicit and consistent (Longhofer, 2002). Most careful research (Berger, Frame, & Miller, 2002; Frame, Padhi, & Woosely, 2001; Martell, Panichelli, Strauch, & Taylor-Shoff, 1999) suggests that scoring—combined with credit bureaux—has improved the depth and breadth of formal loans in high-income countries. With better knowledge of risk, lenders can approve more poor-but-safe borrowers and reject more non-poor-but-risky borrowers. In this way, lenders save time that they would have spent dunning delinquent borrowers and can use the newfound time to find new borrowers (Schreiner, 2002). Can microlenders in poor countries also take advantage of scoring?

Scoring can help microlenders to judge risk, but it is unlikely to replace human loan officers anytime soon. For example, the most important factors in credit-card scorecards—employment and credit record—are often unavailable in low-income countries

Mark Schreiner is a Senior Scholar in the Center for Social Development at Washington University in Saint Louis and a consultant with Microfinance Risk Management. He works to help the poor build assets via improved financial services. Email address: schreiner@gwbmail.wustl.edu Website: <http://www.microfinance.com>

because credit bureaux are absent and potential borrowers are self-employed.

This paper tests whether a simple scorecard can predict the risk of costly arrears—spells of 15 days or more—for borrowers from a microlender in Bolivia. The scorecard shows how characteristics are linked with risk. In historical tests, the scorecard predicts better than naïve models but worse than credit-card models. Thus, scoring may help cut the costs of individual microloans (but probably not group joint-liability loans; see Schreiner, 2002), not as a replacement for loan officers' judgment, but rather as an additional filter for high-risk cases that would otherwise slip by.

The next section gives the background for the scorecard. The section after that reports how characteristics of the borrower, the loan, and the lender are linked with arrears, and the section following that tests the scorecard's predictive power.

Scoring for a Bolivian Microlender

This section discusses the market for microfinance in Bolivia, reviews past work on scoring for microfinance, and presents the data and scorecard used in this paper.

Microfinance in Bolivia

Bolivia is microfinance's showcase in Latin America. In spite of its sparse population and deep poverty, microfinance has a high rate of penetration. Most Latin American countries have, at most, one microfinance lender with more than 10,000 borrowers; Bolivia has a dozen such lenders. Several microlenders have converted from unregulated not-for-profits to regulated for-profits. Most borrowers are near the poverty line but are not among the poorest (Navajas, Schreiner, Meyer, Gonzalez-Vega, & Rodriguez-Meza, 2000).

As recounted in Rhyne (2001) and Mosley (2003), profits in microfinance attracted competition from Bolivian banks and Chilean consumer-finance companies, and, by 1996, the market started to saturate. Arrears skyrocketed, in part because the new entrants tolerated high arrears and weakened the culture of

repayment for all borrowers, and in part because microlenders, in the battle for market share, made loans to people already indebted elsewhere. The crisis in Brazil in 1999 also hurt repayment from the women traders who make up the bulk of microfinance portfolios. As arrears rose to more than double their historical levels, interest in scoring heightened as microlenders sought to find new ways to control risk.

Past Work on Scoring for Microfinance

Many statistical models have linked arrears to characteristics of the microlender, borrower, and loan (Nannyonga, 2000; Reinke, 1998; Zeller, 1998; Sharma and Zeller, 1997). In broad terms, these models have not been very useful as scorecards (nor were they intended for this purpose) for three reasons. First, most models use small samples and so may lack robustness. Second, some models use characteristics that most microlenders do not already collect or that are expensive to collect. Third and most importantly, these models do not check predictive power. A historical test is needed to confirm that the scorecard truly can predict risk and—just as importantly—helps to convince loan officers and credit managers that the scorecard works. Most past academic statistical models aim to detect characteristics linked with risk, not to help lenders to score potential borrowers.

Viganò (1993) is the best scorecard for microfinance in the literature. It links default with 53 characteristics at a rural development bank in Burkina Faso. With a small sample ($n = 100$), prediction was checked with the jack-knife (Efron & Tibshirani, 1993). Unfortunately, the small sample also required that the 53 characteristics be condensed into 13 factors, obscuring the links between risk and specific characteristics. The scorecard also has the technical drawbacks common to discriminant analysis (Eisenbeis, 1981).

The scorecard in this paper is an improvement in three ways. First, the sample is large (39,956 loans repaid in 1988–1996). Second, the focus is less on the statistical significance of the estimated coefficients and more on the power to predict arrears for

10,555 loans repaid in 1997. Statistical significance need not imply predictive power (Hand, 1994). Third, the scorecard uses only characteristics that most microlenders already collect.

Data and Scorecard

The Bolivian microlender makes loans to urban individuals in trade and manufacturing. It bases risk evaluations almost exclusively on the personal judgment of loan officers; few loans are collateralized, and a credit committee discusses only very large or unusual loans. From August 1988 until the end of 1996, 1,987 loans out of 39,956 (5%) had costly arrears, defined as a spell of 15 days or more. Such long spells are costly to the lender because they require extra collection efforts. In the first nine months of 1997, 8.6% of loans went “bad” (913 of 10,555 loans).

The following characteristics are known for all loans disbursed and paid:

- Date of disbursement
- Amount disbursed
- Type of guarantee
- Branch
- Loan officer
- Gender of the borrower
- Sector of the firm
- Number of spells of arrears
- Length of the longest spell of arrears

This is an unusually short list; most scorecards for microlenders would also use the age, marital status, education, and length of residence of the borrower; ownership of a phone, house, or car; and measures of the size and financial strength of the household and firm. Thus, the test in this paper is conservative: if a scorecard with few characteristics works, then a scorecard with a full complement of characteristics on the borrower, loan, and lender would work even better.

Scorecard construction uses knowledge of the characteristics of past cases at the time of disbursement and of their subsequent

repayment performance to infer future repayment risk for similar current cases. Because data exist only for cases that were approved under the lender's standard evaluation process, the scorecard applies only to current cases that also have been approved under this process. Otherwise, sample-selection bias can degrade scorecard performance (Crook & Banasik, 2004).

The scorecard predicts "costly arrears," defined as a dichotomous dependent variable that is 1 for "bad" loans with a spell of at least 15 days and 0 for all other "good" loans. The scorecard is derived from a logit model.

The characteristics linked with risk were chosen based on theory and experience. At the point that a loan has been provisionally approved under the standard evaluation process, these characteristics can be taken as given. Of course, the terms of the loan contract—such as the amount disbursed, the term to maturity, and the guarantee requirements—do depend on the evaluation of risk by the lender. For loans provisionally approved under the lender's standard evaluation, however, the loan terms are fixed. Thus, the scorecard applies only to cases that, in the absence of scoring, would have been approved.

The test below thus checks how well the scorecard flags high-risk cases that the loan officers and the credit committee nevertheless believed to be low-risk.

Links between Risk and Characteristics

Microlenders want to predict the risk of arrears, and they also want to know which characteristics are linked with risk. This section discusses these linkages, and the next section discusses predictive power.

The scorecard is derived from a logit regression based on 39,956 loans repaid by the end of 1996. The X^2 statistic for the scorecard as a whole had a p value of 0.01, and 56 of 109 estimated coefficients had p values of 0.10 or less.

Experience as a Borrower

The experience of the borrower is measured as the number of previous loans and also as the number of months since the first disbursement. Table 1 shows scorecard weights (derived from estimated logit coefficients) that show how risk changes with the borrower’s experience. Positive weights mark increased risk, and negative weights mark decreased risk. Table 1 also shows *p* values and the means of the characteristics.

Table 1. Scorecard weights for borrower experience

	Mean	Weight	<i>p</i> value
Experience of Borrower			
Previous Loans			
0	0.460	0.000	N/A
1	0.247	-0.012	0.50
2	0.131	-0.023	0.21
3	0.070	-0.028	0.12
4	0.039	-0.032	0.09
5	0.022	-0.040	0.05
6	0.013	-0.034	0.10
7	0.008	-0.054	0.04
8	0.005	-0.026	0.28
9 or more	0.006	-0.025	0.31
Months since First Loan			
0-6	0.466	0.000	N/A
7-19	0.170	0.015	0.40
20-53	0.233	0.021	0.23
54-147	0.125	0.033	0.07
148 or more	0.007	0.031	0.11

Number of previous loans

When we examine weights with *p* values below 0.10, we see that the risk of a loan’s going bad decreases with the number of past loans. For example, risk is 5.4 percentage points less for a borrower with 7 previous loans than for a first-time borrower. All else constant, first-time borrowers (46% of cases) are the worst risks.

Months since the first loan

Experience in months since the first loan is a different measure than the number of previous loans because, for example, a borrower could get three one-month loans or three one-year loans. Ranges of numbers of months are defined as a set of dummy variables (Table 1).

Although not all the weights have low p values, the broad pattern suggests that risk increases with time as a borrower. The effect is large; a borrower whose first disbursement took place 54–147 months ago is 3.3 percentage points more likely to go bad than a new borrower.

This may reflect regression to the mean. Borrowers tend to ask for their first loan during uncommonly good times when their ability to repay is at a peak. If the first loan is repaid on time, then the lender may encourage the borrower to take larger and longer loans, even if the borrower is less able to repay such a loan than the first, smaller, shorter loan.

In any case, this is a new result. While it is common wisdom that risk decreases with more experience seen as numbers of loans, no one has discussed that risk increases with experience seen as months as a borrower.

Arrears in the Previous Loan

Experience with scoring for microfinance suggests that repayment history is the best predictor of future repayment performance. Most microlenders cannot check borrowers' histories in credit bureaux, but they use knowledge of past repayment performance for their own repeat borrowers. Table 2 shows how risk is linked with arrears in the previous loan. Spells of arrears were common, but most were short.

Length of spells of arrears in days

The weights on arrears seen as the longest spell in days in the previous loan are large; compared with no arrears (67% of cases), cases with one day of arrears had 2.4 percentage points less risk, and cases with 31 or more days of arrears in the previous loan had 1.6 percentage points more risk in the current loan.

Table 2. Scorecard weights for arrears in the previous loan

	Mean	Weight	<i>p</i> value
Arrears in Previous Loans			
Longest Spell in Days			
0	0.674	0.000	N/A
1	0.127	-0.024	0.01
2	0.054	-0.018	0.01
3	0.034	-0.018	0.01
4	0.028	-0.013	0.03
5	0.012	-0.008	0.28
6	0.009	0.003	0.63
7	0.016	0.001	0.85
8	0.007	0.017	0.02
9	0.004	0.016	0.05
10-14	0.014	0.012	0.05
15-23	0.009	0.028	0.01
24-30	0.003	0.020	0.03
31 or more	0.007	0.016	0.03
Number of Spells			
0-1	0.761	0.000	N/A
2	0.062	0.009	0.08
3	0.044	0.011	0.05
4	0.032	0.015	0.01
5 or 6	0.041	0.008	0.16
7 or more	0.059	0.006	0.27

This result is new: for this microlender, repeat borrowers with shorter spells in the previous loan were less likely to go bad than those with no arrears in the previous loan. This is surprising; common sense suggests that more past arrears would always mean more risk. Why would a short spell be better than no spell?

Perhaps some arrears are due to random shocks, and perhaps borrowers who have had some arrears but who worked to get back on track in just a few days are, on average, less likely to have long spells than those who have not yet fallen into arrears but who might not be so robust once they do hit an unlucky stretch.

Number of spells

The number of spells of arrears in the previous loan is strongly linked with risk (Table 2). Compared with 0-1 spells, risk increases for 2-4 spells and then starts to decrease. This may reflect traders

who make frequent installments but who are often a day or two late, not from negligence but because they wait to combine the trip to pay the installment at the branch with other errands. For them, the number of spells of arrears reveals little about the risk of long spells of arrears.

Gender of the Borrower

Probably the best-known stylized fact in microfinance is that women are safer bets for loans than men. The Bolivian lender made most (58%) of its loans to women (Table 3). All else constant, women were indeed less risky, but only by 0.2 percentage points (the p value is 0.35, so the difference in risk between men and women may very well be nil).

Does this disprove the stylized fact? Without controlling for other factors, women are almost half as risky as men; the loans of 3.6% of women in the sample went bad versus 6.9% of loans to men. But after controlling for other factors—many of them correlated with gender—most of the gender gap in risk vanishes. At least for this lender, gender per se is not strongly linked with risk. Rather, gender is associated with other factors that do cause risk. For example, Bolivian women are more likely than Bolivian men to be traders than manufacturers, and Bolivian women are more likely to have smaller businesses and to take smaller, shorter loans. So if the lender observes only gender, then gender is strongly linked with risk, but if the lender observes many characteristics and accounts for their linkages with risk, then gender is much less predictive.

Sector

About 53% of loans went to traders, and their risk was 4 percentage points less than manufacturers. This is a large weight; average risk in the sample was 5%, so manufacturers were almost twice as risky as traders. (More finely grained classes of sectors—for example, agriculture and services as well as manufacture and trade—would improve prediction, but the data for this lender lack this level of detail.)

Table 3. Scorecard weights for gender, sector, amount disbursed, and guarantee

Characteristic	Mean	Weight	<i>p</i> value
Gender			
Male	0.422	0.000	N/A
Female	0.578	-0.002	0.35
Sector			
Manufacturing	0.473	0.000	N/A
Trade	0.527	-0.040	0.01
Changed Sector	0.006	0.005	0.52
Amount Distributed			
Level	676	0.0000023	0.03
Increase	140	-0.0000003	0.89
Decrease	25	-0.0000123	0.01
Guarantee			
Other	0.029	0.000	N/A
Personal	0.475	0.002	0.55
No Guarantee	0.248	-0.009	0.01
Multiple	0.248	-0.004	0.29
Changed Guarantee	0.100	0.001	0.76

Changing sectors between consecutive loans was associated with 0.5 percentage points more risk, but the *p* value is high, and few borrowers switched sectors.

Amount Disbursed

The link between risk and the amount disbursed is weak. In 1998 dollars, each \$100 disbursed was linked with an increase in risk of 0.02 percentage points (Table 3).

In terms of changes in amount disbursed between consecutive loans, a \$100 increase had virtually no link with risk, but a \$100 decrease was associated with a decrease of 0.1 percentage points. Apparently, this lender successfully rations borrowers suspected as high risks.

In this case, the link between risk and the amount disbursed is so weak that the microlender has little scope to affect arrears via

changes in amount disbursed. The average loan is already small (\$680), and the average increases (\$140) and decreases (\$25) are even smaller. If the amount disbursed were reduced by \$100, risk as predicted by the scorecard would change by 0.8 percentage points. In any case, the scorecard is properly used only after the microlender has provisionally approved the loan under its traditional evaluation process and has set the terms and conditions of the loan contract.

Guarantees

Of the four types of guarantees, the only one with a large effect and a small p value is “no guarantee” (Table 3). Here, the lack of a guarantee does not cause risk, but it does reveal risk as judged by the loan officer. Most likely, only borrowers judged as very low risks in the normal evaluation process had the privilege of borrowing without a guarantee. Changes in the guarantee between consecutive loans are not linked with risk.

Branches

All branches are not equal (Table 4). Compared with “other” (the central office and four small branches), the safest branch was associated with 1.3 percentage points less risk. The few borrowers who switched branches were less risky by 0.8 percentage points. Such results are useful to microlenders because branch performance is susceptible to policy, for example through bonuses or training.

Loan Officers

This microlender bases its normal evaluation on the subjective judgment of loan officers. Of course, officers differ in their ability to “smell” high-risk cases, and they may also take time to learn the ropes and to sharpen their “sixth sense.”

Perhaps surprisingly, risk increases as loan officers gain experience (Table 4). For example, cases handled by a new loan officer with 0–6 months of experience are 3.2 percentage points less risky than cases handled by an old hand with 148 months of experience. Although loan officers learn to work smarter with time, the

Table 4. Scorecard weights for the branch and the experience of the loan officer

Characteristic	Mean	Weight	<i>p</i> value
Branch			
Other	0.438	0.000	N/A
1	0.114	-0.013	0.23
2	0.072	-0.012	0.12
3	0.161	-0.010	0.13
4	0.044	-0.008	0.29
5	0.053	-0.007	0.51
6	0.078	-0.003	0.56
7	0.040	0.000	0.98
Changed Branch	0.024	-0.008	0.10
Experience of Loan Officer in Months			
0-6	0.062	0.000	N/A
7-19	0.204	0.006	0.09
20-53	0.322	0.009	0.02
54-147	0.335	0.020	0.01
148 or more	0.078	0.032	0.01

amount of work that they must do also grows as their portfolios expand. Furthermore, the quality of new borrowers may degrade as loan officers get past the “cream” in the neighborhoods where they work and start to recruit more “typical” borrowers.

Beyond experience, loan officers differ in their ability to sense high-risk cases (Table 5). Compared with “other” officers (those with less than 300 loans paid off) the safest officer was linked with 4.8 percentage points less risk, and the riskiest officer was linked with 2.1 percentage points more risk. Loan officers are not interchangeable parts; microfinance rests on personal relationships, so who the person is is important. This matters because lender policy influences loan officers more directly than borrowers.

The 12% of borrowers who changed loan officers—usually because the loan officer quit—were 0.5 percentage points more risky (Table 5). Thus, decreased staff turnover may lead to decreased arrears.

Table 5. Scorecard weights for specific loan officers

Loan Officer	Mean	Weight	<i>p</i> value
Other	0.116	0.000	N/A
1	0.008	-0.048	0.01
2	0.067	-0.038	0.01
3	0.019	-0.037	0.01
4	0.009	-0.037	0.01
5	0.037	-0.033	0.01
6	0.025	-0.025	0.01
7	0.038	-0.024	0.01
8	0.045	-0.024	0.01
9	0.059	-0.023	0.01
10	0.048	-0.020	0.01
11	0.016	-0.019	0.04
12	0.015	-0.018	0.09
13	0.017	-0.017	0.10
14	0.014	-0.016	0.17
15	0.031	-0.015	0.02
16	0.027	-0.014	0.04
17	0.035	-0.013	0.02
18	0.024	-0.012	0.03
19	0.010	-0.007	0.31
20	0.016	-0.006	0.30
21	0.019	-0.005	0.57
22	0.031	-0.004	0.71
23	0.019	-0.002	0.81
24	0.011	-0.001	0.95
25	0.016	0.002	0.88
26	0.022	0.002	0.84
27	0.016	0.002	0.79
28	0.015	0.004	0.58
29	0.010	0.005	0.54
30	0.010	0.005	0.49
31	0.035	0.007	0.55
32	0.010	0.007	0.31
33	0.009	0.008	0.52
34	0.041	0.009	0.40
35	0.016	0.009	0.44
36	0.014	0.021	0.01
37	0.011	0.021	0.01
Changed Officer	0.116	0.005	0.05

Date of Disbursement

To control for seasonal or once-off changes in the market or lender policy, the scorecard controls for the year and month of disbursement. Loans disbursed in the months before Christmas when business is heaviest are more risky (Table 6). Compared with 1988–1991, risk increased in 1992–1993 before falling in 1994–1996.

In sum, risk depends on gender, sector, arrears in the previous loan, the experience of the borrower, the experience of the loan officer, the specific loan officer, and the specific branch. Seasonality and changes in policy and in the market also matter.

Predictive Power

Scoring uses what is known from the past to forecast what will take place in the future. This section checks how well the scorecard

Table 6. Scorecard weights for year and month of disbursement

Characteristic	Mean	Weight	<i>p</i> value
Year of Disbursement			
1988–1991	0.083	0.000	N/A
1992	0.086	0.040	0.01
1993	0.131	0.068	0.01
1994	0.198	0.059	0.01
1995	0.353	0.056	0.01
1996	0.150	0.050	0.01
Month of Disbursement			
January	0.056	0.000	N/A
February	0.064	0.006	0.13
March	0.088	0.004	0.28
April	0.091	0.002	0.65
May	0.102	0.003	0.48
June	0.096	0.006	0.12
July	0.081	0.006	0.16
August	0.081	0.006	0.13
September	0.087	0.009	0.04
October	0.086	0.008	0.06
November	0.089	0.009	0.03
December	0.079	0.010	0.02

built on data from 1988–1996 classifies loans repaid in the first nine months of 1997.

By most measures, the scorecard does indeed have some predictive power. Still, it is less powerful than most scorecards for credit cards. This reflects the challenge of microfinance to judge risk without reference to credit bureaus or formal wage jobs. Risk is correlated with inexpensive-to-observe characteristics, and lenders can use this fact to reduce arrears, but the link is too weak for scoring to replace loan officers completely.

In 1988–1996, 5% of the Bolivian microlender's loans went bad. In 1997, 8.6% went bad. A naïve model would predict that 5% of loans would go bad in 1997, but the scoring model predicted 6.4%. Thus, about one-third of the increase in problematic loans was due to changes in characteristics that appear in the scorecard, while two-thirds of the increase was due to other factors such as changes in competition and in the macroeconomy.

Scoring also predicts the risk of each loan. For example, if the Bolivian lender had used the scorecard in 1997 with a rejection threshold of 0.10 (that is, if it had rejected all provisionally approved applicants with a risk of 10% or higher, and approved all others), then the share of bad loans would have decreased from 8.6% to 6.9%. With a threshold of 0.05, the share of bads would have fallen to 4.8%.

As the threshold approaches zero, fewer bad loans sneak through but more good loans are mistakenly rejected. Scoring gives estimates of risk, but lenders must choose how to balance risk against the cost to reduce risk and against other goals.

If estimated risk exceeds a threshold, then—for the purposes of the historical test—a loan is rejected; otherwise, it is approved. Given knowledge of what would have happened had the case been approved (because, in reality, the cases in the historical test were approved), scoring has four possible outcomes:

- *“Good” approved*: a “good” with predicted risk below the threshold
- *“Bad” rejected*: a “bad” with predicted risk above the threshold
- *“Bad” approved*: a “bad” with predicted risk below the threshold

- *“Good” rejected*: a “good” with predicted risk above the threshold

For thresholds from 0–0.30 and for 1, the outcomes for the historical test with 1997 data for the Bolivian lender are in Table 7. In the test sample, 913 (8.6%) of loans were bads, and 9,642 (91.4%) were goods. As the threshold increases, goods approved increase and goods rejected decrease; however, bads rejected decrease, and bads approved increase. Lenders choose a threshold based on the trade-offs among the four outcomes, their goals, and the benefits and costs of each outcome.

The all-bad threshold is so low (0.00) that all loans are rejected. The all-good threshold is so high (1.00) that all loans are approved. The all-bad model is a straw person, but the all-good model is not; it is equivalent to policy that the Bolivian lender used once it had approved a borrower through its normal evaluation when it did not have a scorecard.

Good/Bad Separation

The most basic test of a scorecard is how well it separates goods from bads. The cumulative distributions of estimated risk for goods and bads (Figure 1) show that the scorecard achieves some separation. The distribution of goods (mean 0.062, median 0.042) is always left of the distribution of bads (mean 0.098, median 0.077).

“Hit” Rates

To what extent does the scorecard separate goods from bads? The proper measure of the sharpness of separation depends on the goals of the lender (Hand, 1994; Kennedy, 1998). “Hit” rates are best if a lender wants to optimize the share of goods approved and/or bads rejected. Table 7 shows the share of goods approved, the share of bads rejected, and the total hit rate (goods approved and bads rejected as a share of all cases).

In terms of the share of goods approved, the all-good threshold of 100% beats the scorecard at all possible thresholds. On the

Table 7. Power to predict with historical data

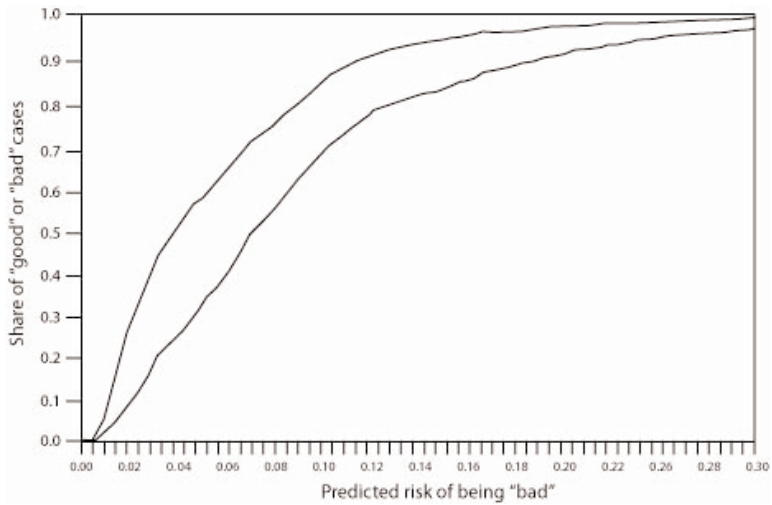
Measure	Formula	Threshold							
		All bad 0.00	0.05	0.10	0.15	0.20	0.25	0.30	All good 1.00
Goods Approved	GA	0	5,343	7,791	8,976	9,330	9,491	9,561	9,642
Bads Approved	BA	0	267	578	740	815	861	886	913
Goods Rejected	GR	9,642	4,299	1,851	666	312	151	81	0
Bads Rejected	BR	913	646	335	173	98	52	27	0
Share of Good Approved	GA/(GA+GR)	0.00	0.55	0.81	0.93	0.97	0.98	0.99	1.00
Share of Bads Rejected	BR/(BR+BA)	1.00	0.71	0.37	0.19	0.11	0.06	0.03	0.00
Total Hit Rate	(GA+BR)/N	0.09	0.57	0.77	0.87	0.89	0.90	0.91	0.91

Note. There are 10,555 cases, 9,642 goods and 913 bads. The good rate is 0.914, and the bad rate is 0.086.

other hand, the share of “bads” rejected for the scorecard beats the all-good model at all possible thresholds.

An all-bad model would have approved none of the goods and rejected all of the bads. Thus, the scorecard always does better than

Figure 1. Cumulative distributions of predicted risk for bads and goods



the all-bad model in terms of goods approved but always does worse in terms of bads rejected.

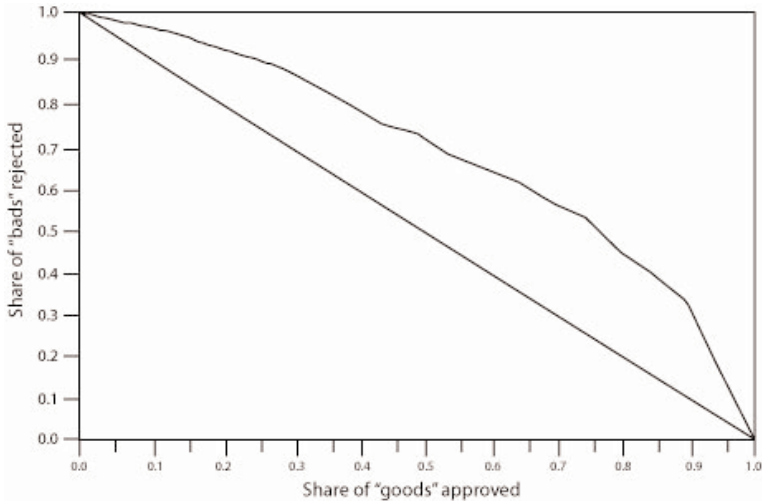
The total hit rate for the scorecard never beats the highest naïve hit rate (0.914) that is achieved by simply predicting that all cases will be good. If the Bolivian lender only wanted to maximize the hit rate, then it would predict that all loans would be good. In practice, however, the loss from a bad approved exceeds the benefit from a good approved. Likewise, the cost avoided due to a bad rejected exceeds the benefit missed due to a good rejected. Because lenders do not weigh all outcomes the same, they generally will do better with a scorecard than with their current (implicit) naïve all-good threshold.

Figure 2 shows the trade-off between the share of goods approved and the share of bads rejected. The diagonal represents a policy that rejects loans at random. Scoring has more power as its curve bends away from the diagonal; a perfect scorecard would trace the upper border and then the right border, forming an upside-down reversed *L*.

The scorecard is near the upper border for shares of bads rejected above 0.8 and near the right border for shares of goods approved near 0.8. This suggests that the scorecard would work well as a “super-pass” or “super-fail” filter. The lender could use the scorecard to approve very low risks (super-passes) without further ado and to flag high risks (super-fails) for more review.

In sum, the scorecard predicts risk well. It separates goods from bads imperfectly (no scorecard is perfect), but, on average, it assigns higher risk to bads than to goods. If the lender puts more weight on successfully rejecting a bad than on successfully approving a good, then scoring beats the all-good naïve model

Figure 2. Trade-off between the share of goods approved and the share of bads rejected



currently used once a borrower is approved by the traditional evaluation process.

Conclusion

Both credit-card lenders in high-income countries and microfinance lenders in low-income countries make massive numbers of small, short, unsecured loans. Unlike credit-card lenders, however, microfinance lenders do not use scorecards.

Can scoring help microfinance? A scoring model for arrears at a microlender in Bolivia suggests that it can. The model pinpoints characteristics that are associated with risk and, more importantly, it predicts risk better than the all-good naïve model currently used by the lender in which all loans approved by the traditional evaluation process are disbursed. Still, scoring for microfinance is less powerful than scoring for credit cards, so scoring and knowledge of quantitative characteristics will not replace loan officers and their knowledge of qualitative character anytime soon.

How should scoring be used? As usual, the math is the easy part. The difficult work is to collect the data and then to use the risk forecasts. The scorecard here is not powerful enough to accept or to reject applicants without a standard evaluation; risk is linked with the characteristics in the scorecard, but it still depends strongly on factors that only the loan officer can observe. Also, the scorecard starts from the premise that an applicant has already been provisionally approved under the normal evaluation.

The scorecard is probably most appropriately used as a super-fail filter that flags high-risk cases that deserve more careful review. Thus, scoring channels effort to borderline cases where rewards are greatest.

Even lenders who do not score each borrower can still use knowledge of the weights in scorecards to inform policy choices. For example, the Bolivian lender might try to attract more traders because they are safer than manufacturers. Likewise, the lender might refer to a special credit committee all loans to borrowers who had a spell of arrears in their most recent loan of more than 15 days. Finally, the scorecard isolates the risk associated with individual

branches and individual loan officers. This allows the lender to target training and incentives to those who need it the most.

In the end, the greatest challenge to scoring for microfinance is not technical but managerial. After all, predictive power can be tested with historical data, so no microlender should have to use a scorecard that does not forecast risk well. But some microlenders—especially those whose mission focuses more on service to the poorest than on profitability—fear that scoring will overstate the risk of the poor and fear that knowing the risk of the poor will lead to mission drift.

Both fears are valid, and both may be addressed with proper management. Scoring will not overstate the risk of the poor as long as scorecards are based on historical data for loans commonly used by the poor. For example, suppose that a poor person applies for a microloan and is run through two scorecards, one constructed from data for mortgage loans to middle-class, salaried civil servants and one constructed from data for microloans for poor people. The civil-servant scorecard will likely overstate the risk of the self-employed poor (because they will appear to be very below-average civil servants), but the microloan scorecard will, on average, give an accurate estimate of the risk of the poor. Thus, the key to avoiding shortchanging the poor is not to blindly apply scorecards constructed with data from one type of loan and one type of population to a different product and population.

But what if the data show that the poor are indeed worse risks, even for loans tailored to their demands? This knowledge need not automatically lead to mission drift; what kind of mission-driven organization would abandon its mission just because it learns that success is more difficult than expected? No, knowledge is better than ignorance. If the poor are riskier, then managers can use that knowledge to make better decisions about how to make trade-offs between cost and depth of outreach. Even the most mission-driven poverty lender has a limit; a loan made to one poor person with an 80% risk of default is a loan not made to another less-risky poor person (or, through time, several loans not made to other less-risky poor people). So while poverty-focused lenders are willing to

accept more risk, they (and their borrowers) benefit from greater knowledge of risk. After all, arrears harm borrowers at least as much as lenders, as borrowers suffer worry and humiliation and may end up selling assets to repay debts (Mosley, 2001). Scoring gives managers better knowledge of repayment risk; whether managers use that knowledge for good or ill is up to them. The best way to improve the odds of good use is not to suppress scoring but to educate managers about what scoring can and cannot do and when scoring is appropriate.

Note

I am grateful for support from the anonymous microfinance lender in Bolivia and for funding from the Division of Asset Building and Community Development of the Ford Foundation. I am also thankful for comments from the anonymous referees and from John Adams, Jonathan Conning, Guillermo Rabiela, Loïc Sadoulet, Laura Viganò, and participants in the Third Annual Seminar on New Development Finance.

References

- Berger, A. N., Frame, W. S., & Miller, N. H. (2002). *Credit scoring and the availability, price, and risk of small-business credit* (Federal Reserve Bank of Atlanta Working Paper No. 2002-06).
- Bond, P., & Rai, A. (2002). *Collateral substitutes for microfinance*. Manuscript, available at <http://finance.wharton.upenn.edu/~pbond/research/limits-jul2-02.pdf>
- Crook, J., & Banasik, J. (2004). Does reject inference really improve the performance of application scoring models? *Journal of Banking and Finance*, 28(4), 857-874.
- Efron, B., & Tibshirani, R. J. (1993). *An introduction to the bootstrap*. New York: Chapman and Hall.
- Eisenbeis, R. A. (1981). Credit scoring applications. In E. I. Altman, R. B. Avery, R. A. Eisenbeis, & J. F. Sinkey, Jr. (Eds.), *Application of classification techniques in business, banking and finance* (pp. 167-198). Greenwich: JAI Press.
- Frame, W. S., Padhi, M., & Woosley, L. (2001). *The effect of credit scoring on small business lending in low- and moderate-income areas* (Federal Reserve Bank of Atlanta Working Paper No. 2001-6).
- Hand, D. J. (1994). Assessing classification rules. *Journal of Applied Statistics*, 21(3), 3-16.

- Hand, D.J., & Henley, W.E. (1997). Statistical classification methods in consumer credit scoring: A review. *Journal of the Royal Statistical Association, Series A*, 160(3), 523–541.
- Kennedy, P. (1998). *A guide to econometrics* (4th ed.). Cambridge, MA: MIT Press.
- Lewis, E. M. (1990). *An introduction to credit scoring*. San Rafeal, CA: Athena.
- Longhofer, S. D. (2002). Statement of Stanley D. Longhofer. *Perspectives on credit scoring and fair mortgage lending, final installment*. Federal Reserve Bank of Saint Louis.
- Martell, J., Panichelli, P., Strauch, R., & Taylor-Shoff, S. (1999). *The effectiveness of scoring on low-to-moderate-income and high-minority area populations*. San Rafael, CA: Fair, Isaac Company.
- Mosley, P. (2003). *Bolivia during the global crisis 1998–2003: Toward a 'macroeconomics of microfinance.'* Manuscript.
- Mosley, P. (2001). Microfinance and poverty in Bolivia. *Journal of Development Studies*, 37(4), 101–132.
- Nannyonga, H. L., 2000. *Determinants of repayment behavior in the Centenary Rural Development Bank of Uganda*. Unpublished Ph.D. dissertation, Ohio State University.
- Navajas, S., Schreiner, M., Meyer, R. L., Gonzalez-Vega, C., & Rodriguez-Meza, J. (2000). Microfinance and the poorest of the poor: Theory and evidence from Bolivia. *World Development*, 28(2), 333–346.
- Reinke, J. (1998). How to lend like mad and make a profit: A micro-credit paradigm versus the start-up fund in South Africa. *Journal of Development Studies*, 34(3), 44–61.
- Rhyne, E. (2001). *Mainstreaming microfinance: How lending to the poor began, grew, and came of age in Bolivia*. Bloomfield: Kumarian.
- Schreiner, M. (2002). *Scoring: The next breakthrough in microfinance?* (CGAP Occasional Paper No. 7). Washington, DC.
- Sharma, M., & Zeller, M. (1997). Repayment performance in group-based credit programs in Bangladesh: An empirical analysis. *World Development*, 25(10), 1731–1742.
- Viganò, L. (1993). A credit-scoring model for development banks: An African case study. *Savings and Development*, 17(4), 441–482.
- Zeller, M. (1998). Determinants of repayment performance in credit groups: The role of program design, intra-group risk pooling, and social cohesion. *Economic Development and Cultural Change*, 46(3), 599–620.

The Transformation of the Microfinance Sector in India

Experiences, Options, and Future

M. S. Sriram
Rajesh S. Upadhyayula

Abstract: This paper discusses the growth and transformation of microfinance organizations (MFO) in India. Issues that have triggered transformation include size, diversity, sustainability, focus, and taxation. Transformation experiences in India are few. To move to the mainstream, non-governmental organizations (NGOs) choose from three popular forms of organizations: non-banking finance companies (NBFCs), banks, and cooperatives. It appears that there is no ideal path for spin-off. Regulatory changes are needed to allow MFOs to graduate to other legal forms as they grow organically. NGOs must be permitted to invest in the equity of MFOs, as is the case in Bolivia and Africa. Norms for setting up MFOs under current legal forms should not be eased. Regulations should ensure that they help genuine MFOs and not others masquerading as MFOs.

Microfinance in India started in the early 1980s with small efforts at forming informal self-help groups (SHG) to provide access to much-needed savings and credit services. From this small beginning, the microfinance sector has grown significantly in the past decades. National bodies like the Small Industries Development Bank of India (SIDBI) and the National Bank for Agriculture and Rural Development (NABARD) are devoting significant time and financial resources to

microfinance. This points to the growing importance of the sector. The strength of the microfinance organizations (MFOs) in India is in the diversity of approaches and forms that have evolved over time. In addition to the home-grown models of SHGs and mutually aided cooperative societies (MACS), the country has learned from other microfinance experiments across the world, particularly those in Bangladesh, Indonesia, Thailand, and Bolivia, in terms of delivery of microfinancial services. Indian organizations could also learn from the transformation experiences of these microfinance initiatives. This paper examines transformation in the Indian context.

Understanding Microfinance

Robinson (2001) defines microfinance as “small-scale financial services—primarily credit and savings—provided to people who farm, fish or herd” and adds that it “refers to all types of financial services provided to low-income households and enterprises.”

In India, microfinance is generally understood but not clearly defined. For instance, if an SHG gives a loan for an economic activity, it is seen as microfinance. But if a commercial bank gives a similar loan, it is unlikely that it would be treated as microfinance. In the Indian context there are some value attributes of microfinance:

1. Microfinance is an activity undertaken by the alternate sector (NGOs). Therefore, a loan given by a market intermediary to a small borrower is not seen as microfinance. However when an NGO gives a similar loan it is treated as microfinance. It is assumed that microfinance is given with a laudable intention and has institutional and nonexploitative connotations. Therefore, we define microfinance not by form but by the intent of the lender.

M.S. Sriram is a faculty member at the Centre for Management in Agriculture at the Indian Institute of Management, Ahmedabad (IIMA). Email: mssriram@iimahd.ernet.in
Rajesh S. Upadhyayula is a doctoral student in the Economics Area at the Indian Institute of Management, Ahmedabad.

2. Second, microfinance is something done predominantly with the poor. Banks usually do not qualify to be MFOs because they do not predominantly cater to the poor. However, there is ambivalence about the regional rural banks (RRBs) and the new local area banks (LABs).
3. Third, microfinance grows out of developmental roots. This can be termed the “alternative commercial sector.” MFOs classified under this head are promoted by the alternative sector and target the poor. However these MFOs need not necessarily be developmental in incorporation. There are MFOs that are offshoots of NGOs and are run commercially. There are commercial MFOs promoted by people who have developmental credentials. We do not find commercial organizations having “micro-finance business.”
4. Last, the Reserve Bank of India (RBI) has defined micro-finance by specifying criteria for exempting MFOs from its registration guidelines. This definition is limited to not-for-profit companies and only two MFOs in India qualify to be classified as microfinance companies.

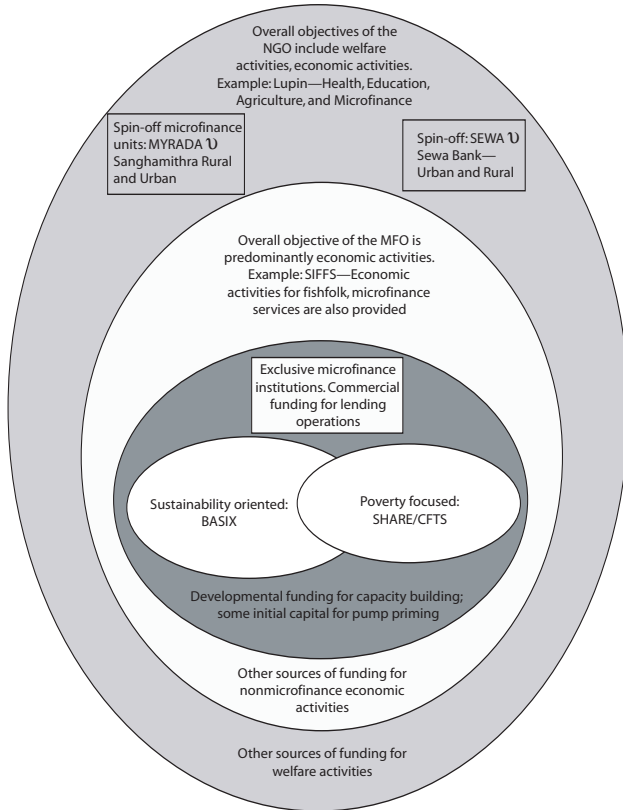
Microfinance in India

In India, microfinance is done by organizations having diverse orientations, as shown in Figure 1.

NGOs in India perform a range of developmental activities; microfinance usually is a sub-component. Some of these NGOs organize groups and link them to an existing provider of financial services. In some cases NGOs have a “revolving fund” that is used for lending. But in either of these cases, microfinance is not a core activity for these NGOs. An example is the Aga Khan Rural Support Programme India (AKRSP-I). For AKRSP-I, the micro-finance component is incidental to its work in natural resource management.

Examples like MYRADA and the Self-Employed Women’s Association (SEWA) fall in the same category. However, as their

Figure 1. Defining the microfinance egg



microfinance portfolios grew, both organizations decided to form separate entities for microfinance. MYRADA set up an MFO called Sanghamitra Rural Financial Services (SRFS), while SEWA set up the SEWA Cooperative Bank.

At the next level, we find NGOs helping the poor in economic activities. Their purpose is developmental. They see microfinance as an activity that feeds into economic activities. For instance, the South Indian Federation of Fishermen's Societies (SIFFS) started as a support organization for fishermen, providing technical and marketing support. It then arranged for loans to its members through

banks. When the arrangement was not effective, it started providing loans itself.

At the third level, we have organizations with microfinance at the core. They have developmental roots, but are diverse in their operational details, orientation, and form of incorporation.

This paper focuses on organizations that have microfinance at the core. It also examines NGOs that have created new MFOs to deal with the specialized function of microfinance. It deals with issues of transformation of these organizations, moving from a developmental root to a commercial sprout.

Issues That Trigger Transformation

We examine five significant issues that trigger the transformation of NGOs into MFOs.

Size

The most significant issue that triggers a transformation is growth. This affects the promoters as well as the providers of microfinance.¹ With organizations like MYRADA and SIFFS that promoted credit groups, banks were unwilling to provide loans at the pace at which microfinance customers needed them. It was not easy for MYRADA or SIFFS to deal with the attitudes of people manning these organizations. In several instances it was an enthusiastic bank manager who made the difference; but this was not institutionalized. In such situations, NGOs tend to get into action by opening a microfinance division or by setting up a separate MFO. The origins of several Indian MFOs are rooted in the failure of banks to meet the needs of the poor.

Diversity

Another trigger for transformation is the diversity of financial services that an MFO wants to offer. In most cases, NGOs start with credit but soon realize the need to provide other support services. While MFOs have reduced their own lending risks through group guarantees and addressed the issue of willful default, they have not been able to grapple with the situation where the underlying economic activity fails and the borrower faces a genuine problem. This

can be tackled with a combination of savings and risk mitigation products. But, MFOs realize that the NGO format is not suited to carrying out these activities, owing to stringent regulations. They necessarily have to look at transformation options.

Sustainability

Sustainability is closely linked to growth. Beyond a certain level, MFOs have to seek external funds for keeping the credit activity going. When MFOs seek funds from financial institutions, issues like ownership structure and capital adequacy become critical. For an MFO to survive in the long run, it has to transform itself into an institution with transparent systems and accountability. In most cases the promoters of MFOs do not have sufficient capital to invest and therefore the main constraint is that they are dealing with “other people’s money.” NGOs have no clear-cut ownership structure, and making people liable under this format is a problem. If they wish to be sustainable, the only option is to deal with mainstream institutions (Rhyne, 2001).

Focus

NGOs need to maintain focus on their original mandate. Undertaking microfinance is transaction intensive and requires distinct orientation and skills. For NGOs, there is always a conflict between microfinance, which earns returns and is therefore “commercial,” and other activities that are “developmental.” This is one reason for NGOs to spin off their microfinance activities. The entity that emerges to carry out microfinance should be understood by the mainstream and therefore it should have an appropriate institutional form.

Taxation

When an NGO carries out commercial activities (microfinance) on a large scale, it could lose its “tax free” status, and this might jeopardize other activities. Even grants may become taxable. This is a major concern for NGO-MFOs. This also triggers a search for an alternative where microfinance could be kept isolated.

Transformation Experiences: International

Three different approaches to transformation are apparent in the following three examples. The Bolivian experience indicates transformation of an NGO to an MFO-Bank. In Indonesia, banks have adopted MFO methods to provide financial services to the poor. The Bangladesh experience involves the transformation of a project into a MFO.

Bolivia: Mainstreaming Microfinance

As in many parts of the world, NGOs triggered the microfinance revolution in Bolivia. The economic turmoil in the mid-1980s seeded the microfinance initiatives there. The sector grew rapidly and now Bolivia has an array of MFOs including banks, NGOs, and Fondos Financieros Privados (FFPs). Among the banks, the most celebrated is BancoSol, an offshoot of an NGO called Prodem. Most NGOs operating microfinance programs in Bolivia tend to become FFPs when they reach a critical stage. Very few get to the level of full-scale commercial banks like BancoSol. Prodem, while it promoted BancoSol, also continued as an NGO to address the developmental needs of its rural customers. Recently Prodem converted itself into an FFP. Apart from BancoSol, another Bolivian bank that has a significant microfinance portfolio is a relatively young one, Banco Economico (Rhyne, 2001).

FFP is an innovative institutional structure for microfinance, as it allows NGOs to take an equity position in a commercial activity. The Indian microfinance sector has been arguing for policy reforms on the lines of FFP. For instance, Sa-Dhan, the association of community development finance institutions, argues that there should be a new category of companies with a lower level of capitalization and providing a limited range of banking services (Sa-Dhan, 2002). Sa-Dhan argues that such companies could limit their savings services to borrowers. This is similar to the FFPs of Bolivia, which have lower capital requirements and are restricted from providing certain services that banks provide. In Bolivia, many large NGOs have converted themselves to FFPs. In addition,

there were organizations such as Fasil and Acceso that came from the commercial world. While Fasil survived, Acceso quickly closed shop as it went overboard on consumer credit. Acceso's collapse has lessons for evolving regulatory norms to suit the MFO needs and has implications for future entrants to the market.

Gabriel Schor (quoted in Rhyne, 2001) says that this transformation in Bolivia has revealed the concept of an "ideal capitalist." It brought four key elements to the ownership of MFOs: NGOs came in through developmental mission; private investors who came in were motivated by recognition with returns; public sector investors came for safe investment and prestige; and international technical partners came to disseminate the best practices (Rhyne, 2001).

Indonesia: Transformation of the Mainstream

While most microfinance initiatives worldwide have taken the "supply" route, in Indonesia, the initiative took the "demand" route. It is, therefore, useful to understand this perspective.

In Indonesia, microfinance did not begin from organizing people into groups and training them. Neither did it emerge from self-help groups. The pioneering institutions in microfinance did not have any of the value attributes discussed earlier. Of the two most well known institutions, Bank Dagang Bali (BDB) was established in 1970 as a private bank. The promoters of BDB were two enterprising people with first-hand experience of small enterprise and finance (M-Cril, 2002). The bank grew and survived through innovation of products, seizing the opportunity for arbitrage between low interest on savings and high interest on loans.

BDB became a model for the state-owned Bank Rakyat Indonesia (BRI). It set the mainstream to move downwards towards the poor. The move was to provide banking and not just credit or savings to the poor. The trigger provided by BDB attained nationwide coverage in 1984 with the restructuring of the unit desa (local banking) system of the state-owned BRI (Wardhana, 2001).

This has lessons for embedding microfinance in the general financial system. Under the old system the state channeled

resources for the poor through the banking system, offering a line of credit at subsidized interest. However, the banking system soon realized that this was not sustainable. The state accepted the challenge to move from subsidized credit to sustainable microbanking. By moving towards the packaging of credit to meet the needs of the poor, the system sorted out problems of arbitrage between the cost of credit available from the institutions that were sponsored by the state and the local players. The problem of improper identification of the “beneficiary” leading to leakage was solved. The question of continuing access to the services was, therefore, successfully addressed by embracing microfinance methods. After a conscious shift towards microbanking, the banks now offer complete financial services to the poor and people who transact in small amounts.

Bangladesh: Transformation of a Project

The Bangladesh experience is widely discussed and well quoted in the literature on microfinance. Here there are no issues pertaining to transformation, because microfinance did not branch out from developmental activities, but was a core. Microfinance emerged in response to the inability of commercial banks, the Bangladesh Krishi Bank, and other financial institutions to meet the banking needs of the poor. In the 1970s loan recovery of these institutions averaged 65% of the dues. During that period, political parties offered to waive the loans of the farmers (Montgomery, Bhattacharya, & Hulme, 1996). Around this time, Professor Yunus started action research on effective delivery of credit to rural poor—which later grew into a large microcredit program, known as the Grameen Bank. The program was successful, and in 1983 the project was converted to an independent bank through legislation.

Unlike the experiences of other countries, the Bangladesh experience looks at legitimizing a successful experiment and not allowing it to drift into other forms of inappropriate incorporation. The Bangladesh experiment gained overall approval in as much as it has become a universal standard in microfinance. This is one of the most replicated models of microfinance in the world.

Following Grameen, other institutions in Bangladesh also entered the field. The Bangladesh Rural Advancement Committee

(BRAC), set up in 1970, got into organizing groups under two pilot programs in the first half of the 1980s. BRAC's methodology shared similarities with Grameen. With Grameen being a worldwide fable, it was not difficult for other institutions in Bangladesh to get regulatory support. BRAC eventually did spin off a banking company in 2001. In the case of the Association for Social Advancement (ASA), the metamorphosis was even more stark. Though ASA was established in 1978 as an organization of social and political activists, it changed its focus to social and economic upliftment of the poor in 1985. By 1991 it was a fully focused organization using microfinance as a singular tool for achieving its objectives (www.asabd.org).

However, with institutions like Grameen Bank, BRAC, and ASA pioneering microfinance and providing models for other countries to follow, microfinance organizations in Bangladesh did not have a need to transform. They could grow at their own pace without transformation. One reason why they had no regulatory problems was that they were focused exclusively on credit. It was only after they reached a very large size and sophistication that they wanted to offer other banking services. It was only recently that Professor Yunus of Grameen Bank raised the issue of the need for an appropriate legislation for microfinance banks (Yunus, 2003). In Bangladesh we have a dual example of something that started off as an MFO entering other areas of development, and NGOs following the example of Grameen and launching their own successful microcredit programs. The transformation was two way. Unlike Indonesia, MFOs in Bangladesh also carry the value attributes listed earlier in the paper—dealing predominantly with the poor and having developmental roots.

Transformation Experiences of India

We have reviewed literature pertaining to experiences in the world to understand the approaches used to get an identity for microfinance. Indian MFOs employ a scattering of similar approaches. We examine the types of transformation that have taken place in India and highlight the implications for the growth of the sector.

We look at the transformation experiences of the Indian microfinance sector from two viewpoints. First we discuss the responses for the issues raised earlier in the paper. We then discuss the transformation processes of a few Indian MFOs.

Challenges Posed by Issues That Trigger Transformation

Size

NGOs have multiple developmental objectives and microfinance meets a subset of these. The microfinance activity is visible and has scope for rapid growth. However, the incorporation of an NGO as a not-for-profit entity (trust, public society) is not ideal for lending activities. When the activity is small, it would be possible to work within this framework, but growth means documentation, regulation, follow-up, and money management (Sriram, 2002). To ensure that there is a clear demarcation between the charitable and commercial activities of an organization, it is necessary to keep microfinance as a distinct activity or division. Growth needs the infusion of funds for microfinance operations. A not-for-profit entity does not help scaling up borrowings or attract investments from outsiders. Because there is no capital base in an NGO, leveraging is difficult. If microfinance activities form the biggest chunk of the surplus earning activities of an NGO, taxability of its operations is a concern.

Share illustrates the transformation of an NGO to a non-banking finance company because of growth in size and focus on financial services. The specifics of this transformation are discussed later.

Diversity

Although diversity is closely linked to size, it need not necessarily be so. Apart from loans, MFOs would want to offer savings services to customers. This is an essential service. It is also a source to help the loaning services grow. Some MFOs also want to offer insurance and other services. For instance, when SEWA wanted to work with poor women a few decades ago, an important gap that they saw was that women did not have savings and products that addressed the

needs of social security. For meeting these needs it was necessary to open a bank. In most cases the first step in diversity is offering savings services. Unlike microcredit which is not as closely regulated, savings is very closely regulated and monitored. Not all forms of organizations are permitted to offer savings products. Therefore any foray into savings will trigger an NGO to examine options of transformation.

Sustainability

The trigger for sustainability could come from within or from outside. For instance, donors may be prime movers by granting seed money. However, they may want the activity to be ongoing without further investments. In the case of BASIX in India, the Sir Ratan Tata Trust (SRTT) was willing to extend a returnable grant for BASIX for a year to start pilot operations, with an understanding that the grant would not be renewed or enhanced. BASIX started its operations as an NGO, pilot tested some products and delivery channels, and in the meantime got the commercial arm incorporated. The operations, which were field-tested, could be carried out in a sustainable manner. There are donors who grant revolving funds for starting microfinance activities. However, if the activities were to continue, a transformation would be necessary.

Focus

Some NGOs have an exclusive entity to manage microfinance. NGOs may want to continue other activities and microfinance diffuses the focus. There are two instances of such a spin-off in the Indian context. The first is SEWA Bank set up by SEWA. The bank focused on financial services and provided a diverse range of financial services—savings, risk management, and credit. As its insurance portfolio grew, the bank recognized that this was a specialized function. It has decided to offer risk products through a new organization, Vimo Sewa.

Another instance is the setting up of the Sanghamithra Rural Financial Services (SRFS) by MYRADA to address the needs of the self-help groups promoted by it. Before SRFS, MYRADA was donning the role of a “promoter” of microfinance, i.e., facilitating

credit through promoting and linking groups with banks. When it realized that the linking of the groups with banks was not happening at the planned pace, it decided to assume the role of a “provider.” This involved specialized systems and procedures and a change in the orientation of staff members. Besides, MYRADA also wanted to make SRFS an example that could commercially provide financial services to the poor. Thus, MYRADA decided to build an arm’s length relationship between the developmental work of promotion and the commercial work of the provision of credit related services. It can be seen in this case that one of the sub-processes of transformation is spin-off of new organizations.

Transformation of Institutions

The transformation process in India is still at a nascent stage. Microfinance has not grown to the size that warrants a full-scale study on the transformation processes. There are a large number of small initiatives being carried out at various places. The estimated number of microfinance institutions that have requested finances from SIDBI; have contracted rating agencies like M-Cril, Planet Finance, and CRISIL for rating; or are MACS promoted by the Co-operative Development Foundation (CDF) are indicated in Table 1.

The figures are only indicative. The number of public societies and trusts is likely to be an underestimate, whereas the figures for other forms are more realistic. We discuss the transformation options under each regulatory category.

Option 1: In Good Company

If we treat setting up “for-profit companies” to mean transformation, not much has happened in the field. We examine a few examples of transformation from the limited experiences that the Indian microfinance sector has had.

Let us look at instances of MFOs that have registered as NBFCs. Here, there are two approaches: one taken by Share and Cashpor Financial and Technical Services (CFTS), and the other by BASIX.

Table 1. Estimated number of MFI under different organizational forms

Legal Status	Estimated Number	Important Institutions
Not-for-Profit Company	2	IASC, Sanghamithra
For-Profit Company (NBFC)	6	Samruddhi, SHARE Microfin, CFTS, Sarvodaya Nano Finance, Kosh, Asmitha
Local Area Banks	1	KBS Lab, Andhra Pradesh
Cooperatives:		
Coop Society	6	AMCCS, JMSSM, Bhuttico, VYCCU, ICNW, Pushtikar, Samiti
Cooperative bank	1	SEWA Bank
Mutually Aided Cooperative Society	250	SWDMACTS, Sneha MACS, PWDMACS, APDSFLMACS, Share India MACS and others including mens' and womens' thrift co-ops promoted by CDF—All in Andhra Pradesh
Public Society/Trust ^a	400	Assist, SKS, RASS, ASA, FWWB, GDS, Outreach, RGVN, SIFFS, WWF, VWS, YCO.
Estimated Number	666	

Note. From SFMC Database, M-Cril Database, C-Gap Rating Fund Database, and CDF Annual Report.

a. From Sinha, S. (2001). (This is one of the estimates.)

Share and CFTS are similar in orientation and focus. Both are inspired by Grameen and focus on reaching the poorest. Share operated as a public society for a long time before setting up a NBFC. CFTS started as an NBFC and is still trying to grapple with the norms applicable to NBFCs. When Share set up an NBFC, it transferred a portion of grants received from C-Gap to poor customers and encouraged them to reinvest those grants as equity in the new NBFC. This ensured adequate capital for Share to start an NBFC. This was similar to the Bolivian approach. However, an important difference is that it was possible for the Bolivian NGO to invest in an FFP (a similar arrangement was with K-Rep, Kenya). In the case of Share, it had to transfer all the clients to a new legal entity, slowly and gradually winding down the operations in the NGO and transferring the clients to the NBFC branch by branch (Sriram, 2001). This posed some problems for Share. First, being governed by the prudential norms,

an NBFC is prohibited from accepting savings till it gets an investment grade rating. Even if Share gets the rating, its flexibility of offering savings services to clients will be very restricted. Share found an innovative solution where it also promoted a cooperative (Share India MACS) to collect savings. This cooperative in turn would lend to the NBFC. But this has limitations, as both entities are incorporated under different laws and have different governance structures.

In the case of CFTS, the incorporation itself was a process of transformation. Cashpor is an NGO operating in multiple countries. When CFTS set up its operations in India, it was registered as a company. However, unlike Share it did not have prior operations in India as an NGO. It was, therefore, difficult to raise the start-up capital. Local laws make it difficult for small international investments to come in the form of equity in the financial sector. For a long time, CFTS did not have adequate domestic capital to be registered as an NBFC. CFTS had to go through the process of raising capital, by finding donor money that could go to the clients and then be re-invested in the company to reach a size that gained economies of scale and recognition. The Activists for Social Alternatives is another organization that follows the Grameen model and is trying to transform itself as a company. It is attempting an innovative route of forming private mutual benefit trusts of clients. The trusts would seek donor grants and in turn hold equity in the NBFC. However, the scheme has yet to take a concrete shape.

The path followed by BASIX was different. BASIX had a design that looked at mainstreaming microfinance right from inception. The structuring of BASIX was complicated. BASIX sought a mix of developmental and commercial funding for its operations and had a separate vehicle through which the operating entity was adequately capitalized. This involved setting up a holding company that had large external borrowings from donor organizations. The holding company was heavily leveraged. As the formality of getting clearances for setting up an NBFC was going on, BASIX carried on its operations for a year through an existing

NGO-Indian Grameen Services. BASIX represents a mix of developmental capital flowing in on the promise of sustainability and commercial capital flowing in from the developmental windows of large financial institutions.

While Share and BASIX have similar institutional investors, the shareholding in BASIX is not spread as widely as in Share. The laws have become more stringent since BASIX was established and it is now impossible to replicate that model of financing.

All three institutions have faced barriers in incorporation and operation. The major constraints pertain to regulations, as listed below:

- Steep entry norms to register NBFCs. If the promoters have a development background, it is difficult for them to raise commercial capital to start an NBFC. Routing donor money into commercial organizations is not easy, though BASIX did it with a lot of innovative thinking.
- Restrictions placed on the type of activity that can be undertaken by these companies—especially on accepting savings from clients and on the financial services that can be provided.
- Restrictions on accessing finance from outside the country. These restrictions mostly take the form of requiring clearances and permissions, and they have eased over time. However matters get complicated if domestically raised capital is insufficient.

Option 2: Let Us Cooperate

As debates continue in the microfinance world on issues of mainstreaming, initial capital norms, and incorporation, there is silent revolution in parts of Andhra Pradesh, particularly in the districts of Karimnagar and Warangal. There are nearly 250 small thrift cooperatives, each with an average membership of around 500, carrying on successfully and offering all the services offered by MFOs for more than a decade. While there are a good number of women's cooperatives, there have been an equally large number of men's cooperatives, all promoted by CDF.

The microfinance world usually does not recognize traditional banking or credit union movement as “microfinance,” unless it has adopted some of the symbolisms. Even by that note, these thrift

cooperatives qualify to be called MFOs. About a decade ago, CDF was working exclusively with agricultural finance cooperatives. State interference in cooperatives was one of the major problems. The interference culminated in the nation-wide loan pardon scheme of 1989, resulting in the impairment of the portfolio of many a cooperative. At that point CDF thought it was time to spin off the thrift and credit activity out of the cooperative fold and actively started promoting informal mutual benefit groups. Simultaneously, CDF also lobbied for a change in legislation, seeking greater autonomy for cooperatives in the state. This culminated in the Mutually Aided Co-operative Societies (MACS) Act. This act gives ample autonomy for cooperatives, provided they do not seek state funding. After the legislation was passed, the mutual benefit groups promoted by CDF were registered under the new act. Simultaneously other NGOs encouraged their groups to be formally registered as MACS.

The transformation of small groups to cooperatives has been painless. The advantage of a cooperative is that it can access various types of savings from its members besides providing credit like other MFOs. It can also easily get its stakeholders in the governance structure by the use of democratic processes. Besides, cooperatives can grow organically by setting up federations as and when they have a need to wield clout and negotiate on matters of policy. However, until now, the federations have played a limited role in the context of CDF cooperatives.

One major drawback of cooperatives is the geographic limitation. State and not federal legislation governs cooperation, and even within that, usually the area of operations of a cooperative is demarcated. Cooperatives also experience problems in accessing mainstream finance, because of their poor image. Nevertheless, they seem to be a good mechanism to get the informal groups into a formal incorporation when the groups reach the limit of size. But it is also important to note that no single cooperative has grown big enough to cross Rs. 10 million in outstanding loans.

The success of the new generation of cooperatives is limited to Andhra Pradesh, even though other states have passed similar

legislation. The only exception to this is the SEWA Cooperative Bank based in Ahmedabad. SEWA Bank is increasingly being recognized as one of the oldest MFOs in India—having been in existence for over 25 years. While there have been several urban cooperative banks across the country, none is recognized as an MFO. SEWA Bank did not go through the pains of transformation, because the moment its parent, SEWA, decided that the poor women of Ahmedabad needed a financial service institution of their own, SEWA lost no time in promoting a women's bank independent of the NGO. SEWA proves the point that if the client group and geographical focus exist, there is no need to go through the painful process of starting as an NGO and moving towards mainstream. However, under current norms, an urban cooperative bank can only be set up with a start-up capital of Rs. 5 million (Sinha, 2001). Though this is less than the amount needed for setting up a commercial bank, it is still a steep amount if it were to be contributed by poor women to run as a self-governed institution.

Option 3: Banking on Innovation

The third alternative is setting up a local area bank (LAB). We have only one instance that can be classified as “microfinance”—the case of BASIX. The setting up of this bank was not a transformation but was part of the design of the BASIX group. BASIX started the Krishna Bhima Samruddhi LAB (KBSLAB) in 2001 and is the only instance of how microfinance principles can be adopted by the banking sector. The entry norms for LABs are more stringent than for NBFCs. While NBFCs are expected to bring in a start-up capital of Rs. 20 million, LABs are expected to start with an initial capital of Rs. 50 million. There are further restrictions on LABs—they can only operate in a geographical area limited to three contiguous districts. Every branch of the LAB has to be opened with the permission and license of the Reserve Bank of India (RBI). This is stifling. While there is tremendous flexibility in launching savings products, it comes with inflexibility in expansion and growth. Recently, RBI has decided not to issue further LAB licenses (Business Line, 2003).

Other possibilities include RRBs contributing for the promotion of microfinance and setting up cooperative banks. Some RRBs are doing an excellent job of linking SHGs and thereby bringing them to the mainstream banking sector. Harper (2002) has studied the case of a commercial bank active in microfinance. If commercial banks and RRBs do adopt some microfinance methods, it is possible to replicate the Indonesian experience in India.

The other area where microfinance could happen is in the cooperative banking sector. Cooperative banks in India have lower entry norms compared to mainstream banks and LABs (see Table 2 for details). SEWA Bank is one example of how an NGO promoted a cooperative bank to offer an array of services. However, we do not have many other examples. A possible reason for the banking option not gaining popularity is the urban focus. While there are several cooperative societies in rural areas, banking has been restricted to the urban sector. However, recently there have been a series of bankruptcies in urban cooperative banking and therefore it is likely that there might be regulatory tightening.

Table 2. Entry point norms for urban cooperative banks (other than unit banks)

Category of Center	Capital (Rs. million)	Membership (No.)
A—population over 1.5 million	50	3000
B—population over 1 million but not exceeding 1.5 million	25	2500
C—population over 0.5 million but not exceeding 1 million	20	2000
D—population over 0.2 million but not exceeding 0.5 million	10	1500
E—population not exceeding 0.2 million	5	1000
Entry point capital for LAB	Rs. 50 million (area of operation restricted to 3 contiguous districts)	
Entry point for Commercial Bank	Rs. 1,000 million (area of operation open across the country)	

Source: *Report of the High Power Committee on Urban Cooperative Banks*. RBI Bulletin, 14 January 2002. Mumbai: Reserve Bank of India.

Transformation Options and Their Implications

If we consider the view taken by Robinson (2001) on what should be treated as MFOs, we will address the issue head on. She has classified the institutions that are “expected” to operate in the microfinance realm under the following categories:

- Institutions that provide microcredit but are not permitted to mobilize savings from the public (most institutions that are not regulated and publicly supervised)
- Institutions that do well in lending but poorly in mobilizing savings (such as Bangladesh’s Grameen Bank)
- Institutions that do well in savings but poorly in lending (India’s RRB and China’s Rural Credit Cooperatives)
- Institutions that fail in both (most microfinance institutions that provide subsidized credit are permitted to raise public savings, particularly state-owned banks).

Considering this view, microfinance could happen not only by the transformation of small NGOs into bigger institutions, but also by the transformation of larger financial institutions embracing the microfinance methodology and microfinance clients.

The options available for transformation within India and their implications are detailed in Table 3. In brief, we do not have an optimal route for the transformation of NGOs into mainstream MFOs. NBFCs that could operate across the country will have to go through a steep entry hurdle and registration process. LABs have a double disadvantage of steep entry norms and limited operational area. This option is also not available with the recent decision of RBI.

With the concerns that most MFOs have for community involvement and with the existing legislation in India, the obvious choice for microfinance initiatives is a cooperative. This involves the clients in governance because of its democratic nature. Even though cooperatives seem to be an obvious alternative, they are not so across the country because only a few states have passed liberal cooperative legislation. Besides, the major disadvantage of cooperatives is their geographic limitations. Further, the cooperative institutions, owing to historical baggage, do not make glamorous MFOs. The credit union movement represents more of an individual

Table 3. Transformation options and their implications

Form	Options	Organizational incorporation	Implications
NGO	Option 1: Spin off mF as a separate activity	Not for Profit MFI—a special vehicle only for purposes of demonstration at scale (SRFS)	Cannot grow beyond a point. While sustainability can be demonstrated, the organization will have to be roving—withdraw from one location and move to another—or grow organically and gradually.
		For-profit Company (NBFC)—Transfer clients, investments, and portfolio independently (SHARE, CFTS)	Issue of ownership and control. Initial capital contribution can come from the communities. Recapitalization is complex. Diversification to savings and risk products is not simple under current regulation. Even when permitted, the bouquet of products offered will be limited.
		For-profit cooperative either under the MACS Act or as a Co-op Bank	Can grow organically, but will have geographical limitations to growth. The geographic area of operation is demarcated. However, there is flexibility to offer savings products. Initial capitalization requirement is not daunting.
	Option 2: Promote independent MFOs	Promote (informal) Self-Help Groups (Pradan, Myrada), encourage them to form federations (Dhan Foundation)	Can grow organically. However, scaling up and infusion of large amounts of external funds are not simple, as the movement is scattered across several independent informal or legal entities. Embedding in the banking system is a solution, but there are limits to growth. There are chances of withering away if the NGO withdraws support.
		Promote (formal) mutually aided cooperatives and encourage them to	Problems are similar to SHGs mentioned above. However, since each of these is an independent entity, dealing with banking institutions is likely to be simpler. Chances of withering away are low if systems are established.
Development Professionals with NGO background	Option 1	Promote NBFCs—seek developmental and commercial investments through complex mechanisms—private mutual benefit trusts, debt in holding company (CFTS, BASIX)	Problem in raising initial capital. Other limitations applicable to NBFCs discussed above also apply. It is difficult to pull off a complex structure of mutual benefit trusts and holding company structures.
	Option 2	Promote LABs, find equity for start up	A difficult proposition for two reasons: steep initial capital requirements and complexity in licensing procedure of RBI and limitation in geographical area to three contiguous districts. Tremendous amount of flexibility in offering diverse products and services and great scope for customization.

banking model in India with formal systems, while microfinance focuses on groups, social collateral, and social capital. Few cooperatives use the microfinance methodology in providing financial services.

Implications for Regulation

The transformation experiences of NGOs have implications for the regulatory framework. The microfinance sector represented by Sa-Dhan has been advocating the easing of entry point capitalization norms for microfinance “companies.”

While this would help a large number of NGOs to hivelike off their commercial operations and help operations to grow organically, it does not prevent other individuals or institutions masquerading as MFOs. The recent experiences of a series of urban cooperative bank failures in Gujarat and Andhra Pradesh are an indication of what happens when the easier entry norm is misused. For instance, the easier entry norm for cooperative banks was introduced because these were democratic institutions, member-owned, and member-driven. However, over a period of time, all these banks started transacting heavily with nonmembers. The institutions lost the cooperative nature for which the entry norms were eased and turned out to be in the hands of a handful of investors. In proposing regulatory reform, we need to be wary of the potential misuse of the easing of entry hurdles.

There are also a good number of residuary NBFCs that collect savings from the poor and the unorganized sector. While these are closely regulated, their leeway in providing credit is cramped, as they have to invest a major portion of the savings in safe government securities. Therefore, MFOs have not considered residuary NBFCs as a viable option. The microfinance sector does not treat residuary NBFCs as MFOs because they do not have the “value attributes” discussed earlier.

When entry norms are eased, there may be several other institutions—without the value attributes—claiming to be MFOs, and the microfinance sector will encounter a credibility crisis. In Bolivia, FFPs were seen as an intermediary step for NGOs to enter

the mainstream. The entry norms were steep, but they allowed an NGO to invest in a bank or FFP. In this scenario, it is possible for an NGO to convert the donor money received for pump-priming as equity in a new and proper banking entity. In the case of K-Rep in Kenya, the NGO is registered as a company limited by guarantee, and resources are held in a charitable trust that is invested in the bank. In both cases some norms were relaxed, but the new institutions were treated as proper financial institutions.

Graduating from an NGO to an NBFC to a LAB to a commercial bank is impossible in India because the laws do not provide for transformation. It is also not possible because the steps between these stages are steep. A LAB can never hope to go beyond its area of operation. It would be useful if MFOs would argue for legislation that would allow them to graduate to bigger institutions—one on cooperative lines and another on corporate lines.

Another route that the microfinance sector can advocate is to adhere to the current norms of entry and capitalization for NBFCs and LABs but seek permission for NGOs to invest in such for-profit entities without prejudice to the tax status of NGOs. This would mean that only NGOs that can raise enough funds from various sources could actually set up a mainstream-type NBFC. This gives no shortcuts for entrants from the non-NGO sector, since if they have to bring in substantial capital, it does not make matters simpler if they can adopt the not-for-profit entity route. After all, they will have to find somebody to put money into the not-for-profit entity in the first place.

Notes

This paper was presented at the SIDBI workshop on “key Dimensions in Transformation: From NGOs to Formal Institutions,” at the Indian School of Business, Hyderabad, December 12–14, 2002. The authors acknowledge the editorial support provided by Mr. P.S. Seshadri of the Indian Institute of Management, Ahmedabad.

¹ Promoters of microfinance are those who help in the formation of groups, invest in building the capacities of customers, and link them to a financial institution. Providers are those who involve themselves in direct financial transactions with clients. For a good discussion, see Rutherford (2001).

References

- Business Line. (2003, August 27). No new licences for local area banks, *The Hindu Business Line*.
- Harper, M. (2002). Self-help groups and Grameen Bank groups: What are the differences? In T. Fisher & M.S. Sriram (Eds.), *Beyond micro-credit: Putting development back into micro-finance*. New Delhi: Vistaar.
- High Power Committee. (2002). Report of the High Power Committee on Urban Cooperative Banks. *RBI Bulletin*. Mumbai: Reserve Bank of India.
- Klaus, M. E. (1999). *Report of working group on savings mobilization, Bank Rakyat Indonesia (BRI)*. Washington DC: Consultative Group to Assist the Poorest (CGAP), World Bank.
- M-Cril. (2002). Microfinance rating: Risk assessment of Bank Dagang Bali. Washington DC: Consultative Group to Assist the Poorest. Available at www.cgap.org
- Montgomery, R., Bhattacharya, D., & Hulme, D. (1996). Credit for the poor in Bangladesh. In D. Hulme & P. Mosely, *Finance against poverty*. London: Routledge.
- Rhyne, E. (2001). *Mainstreaming microfinance*. Connecticut: Kumarian Press.
- Robinson, M. (2001). *The microfinance revolution: Sustainable finance for the poor*. Washington DC: World Bank.
- Rutherford, S. (2000). *The poor and their money*. New Delhi: Oxford University Press.
- Sa-Dhan. (2002). Enhancing Financial Flows to the Poor: The Way Forward. *Summary of the sub-group reports presented to the empowered committee on financial flows to the unorganised sector*. New Delhi: Sa-Dhan.
- Sinha, S. (2001). *The role of central banks in microfinance in Asia and the Pacific*. Manila: Asian Development Bank.
- Sriram, M. S. (2001). Case study of SHARE group. In S Datta & M. S. Sriram, *Flow of Credit to Small and Marginal Farmers in India* (report submitted to the Ministry of Agriculture, Government of India). Ahmedabad: Indian Institute of Management.
- . (2002). *Information asymmetry and trust: A framework for studying micro-finance in India* (WP No. 2002-09-02). Ahmedabad: Indian Institute of Management.
- Wardhana, A. (2001). Introduction. In M. Robinson (Ed.) *The microfinance revolution: Sustainable finance for the poor*. Washington DC: World Bank.
- Yunus, M. (2003). *Some suggestions on legal framework for creating microcredit banks*. Dhaka: Grameen Bank.

The Experience of Financial Institutions in the Delivery of Microcredit in the Philippines

Maria Abigail Carpio

Abstract: This paper identifies the characteristic features of the different financial market players involved in the delivery of microcredit in the Philippines and looks into their experiences in addressing the credit demand of the small-borrower market segment, particularly the microenterprise sector. This paper argues that each group of lenders, specifically commercial banks, rural banks, credit-granting NGOs, and an apex financial institution, allocates its funds by establishing its own criteria for assessing the creditworthiness of borrowers and its own mechanisms to avoid borrower default. The delivery of microcredit takes place within an environment where the different financial market players face their own set of constraints in supplying credit to small-scale borrowers. This is made evident in the experiences of the different institutions in adopting the approaches of downgrading, upgrading, and financial linkage building.

The goals of developing countries to attain increased employment, equitable income levels, and self-sustained economic growth are integrally related to the opportunity of low-income entrepreneurs who have the potential to contribute to overall productivity. Although access to financial services by small and microenterprises is identified as a key requisite in supporting enterprise

growth and development, this is yet to be fully realized in many developing economies. In the Asia-Pacific region, less than 5% of poor households have financial service access, according to the Asia Pacific Development Center (Getubig, Remenyi, & Quinonez, 1997).

This paper looks into the experience of financial institutions in the Philippines in addressing the demand for credit of small-scale borrowers, specifically of microenterprises. It begins with a discussion on the significant role played by the microenterprise sector in the Philippines as an important source of income among poor households. This is followed by a description of the Philippine financial sector, with emphasis on the asymmetry in the allocation of credit among the main financial market players. Within this context of asymmetric credit allocation, the experiences of financial institutions involved in delivering financial services to the low-income market segment is presented in the fourth section, highlighting the institutional approaches of downgrading, upgrading, and linkage building.

The Microenterprise Sector in the Philippines

In the Philippines, microenterprises consist of business activities in industry, agriculture, and/or services, whether by single proprietorships, partnerships, or corporations that have asset sizes amounting to P150,000 (\$2,800) or below and a total workforce of one to nine people. These enterprises are lumped together under Small and Medium Enterprises (SMEs), based on the Magna Carta for Small Enterprises (Republic Act No. 8289, Philippine Department of Trade & Industry, 1997). According to the 1993 Integrated Survey of Households Bulletin in the Philippines, half of the persons employed in this sector are wage and salary workers rather than owner-operators or members of the entrepreneur's family (Philippine National Statistics Office, 1993).

Maria Abigail Carpio is an independent consultant and is currently pursuing doctoral studies at the Ruhr University in Bochum, Germany. Her most recent research work covers cases of microfinance banks operating in the Philippines, Bolivia, and Uganda. Email: Maria.Carpio@rub.de.

Delivery of Microcredit in the Philippines

Many poor Filipino families derive their income from multiple sources. Data from the 1998 Annual Poverty Indicators Survey (APIS) reveal that, of the more than 14.4 million families surveyed, 67% received income in the form of wages, 61% received income from entrepreneurial activities, and 50% augmented their family income by engaging in family sustenance activities (Philippine National Statistics Office, 1998).¹ Among the poorest 40% of the respondents, 70% depended on entrepreneurial activities rather than on wages or salaries for their income. In 1999, the reported share of wages and salaries as a source of income continued to decrease by 0.8%, and entrepreneurial activities ranked third in the distribution of sources of income among families surveyed. Among the families belonging to the first to the third deciles, most of the income came from entrepreneurial activities, while those who belonged to the higher-income strata obtained a bigger share of their income from wages and salaries. Approximately 70.4% of the families in the lowest 40% income group were reported to have businesses, compared to only 54.5% of the families in the higher 60% of income strata.

**Table 1. Total income derived and sources, 1998
(in Philippine pesos)**

Economic Activities	All Families	Income Strata			
		Lowest 40%		Highest 60%	
			%		%
TOTAL	868,860,662	92,233,275	10.62%	776,627,389	89.38%
Wages and Salaries	419,549,518	30,269,768	32.82%	389,279,751	50.12%
Family Sustenance	10,587,079	5,810,681	6.30%	4,776,398	0.62%
Net Share of Crops, etc.	5,472,832	1,210,318	1.31%	4,262,517	0.55%
Entrepreneurial Activities	214,547,668	34,483,708	38.47%	179,063,959	23.06%
Other Sources of Income	218,703,565	19,458,801	21.10%	199,244,764	25.66%

Note. Total percentages are computed as a percentage of *all families*. Percentages for other economic activities (wages, family sustenance, net share of crops, entrepreneurial activities and others) are computed as a percentage of *families in the respective income strata*.

The 1998 APIS also reveals that out of the 8.5 million surveyed families with businesses, only 25% had the chance to avail themselves of credit to finance their entrepreneurial activities. High interest rates, lack of collateral, and lack of information about where to get loans were among the top three reasons cited by families in the lower 40% income group for their inability to avail themselves of credit for their businesses. In fact, the scarcity of working capital and investment credit has been identified by small and microentrepreneurs as the single greatest difficulty encountered by the SME sector (ADB/OECD, 2000).

As of 2000, the total number of enterprises operating in the Philippines was estimated at 820,960, generating employment of about six million (Philippine National Statistics Office, 2000). Microenterprises dominated this number (91.1%), followed by small enterprises (8.2%). Among the establishments under the wholesale and retail trade sector, 95.2% were microenterprises. On the other hand, while enterprises in the manufacturing sector showed a tendency to be relatively larger in size compared to the wholesale and retail trade sector, microenterprises still dominated the manufacturing sector with a share of 86.9%.

In terms of employment generation, micro, small, and medium enterprises absorbed 69.6% of the workers in the formal sector. Since enterprises in the wholesale and retail trade sector were primarily micro in size, the sector absorbed only 30.3% of the total, 62.2% of which were working in microenterprises. On the other hand, the manufacturing sector employed a total of 1.6 million workers (26.9% of the total), 45.9% of which were working for large enterprises.

The available data in the Philippines on the growth in the number of microenterprises show that these enterprises tend to multiply faster than any other type of enterprise. While small enterprises doubled over the period of 1983-1994, and medium and large enterprises grew by 4% and 27%, respectively, the number of microenterprises grew by as much as 62% (Small & Medium Enterprise Development Council, 1998, cited in Berry, Rodriguez, & Sandee, 1999).

Table 2. Number of enterprises and employees by size and industry, 2000

INDUSTRY	TOTAL		MICRO		SMALL		MEDIUM		LARGE	
	no. of enterprises	no. of employees	no. of enterprises	no. of employees	no. of enterprises	no. of employees	no. of enterprises	no. of employees	no. of enterprises	no. of employees
Agriculture	3,391	137,340	1,611	6,478	1,527	38,724	127	16,986	126	75,152
Fishing	1,252	31,185	523	2,227	688	14,346	18	2,248	23	12,364
Mining	376	17,328	239	1,209	112	2,972	12	1,568	13	11,579
Manufacturing	125,467	1,589,214	108,998	354,025	14,121	354,328	1,110	150,734	1,238	730,127
Electricity, Gas & Water	1,318	80,595	660	2,746	480	14,451	90	12,850	88	50,548
Construction	3,154	161,487	1,724	7,602	1,225	33,429	93	12,863	112	107,593
Wholesale & Retail Trade	437,325	1,785,811	416,519	1,110,683	20,038	403,033	438	12,863	330	213,424
Hotels & Restaurants	89,472	485,098	81,879	267,731	7,377	167,152	152	19,173	64	31,042
Transp'n & Comm'n	15,267	301,035	11,302	42,105	3,622	85,209	168	22,641	175	151,080
Financial Intermediation	24,118	262,165	18,129	75,325	5,801	106,606	82	11,013	106	69,221
Real Estate	40,477	430,884	35,483	106,399	4,348	107,146	291	40,866	355	176,473
Education	9,675	272,202	5,127	21,469	4,032	109,216	306	41,983	210	99,534
Health & Social Work	28,414	158,341	26,795	60,243	1,412	36,597	116	15,761	91	45,740
Other Services	41,254	189,501	38,751	106,858	2,383	49,018	67	9,329	53	24,296
TOTAL	820,960	5,902,186	747,740	2,165,100	67,166	1,522,227	3,070	416,686	2,984	1,798,173

Source: Philippine National Statistics Office, 2000.

Microenterprises, given their characteristically small size of operations, have very low start-up capital requirements. Although they operate on short-term planning cycles, sometimes daily or weekly, their requirements for working capital are relatively large, covering the cost of raw materials and inventory. Their credit requirements, apart from assuming characteristics which differ from those of large, more established firms, also vary widely according to the developmental stage of the enterprise.² Therefore, supplying credit to microenterprises is an undertaking that many financial institutions in the Philippines, especially those in the formal sector, still consider as unfamiliar territory.

The Challenge of Supplying Credit to Microenterprises in the Philippines

An Overview of the Philippine Financial Sector

The Philippine financial sector consists of a relatively large network of banking and nonbanking organizations performing various financial intermediation services. The country's financial system may be classified into the following: (1) a formal sector under the regulation and supervision of the Central Bank (*Bangko Sentral ng Pilipinas* [BSP]) and the Insurance Commission; (2) a semiformal sector composed of organizations under the supervision of the Cooperative Development Authority (CDA), and non-government organizations (NGOs) registered with the Securities and Exchange Commission (SEC) but not subject to any regulation of their financial operations by any government agency; and (3) a purely informal sector composed of unregistered individual operators or organizations neither supervised nor regulated by any government entity.

The formal sector is composed of commercial banks, thrift banks, rural banks, and nonbank financial institutions. In the Philippines, the formal sector lies at the center of the general banking system, accounting for 81% of the entire assets, as of the end of 1998 (Llanto, 2000). According to Llanto (2000), within the banking system, more than 50 commercial banks account for the bulk of the volume of finance, including as much as 90% of the sector's

Delivery of Microcredit in the Philippines

assets, while the resources of the 117 thrift banks and more than 800 rural banks make up only 7.7% and 2% of the banking system, respectively. The semiformal sector is composed of credit unions, cooperatives, and a number of NGOs. The informal sector, on the other hand, is composed of individual operators such as money lenders and traders. The unregistered local rotating savings and credit associations (ROSCAs), which are referred to in the localities as the *paluwagan*, also form part of the informal sector.

Asymmetry in the Allocation of Credit

The credit requirements of microenterprises in the Philippines are met by a variety of organizations belonging to the formal, semiformal, and informal financial sectors. The institutions that cater to the needs of microenterprises include rural banks, cooperatives, credit unions, and an estimated 500–600 credit-granting NGOs (Llanto, Garcia, & Callanta, 1996). Within this roster of organizations, the main institutions engaged in the delivery of microcredit are the NGOs operating as retail microfinance institutions. While comparatively small in terms of size and outreach, NGOs tend to concentrate their services on the needs of marginalized groups in the country. On the other hand, the small rural banks serve a cross section of small-scale borrowers and savers at the local level.

As in the corporate sector, the banking system is highly concentrated, with the six largest banks controlling close to 60% of the assets of the banking system (World Bank, 2000). They are owned and controlled by large domestic groups. The other 40% are highly fragmented across the remaining 47 commercial banks, 117 thrift banks, and about 800 rural banks. Vos and Yap (1996) point out that the structural problems in the Philippine financial system are caused in part by the wide-ranging interlocking directorates and ownership patterns of the banking industry. Furthermore, the distribution of bank offices is skewed towards the National Capital Region, making banking services less accessible to those in less-developed regions.

The unincorporated businesses and cooperatives are among the types of borrowers that the commercial banking sector is not

able to extend loans to (Vos & Yap, 1996, p. 99). In contrast, private corporations in the Philippines, on average, receive 68–70% of the loans coming from commercial bank establishments. This asymmetry in the allocation of credit by the commercial banking sector in the Philippines means that the credit needs of low-income households must be supplied by other types of lenders. Thus, within this financial environment, different institutional approaches are adopted by various financial institutions designed to better address the needs of this unserved market segment.

Institutional Approaches Adopted by Financial Institutions in the Delivery of Microcredit

The Downgrading Approach: The Experience of Commercial and Rural Banks

The notable increase in the involvement of formal financial institutions in the delivery of microfinance services comes as a result of the expansion of the scope of formal institutions through down-scaling and developing linkage programs with the different organizations in the semiformal sector. This setup allows formal financial players to get acquainted with the practices of those directly involved in lending to small-scale borrowers. The perceived presence of competition among these banks has forced a number of them to diversify into new markets. Some have sought a new public image, while others, who have heard of the profits of successful microfinance institutions, have developed an interest in this unexplored market. In the last five years, the exploration of this new market has been facilitated by donor-funded loan guarantees, central bank rediscount lines, and specialized technical assistance.

In the Philippines, the government exerts pressure on banks to pay attention to the credit requirements of specific unserved sections of the economy through such instruments as the Magna Carta for Small and Medium Enterprises, which mandates the banking system to allocate 6% of its loans to small enterprises and another 2% to medium enterprises.³ In March 2001, the Central Bank (BSP) reported that the banking system as a whole complied

Delivery of Microcredit in the Philippines

with both the 6% and 2% mandatory credit allocation requirement. Table 3 shows that commercial banks accounted for 81% of the total credit allocation for SMEs, illustrating the impact of its size of operations. However, the banks' response to small borrowers' demand for financial services was limited to granting wholesale funds retailed to NGOs and other MFIs operating under the semiformal sector, or to purchasing government securities as an alternative compliance with the loan quota (G. Aquino, personal communication, 6 September 2001). The commercial banks allocated as much as ten times the mandated amount for medium enterprises, while thrift banks posted even higher percentages of credit allocation (21.39%) to the same sector. These figures help illustrate which groups of enterprises within the SME sector are preferred to be serviced by the different banks.

Table 3. Distribution of mandated credit allocation by bank category

	6% ALLOCATION FOR SMALL ENT.		2% ALLOCATION FOR MEDIUM ENT.		PERCENTAGE OF COMPLIANCE	
	Amount	% Dist.	Amount	% Dist.	Allocation 6%	2%
Commercial Banks (incl. foreign banks)	102.7	80.4	82.7	81.9	11.34	9.12
Thrift Banks	17.4	13.6	15.9	15.7	23.35	21.39
Rural Banks	7.7	6.0	2.4	2.4	28.69	9.03
TOTAL BANKING SYSTEM	127.8	100.0	101.0	100.0	12.69	10.03

Note. Mandated 8% credit allocation requirement for the SME Sector. From Bangko Sentral ng Philipinas (BSP), 2001.

The size of the banks and their specialization heavily determine how they cater to the financial needs of the low-income market segment and their ability to resolve the key constraints encountered in dealing with this market. The Rizal Banking Corporation (RCBC), one of the top five commercial banks in the Philippines, for example, offers a minimum savings account balance of P5,000 (\$91) and a minimum loanable amount of P500,000 (\$9,100). Its asset writing policy is very strict with collateral, and it requires a

20%–30% nominal return on investments. It has a small and medium business unit within the bank office, which is, however, not very profitable and is only maintained in order to meet the government credit-allocation requirement. Without this mandate, RCBC acknowledges that it would not even think of lending to small business, much less to microenterprises (Goodwin-Groen, 1998).

Another example is the Philippine Commercial and Industrial Bank (PCIB), which initiated the PCIB Moneyshop in 1973. The moneyshop was put up among the many stalls in public markets and offered working capital to different market vendors. It provided easy access to established on-site banking facilities where money could be borrowed conveniently. The operations were adjusted to the business patterns in the market place, such as ensuring that the moneyshop's operations began in the early hours of the morning. Collectors went to the individual borrowers instead of waiting for payment at the moneyshop window. Despite the daily collection system adopted, however, a significant percentage of loans in arrears incurred or held in litigation remained considerably high, higher at any rate than the levels usually tolerated by the banking system. Moreover, it was not as successful as the credit unions in attracting savings among its clientele.⁴ While PCIB may have deviated from its traditional banking procedures in order to meet client demands, it was not able to establish with its clients a kind of "personalistic relationship,"⁵ which is characteristic of the ties that exist among different actors in the informal financial sector. In this case, moneyshop collectors may have gone to the individual borrowers to collect payment and still faced borrower-default partly because they are still perceived as "outsiders."

The experience of large commercial banks directly involved with microfinance activities generally tends to show that (1) there is still a strong perception among commercial bank managers that banking with small-scale clients is not a viable venture to undertake and (2) large commercial banks are not equipped with the skills and technology necessary to profitably engage in providing microcredit and other microfinance services. Although the BSP is pushing the banking sector to get more involved in microfinance

activities, it is aware of the difficulties and limitations faced by large commercial banks in serving this market.

On the other hand, the rural banks in the Philippines have been traditionally more involved in microlending than their counterparts in the commercial banking sector. The relative size of their operations and the location of their offices and branches in the municipalities help minimize the operational constraints and the physical limitations encountered by other commercial banks. A number of rural banks, for example, accepted deposits as small as P100 (\$1.90) and provided loans as low as P1,000 (\$19) (Llanto, Garcia, & Callanta, 1996).⁶ With reference to the SME credit allocation requirement, the rural banks posted a higher share (28.69%) in allocating credit to small enterprises, compared to what the commercial banking sector contributed (11.34%). Rural banks show a greater propensity to serve low-income borrowers. However, even given these figures, a considerable number of rural banks are still adamant about positively responding to the BSP's call for increased lending to microenterprises and SMEs. This is born out of a group-banking trauma that the rural banking sector suffered from its experience in the late 1970s and 1980s with the targeted credit schemes of the government, most notably the Masagana '99.⁷ The medium-term effect of this experience was a strong negative sentiment against group lending and a conservative, risk-averse lending practice by rural banks.

The successful experience of credit-granting NGOs and credit cooperatives, however, has drawn attention to the profit potential from serving the low-income market segment. This success has encouraged many rural bankers, especially those faced with less opportunity to tap into the higher end of the credit market in the localities where they operate, to reconsider their involvement in microlending. With encouragement from the government and technical support from international donors, the number of rural banks involved in microfinance is reported to be gradually increasing.⁸

Microcredit delivery among rural banks is being vigorously supported by both government and donors in view of the rural banks' comparative advantage over other players in the financial

sector. Their location in the municipalities and smaller towns affords them the opportunity of personally knowing the target clientele. Besides, small-scale borrowers may find it more comfortable to deal with rural banks, as poor clients have a tendency to perceive commercial banks to be more oriented towards the higher end of the credit market. The existing physical infrastructure of rural banks also provides them with an advantage over other microfinance institutions (MFIs) such as cooperatives and credit-granting NGOs, making it more practicable for rural banks to expand and reach out to a substantial number of small-scale clients. Moreover, rural banks also have the legal capacity to mobilize deposits, which does not make them dependent on donor resources in capitalizing their lending operations.

However, many rural bankers agree that doing microfinance takes more than just opening a special microlending window or unit within the bank. The experience of the New Rural Bank of San Leonardo (NRBSL) in Nueva Ecija shows that getting into microfinance successfully was very much a matter of building the right image among its target clients. Its CEO and owner had to join his staff in launching a massive small deposit campaign within the town by going from door to door of every household. This helped establish the bank's image of being friendly to the low-end market (A. Panganiban, NRBSL CEO, personal communication, 25 September 2001).

The experience of rural banks in serving the low-income market segment shows the following: (1) Microlending by rural banks necessitates having a "champion" who will ensure the success of the microlending operation. In the case of the NRBSL, the personal commitment of the owner and managers of the bank to help introduce and sustain its microlending operations was pivotal in establishing credibility among their targeted clientele. (2) The rural banks also have the opportunity to treat their microlending operations as an adjunct to their other banking functions. This means that these banks are not solely dependent on the gains from its microfinance operations. Initially, they may experience high transaction costs associated with dealing with low-income clients,

and thus the return on their microlending programs will require a certain volume to achieve economies of scale. Within this phase of building up their pool of clients, rural banks may also benefit from the gains realized from their other operations. (3) Another ingredient in the success of microlending by rural banks is the environment where they operate. The presence, for example, of an existing sizeable group of microentrepreneurs within the locality, as in the case of NRBSL, provides banks with the necessary demand requirement. The Microenterprise Access to Banking Services (MABS) Program reports that rural banks applying for training in microfinance have been those concentrated in areas where a growing number of businesses may be found, such as the more densely populated provinces of Laguna in central Luzon and Cebu in the southern part of the Philippines. While many banks must still face a number of constraints in dealing with the low-income market segment, the comparative advantage that comes with their status as banks lures a number of credit-granting NGOs to explore the prospects of transforming into regulated financial institutions.

The Upgrading of Credit-Granting NGOs into Banks

The upgrading of credit-granting NGOs provides a promising means by which many of these organizations are able to mobilize savings or refinance their lending operations directly on the market. According to a monitoring study conducted by the Philippine National Economic Development Authority (NEDA), as of 1996, there were already as many as 600 NGOs involved in microfinance throughout the country, with combined total assets of P45.5 million (equivalent to almost \$1 million). Their loan portfolio was estimated at approximately P920 million (approximately \$17 million), which is equivalent to 2.5% of that of rural banks. Notwithstanding this, mature credit-granting NGOs in the Philippines are still observed to suffer from limited outreach. Llanto and Chua (1998) point out that these NGOs have an outreach capacity of only 1,000 on average. Moreover, NGOs are hampered by

their weak institutional capacity, especially in the areas of financial management, resource mobilization, and product development.

The marked increase in the capitalization requirement for the establishment of banks clearly makes it harder for credit-granting NGOs to transform themselves even into small banks. By 1996, two of the best-performing credit-granting NGOs in the country were already applying for rural banking licenses with the BSP. However, when the BSP raised the minimum capital requirement, one of the applicants was forced to withdraw. The remaining applicant, the Center for Agriculture and Rural Development (CARD), was the only NGO able to meet the said capitalization requirement and received its license to operate as a rural bank in December 1996.⁹ Given this constraint, credit-granting NGOs either turn to international donors for capitalization support or merge with other NGOs in order to raise the necessary capital to put up a bank. The Alliance of Philippine Partners in Enterprise Development (APPEND), a group of six NGOs, recognized that it had to capitalize on the collective strength of their networks and establish a partnership with a foreign donor, Opportunity International, in order to open up a microfinance bank in Antipolo City (north of the capital) called the Opportunity Microfinance Bank (OMB) in August 2001.

The impact of transforming credit-granting NGOs into formal financial institutions can be felt in many areas of the organizations' microfinance operations. The case of CARD shows that its transformation into a bank helped facilitate its growth in outreach, which soared to 10,868 in 1997 and more than doubled (26,369) by June 1999 (Seibel & Torres, 1999). The transformation subjects MFIs to certain performance standards imposed upon them by the regulatory agency for the maintenance of their license. The discipline that develops from their obligation to meet these standards strengthens their drive towards sustainability and supports their determination to broaden and deepen their outreach. As observed by the proponents of CARD Rural Bank, such performance standards were missing prior to their transformation, as they were not always enforced by the donors from whom their lending funds

were sourced. This is affirmed by Tulay sa Pag-unlad Development Corporation (TSPI), the leading credit-granting NGO in the country, which is planning to set up the TSPI Thrift Bank soon. Its executive director considers the regulation and supervision of the BSP as a safeguard against funds-mismanagement and evidence of the credibility of an NGO as a viable credit-granting institution (R. De Lara, TSPI Executive Director, personal communication, 26 September 2001).

While transformation presents many MFIs the opportunity to mobilize cheaper sources of finance through deposits and may help strengthen their credibility as viable financial players, transforming into regulated financial institutions may not be every MFI's cup of tea. As transformation into banks may be deemed cumbersome for some NGOs, a number of them opt for establishing linkage relationships with bigger commercial banks. This approach, as we will see in the succeeding section, allows credit-granting NGOs and formal financial institutions to capitalize on each other's strength and specialization in the delivery of financial services.

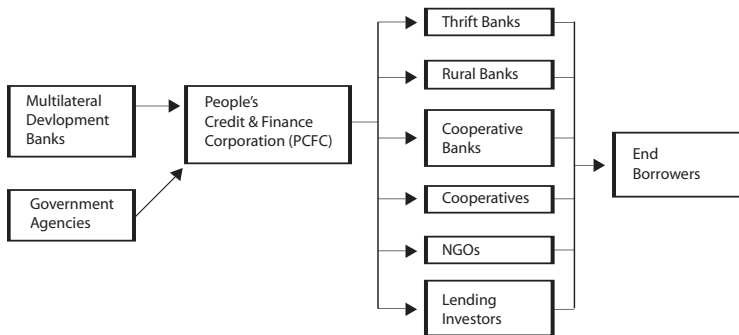
*Linking Credit-Granting NGOs and
the Formal Financial Sector*

The linkage model used in the Philippines utilizes credit-granting NGOs to fulfill a financial intermediary function between the bank or a wholesale financial institution and organized self-help groups or individual borrowers. This role requires NGOs to accept the contractual responsibility for the repayment of the line of credit extended to it by the bank. The final lending to end borrowers is done through the use of self-help groups or on an individual borrower basis. In many cases, the NGO also assumes the responsibility for the extension of consultancy services to and the training of the different groups of end clients.

Such a linkage model is illustrated in the case of the People's Credit and Finance Corporation (PCFC) which was established by the Philippine government to wholesale resources to credit-granting NGOs following the Grameen model. As an apex financial institution, PCFC works with a number of retailers and

conduits such as credit-granting NGOs, cooperatives, and rural banks. By August 2001, its number of retailers had hit 185, 100 of which were banks. PCFC sources its funds mainly from local and international agencies at concessional rates and lends these funds out to its retailers effectively at 12%, with a 1% fee for processing. No collateral is required on the part of its conduits, although security is established through the assignment of promissory notes from the conduit's end borrowers. PCFC has no direct linkage with the end borrowers of its conduits and only specifies that loanable amounts to end clients should not exceed P25,000 (\$460).

Figure 1. The linkage model adopted by the People's Credit & Financial Corporation (PCFC)



Another example of financial linkages established is that between the Bank of the Philippine Islands (BPI), a commercial bank, and the Project Linking Banks and Self-Help Groups (PLBS), an initiative conceived in 1987 with the support of the *German Office for Technical Cooperation (GTZ)*. The PLBS was an initiative covering four project phases, linking NGOs, cooperatives, and self-help groups to credit and savings facilities established by the Landbank of the Philippines (LBP) and a number of participating rural banks.

Through the BPI Foundation, BPI has provided TSPI with a line of credit initially amounting to P1.5 million (\$28,000) at 8% per annum, and two other lines of credit to be further on-lent to

Figure 2. The linkage model adopted by the project “Linking Banks & Self-Help Groups”

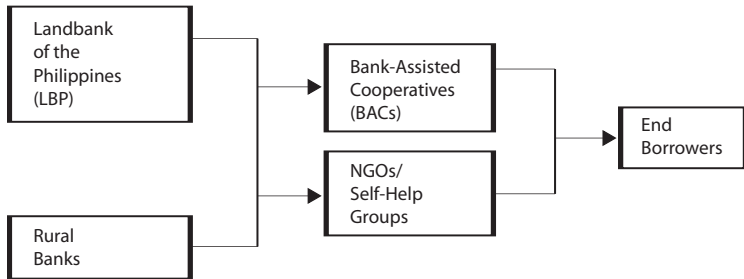
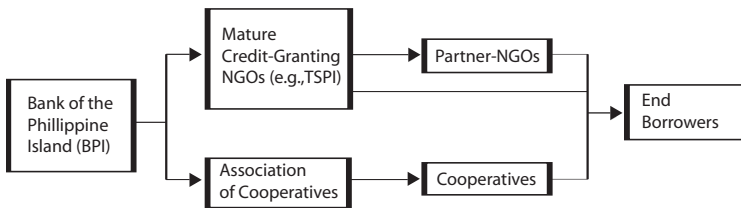


Figure 3. The linkage model adopted by the Bank of the Philippine Islands



two other NGOs which TSPI collaborates with. BPI’s initial total engagement as of 1997 reached P3.5million (\$64,000), forming part of its pilot program of banking with the poor (Goodwin-Groen, 1998). The credit lines are provided for an original term of 12 months but are renewable annually subject to credit review and evaluation. For security and collateral, BPI requires promissory notes executed by the microentrepreneur clients of the credit-granting NGOs, or promissory notes executed by the primary NGO (TSPI), which acts as an agent between BPI and its two other partner-NGOs on a with-recourse basis. The NGOs are expected to submit quarterly reports on the status of the assigned notes and charges 2% per month on the overdue and defaulted amounts. By early 1997, BPI had accumulated 11 loans outstanding to MFIs for a total value of P11.1million (\$202,000).

By establishing links with formal financial institutions which are constrained in directly dealing with the small-borrower market segment, NGOs have the opportunity to increase their capital base. The advantage of mobilizing NGOs as credit-conduits is that many of them have been organized primarily to serve the poor sectors of society. The experience of NGOs in dealing with the small-borrower segment over the years has endowed them with the capacity to know the target clientele and become familiar with their needs. Thus, given their practical experience and their social orientation, which put them on good standing among the many end borrowers they serve, NGOs play a vital role as intermediaries between the banks and the end borrowers.

The problem that arises from this financial linkage approach, however, is that many formal financial institutions engaged in this approach already observe that a saturation level is being reached on the number of possible NGO candidate conduits. PCFC, for example, observed that among its roster of partners, many were already showing signs of organizational deficiency (J. Medina, personal communication, 26 September 2001). Moreover, among the 54 members of the Philippine Microfinance Coalition and the approximately 500 existing credit-granting NGOs in the country, only a handful of NGOs are able to meet the requirements of the leading commercial banks in the establishment of linkage relationships (E. Garcia, personal communication, 13 September 2001). In the experience of PLBS, it was recognized during the early stages of the project that the institutional capacity of many NGOs was keeping them from effectively linking with banks (A. Almendral, personal communication, 19 September 2001). Hence, the team endeavored to reorient the direction of the project during the latter phases and explored working with the cooperative sector instead. More importantly, unlike PCFC and LBP, which are partly government-owned entities, commercial banks are not in a position to assist these organizations in building their institutional capacities for more effective engagement in financial intermediation. In contrast, PCFC and LBP are in a more advantageous position to make use of the support extended by international

donors to assist partner NGOs in building up the latter's institutional capacity.

Building Specialized Institutions from Scratch

Apart from the institutional approaches of downgrading, upgrading, and financial linkage-building, the approach of introducing new types of institutions from scratch or hybrids of more traditional types of organizations like commercial banks, such as the newly-established microfinance or microenterprise banks, certainly presents the opportunity to look at how these new institutions differ from their counterparts in the general banking sector. Whether these new institutions are able to effectively overcome the constraints in dealing with the lower-income market segment while at the same time provide financial services to the target clientele on a sustainable basis is an area of study that will be of interest to many researchers. In the Philippines, the introduction of such specialized institutions is evidenced by the launching of the Micro-Enterprise Bank (MEB) in Mindanao (the southern part of the Philippines) in late 2001. MEB is a joint venture among international investors and a local counterpart, the Planter's Development Bank group. Recently, other similar developments have also taken place in Batangas (south of Manila) with the creation of *Bangko ng Masa* (Bank of the Poor), a private local undertaking.

Concluding Remarks

The characteristics of the different players in the Philippine financial sector outlined in this paper underscore the available opportunities and the constraints that may be dealt with in designing approaches to help address the credit needs of microenterprises. It should not, however, escape the reader that given the oligopolistic nature of the Philippine financial system, the expectation that current bank restructuring will result in improved access of smaller enterprises to bank credit is very much clouded with skepticism (Vos & Yap, 1996).

In the Philippines, the commercialization of microfinance activities has led to the emergence of new types of institutions and has helped define some approaches markedly different from those which were used when microfinance was dominantly viewed as a purely social activity. This is a continuing process which requires changes in perception among the different players in the financial market. New methods and approaches need to be continuously introduced in the provision of services and in mobilizing resources. As has been shown, the appropriate strategies needed in widening and deepening the credit reach of the various players in the financial sector are those which recognize the market specialization of each group of lenders and at the same time provide incentives for institutions to be able to effectively transform and develop into institutions more capable of addressing the credit needs of the small-borrower market segment.

Notes

1. The Annual Poverty Indicators Survey (APIS) is a series of nationwide surveys conducted by the Philippine National Statistics Office in 1998, 1999, and 2002. Only preliminary results of the 2002 APIS are available.

2. Alfonso, Borton, and Castello (1994) note that there are considerable differences in the financial services demanded and the constraints that different microenterprises face in gaining access to sources of finance, depending on the size of the enterprise. See also Lapar (1991). For more in-depth discussion on the nature of credit transactions involving microenterprises, please see Rhyne and Otero (1994), p. 12; Reed and Befus (1994), pp. 186–188; and Nissanke and Aryeetey (1998), pp. 265–269.

3. RA 8289 serves as an amendment to RA 6977, which was enacted in 1991, mandating all financial institutions to set aside certain portions of their loan portfolio for small enterprises. The portion mandated for allocation to SMEs based on RA 6977 was at least 5% by the end of 1991, raised to 10% by the end of 1992 until 1995, and 5% by the end of 1996. In 1997, RA 6977 was amended through RA 8289, which extended the mandatory allocation feature of the law for another ten years, from 1997 to 2007. Allocation requirements were adjusted to 6% and 2% for small and medium enterprises, respectively. (Philippine Department of Trade & Industry, 1997.)

Delivery of Microcredit in the Philippines

4. Further information on this case can be found at <http://gdr.org/icm/inspire/inspire.html>.

5. This term was used by Floro & Yotopolous (1991).

6. These include the Cooperative Rural Bank of Aklan, the Davao Cooperative Bank, and other cooperative banks in Mindanao (southern part of the Philippines).

7. In the early 1980s, the rural banks, along with the Philippine National Bank (PNB), a state-owned bank, were pushed to implement Masagana '99 and various subsidized lending programs primarily to farmer groups. The funds were provided by the Central Bank, but liability resided with the rural banks. These programs resulted in poor loan performance partly brought about by the fact that borrowers immediately perceived the funds as government aid. Hence, credit discipline in the repayment of loans was not maintained. Also, as a supply-driven approach, the lending programs failed to consider the benefits of the savings-mobilization component among the targeted groups. When what seemed to be a steady inflow of cheap money dried up in the early 1980s, many rural banks failed. While the government bailed PNB out, it was not able to do the same for participating rural banks. About 450 from a total of 1,250 rural banks collapsed during this crisis (GTZ, 1997, pp. 4–5).

8. The Microenterprise Access to Banking Services Program (MABS), an initiative co-sponsored by USAID Philippines and the Rural Bankers Association of the Philippines (RBAP), shows that as of April 2001, the number of rural bank branches involved in the program reached a total of 57, more than the targeted goal of 48. This number had further gone up to 66 by the end of July 2001. No capitalization assistance is given and loans are funded from the deposit base of the participating rural banks.

9. For more in-depth discussion on the transformation process of CARD Rural Bank, see Seibel and Torres (1999). As of 2003, there were three transformed MFIs operating as banks with microfinance functions in the Philippines, namely, (1) CARD Rural Bank in Laguna (rural bank), (2) Opportunity Microfinance Bank in Rizal Province (thrift bank), and (3) Vision Bank in Catanduanes (rural bank).

References

- ADB/OECD. (2000, July). *Proceedings from the ADB/OECD Workshop on SME Financing in Asia*. Manila.
- Alfonso, Arelis G., (with Borton, N. & Castello, C.). (1994). *The association of solidarity groups in Colombia: Governance and services*. In M. Otero & E. Rhyne (Eds.), *The new world of microenterprise finance: Building healthy financial institutions for the poor* (pp. 251–267). West Hartford, CT: Kumarian Press.
- Bangko Sentral ng Pilipinas (BSP). (2001). *Consolidated summary report on compliance with SME of the banking system (as of 31 March 2001)*. Manila: BSP.

- Berry, A., Rodriguez, E., & Sandee, H. (1999). *Firm & group dynamics in the role of the SME sector in Indonesia and the Philippines*. Washington DC: World Bank Institute.
- Floro, S., & Yotopolous, P. (1991). *Informal credit markets and the new institutional economics: The case of Philippine agriculture*. Boulder, CO: Westview Press.
- Gesellschaft für Technische Zusammenarbeit (GTZ). (1997). *Assessment of linkage banking projects in Asia: Case study 2*. Eschborn: GTZ.
- Gesellschaft für Technische Zusammenarbeit (GTZ). (2000). *Building a sound financial system for sustained access of the low-income sector to banking and financial services*. PLBS Working Documents. Manila: GTZ.
- Getubig, I., Remenyi, J., & Quinonez, B. (1997). *Creating the visions: Microfinancing the poor in Asia-Pacific: Issues, constraints and capacity-building*. Kuala Lumpur: Asia-Pacific Development Center.
- Goodwin-Groen, R. (1998). *The Role of Commercial Banks in Microfinance: Asia-Pacific Region*. Brisbane, Australia: The Foundation for Development Cooperation Ltd.
- Lapar, M. L. (1991). *Growth & dynamics of small and microenterprises: Does finance matter*. Working Paper Series No. 91-12. Manila: Philippine Institute for Development Studies.
- Llanto, G. M. (2000). *Philippines country report*. In *Asian Development Bank, The role of central banks in microfinance in Asia and the Pacific: Vol. 2*. (pp. 247-276). Manila: Asian Development Bank.
- Llanto, G. M., Garcia, E., & Callanta, R. (1996). *An assessment of the capacity and the financial performance of microfinance institutions: The case of the Philippines*. PIDS Discussion Paper Series No. 96-12. Manila: Philippine Institute for Development Studies.
- Llanto, G. M., & Chua, R. T. (1998). *Transaction costs of lending to the poor: A case of two Philippine non-governmental organizations*. Brisbane, Australia: Foundation for Development Cooperation Ltd.
- Nissanke, M., & Aryeetey, E. (1998). *Financial integration and development (Liberalization and reform in Sub-Saharan Africa)*. London: Overseas Development Institute, Routedge.
- Philippine Department of Trade and Industry. (1997). *Small business in the Philippines*. Manila: Department of Trade and Industry.
- Philippine National Statistics Office (NSO). (1993). *Integrated survey of households bulletin*. Manila: National Statistics Office.
- Philippine National Statistics Office (NSO). (1998, 1999). *Annual poverty indicators survey*. Manila: National Statistics Office.

Delivery of Microcredit in the Philippines

- Philippine National Statistics Office (NSO). (2000). *Survey of establishments in the Philippines*. Manila: National Statistics Office.
- Reed, L., & Befus, D. (1994). *Transformation lending: Helping microenterprises become small businesses*. In M. Otero & E. Rhyne (Eds.), *The new world of microenterprise finance: Building healthy financial institutions for the poor* (pp. 185–203). West Hartford, CT: Kumarian Press.
- Rhyne, Elisabeth & Otero, Maria. (1994). *Financial services for microenterprises: Principles and institutions*. In M. Otero & E. Rhyne (Eds.), *The new world of microenterprise finance: Building healthy financial institutions for the poor* (pp. 11–26). West Hartford, CT: Kumarian Press.
- Seibel, H. D., & Torres, D. (1999). *Are Grameen bank replications sustainable and do they reach the poor?: The case of CARD rural bank in the Philippines*. *Journal of Microfinance* 1(1): 117–130.
- Steinwand, D. (1997/3). *Project linking banks and self-help groups*. In GTZ, *The linkage banking in Asia. Vol. 1: The assessment of linkage projects* (pp. 67–96). Bangkok: APRACA-GTZ.
- Vos, R., & Yap, J. T. (1996). *Financial intermediation and adjustment of internal and external balances*. In R. Vos & J. T. Yap (Eds.), *The Philippine economy: East Asia's stray cat?: Structure, finance and adjustment* (pp. 93–117). GB: Mcmillan Press Ltd.
- World Bank. (2000). *Philippines growth with equity: The remaining agenda: A World Bank social and structural review*. Report No. 20066-PH. Washington DC: World Bank.

Microleasing

The Grameen Bank Experience

Asif Ud Dowla

Abstract: Grameen Bank was the first microfinance institution (MFI) to introduce microleasing on a large scale. This paper provides a preliminary evaluation of Grameen's leasing program. Instead of providing a full-fledged impact assessment study, we examine the terms and conditions of the leasing program and evaluate its success in terms of outreach, repayment rate, and asset ownership. Analysis of program level data shows that the program is successful in terms of outreach and repayment performance. Through the program, poor men and women have become owners of power tillers, power looms, shallow machines, cellular phones, and even computers. The success of leasing suggests some important lessons for MFIs. It shows that poor people have diverse credit needs and that to help the poor borrowers to graduate out of poverty, MFIs have to provide different and flexible products.

In 1992 Grameen Bank started its experimental leasing program by leasing power looms to weavers in Ariahazar, near Dhaka, the capital city of Bangladesh. Many of the borrowers in this area were weavers who produced fabrics using handlooms. The borrowers noticed that many of their competitors were using power looms and wanted to know if the bank would help them to gain access to power looms. Initially, the bank bought the power loom and rented it out to the borrowers. However, the bank manager realized that the borrowers would be better served through an arrangement where the machines could be leased to the borrowers, who could then pay off the cost of the machines by using the earnings from them. Based on this experience, in 1993 Grameen Bank

piloted leasing power tillers in the Dinajpur and the Rangpur Zone of the Bank.

In the 1994 zonal manager's conference, a decision was adopted to expand leasing to all zones. At the end of year 1997, Grameen Bank leased 8,411 items in 111 different categories. The program has enabled 96 male and 1118 female members to complete the leasing contract and own assets in the process. As of December 1997, the leasing program has booked Tk. 237.67 million (\$5.29 million) worth of leases, or an average of Tk 28,000 (\$623) per lease. The leasing program is in operation in all areas of the bank; however, not all branches have a leasing program.¹ The total disbursement of all products of Grameen Bank was Tk 6240.70 million at the end of December 1997. This makes the share of leasing close to 4% of the total portfolio of the bank.

The objective of this paper is to critically examine the leasing program. Since the program is relatively new, the exercise will entail a preliminary evaluation of the program. Instead of a full-fledged impact assessment study, we will examine the terms and conditions of the leasing program and evaluate its success in terms of outreach, repayment rate, and asset ownership.

The paper is based on data for the period 1994–1997 because the bank partially suspended the leasing program during 1998–2001, while the bank redesigned its financial delivery mechanism. Leasing is now relabeled as a special project loan under the rubric of Grameen II (Yunus, 2002). Even though the data is a bit old, Grameen Bank is the first microfinance institution (MFI) to introduce microleasing on a large scale and thus its experience with leasing will be relevant for other MFIs that have introduced leasing or are on the verge of introducing such a product.²

The plan of the paper is as follows. First we will examine some studies that deal with the types of activities funded by the leasing program. Then we will discuss the operational aspect of the Grameen Bank's microleasing. Next we will examine the leasing

Asif Ud Dowla is a Professor of Economics at St. Mary's College of Maryland. E-mail: audowla@smcm.edu

program and evaluate its successes and failures. Finally, the conclusion includes suggestions to improve the efficacy of the leasing program.

The Financial Landscape of Leasing

“Financial leasing is a contractual arrangement between two parties, which allows one party (the lessee) to use an asset owned by the other (the lessor) in exchange for specified periodic payments. The lessee uses the asset and pays rental to the lessor, who legally owns it” (Gallardo, 1997). The owner of the leased item expects the lessee to make lease payments by generating sufficient cash flow. This feature of leasing enables borrowers without credit history and collateral to access the use of capital equipment or other items. Leasing can be of three types; financial leasing, hire-purchase, and operating lease. Grameen Bank uses the hire-purchase version of leasing.

Most of the activities funded by the leasing program are related to small rural manufacturing and service industries. There were two major studies that explored the workings of the small manufacturing and service industries in Bangladesh. The first one was the Rural Industrialization Survey Project (RISP) by Bangladesh Institute of Development Studies (BIDS), and the other one is a book, *Small Firms Informally Financed*, edited by Islam, Von Pischke and de Waard (1994). The later source deals mostly with urban-based small manufacturing and service industries, yet its findings are relevant for the microleasing industry. The BIDS study shows that small firms, especially in the rural areas, face tremendous hurdles in setting up businesses and financing their working capital needs. The study by Islam et al. shows that businesses in this sector rarely borrow from the formal banking sector. Many of the entrepreneurs surveyed are aware of credit facilities from the commercial banks, but few try to use them. The major source of funds for them is the informal sector, consisting of friends and relatives or the moneylenders. Depending on the funding source, the cost of capital to the producers varies from 10% to 120% per annum simple interest rate for initial investment, and up to 240%

for working capital financing. The interest rate charged by money-lenders is in the range of 60 to 120 per cent per annum. The study further shows that even friends and relatives may charge interest on informal loans (30% to 96% interest per annum).

The BIDS study shows that, with a few exceptions, for the majority of units, personal savings contributed from 50% to 100% of the funds needed for establishing a Small Cottage Industry (SCI). Some of the units used external sources for financing initial capital and among them slightly fewer than 80% borrowed from noninstitutional sources. One of the investigators (Ahmed 1984) examined the problems encountered by microenterpreneurs in raising funds from the formal credit market. The main problem was the stringent collateral requirements. The value of security offered in terms of items like land, buildings and other fixed assets by the borrowers as a proportion of loan was quite high (275%). For a loan from commercial banks, this figure rose above 400%.

The next obstacle was the cumbersome documentation requirements necessary to obtain formal credit. Through a special survey, Ahmed (1984) found that borrowers have to meet as many as ten different types of paper requirements, e.g., submission of nationality certificate, solvency certificate, personal guarantee, business registration and license, plant layout, and balance sheet statement to receive a loan. The author of the study notes, "given that nearly 60 percent of the owners of SCI's are illiterate, 95 percent of them self-managed and a mere 6 to 7 percent of them keep records of their operations, these excessive documentation requirements are likely to pose almost insurmountable difficulties to the small borrowers in getting an institutional loan."

Moreover, he found that the transaction costs of borrowing from institutional sources are quite high. These costs include official fees, unofficial payments and bribes, and miscellaneous expenses incurred by the borrowers in taking loans. The latter costs constitute on average 3.45% of the amount borrowed, rising up to nearly 6% of loans taken from government lending agencies. Longer waiting times as well as a considerable number of working days are lost in securing an institutional loan; on average it takes

slightly less than three months to get a loan and about 12 working days are lost while getting the loan approved. A recent village level study shows that the transaction costs are even higher, averaging 67.66% and 52% in the two study villages (Banik, 1993).

These studies, however, failed to expose the gendered nature of the problem. Women have a negligible presence in the rural industry. The RISP study shows that 32.3% of the workers are female in rural industries whereas only 3.3% of the proprietors are female. The credit constraint faced by women entrepreneurs is even more confining than that faced by men; they may not get any loan at all. Islam et al. (1994) report a rate of 120% to 240% per annum simple interest rate on loans to the women's tailoring trade. These studies also suggest that there is a huge demand for credit to finance these activities. However, due to lack of funds, or because of the stringent conditions that have to be met to obtain funds, many potential enterprises never take off resulting in jobs not being created and lost opportunity to achieve economic upliftment for a significant number of people—especially women.

These studies show that the financial landscape faced by firms in small manufacturing and service industries is rather bleak. They have to borrow from the informal market at an exorbitant interest rate or deplete personal savings to start a business. For the expansion of business, they have to rely on internal financing through reinvestment of profits. However, the majority of the sample SCI consume a significant portion of profit, to the tune of 85% on average. Ahmed (1984) argues, "with insignificant retained earnings resulting from higher consumption of profits, considerable credit selling, and the consequent repayment delays and lack of facilities for private financing through hire-purchase arrangements and subcontracting systems, is bound to make the growth and expansion of these industries extremely difficult in the country unless suitable arrangements are made to ensure adequate flow of formal credit to them."

The above review deals only with short-term credit needs of small enterprises that could benefit from the leasing program. Leasing is usually medium- to long-term and the banks are

reluctant to undertake term lending. Such needs have to be satisfied by borrowing from moneylenders, friends, and relatives or by using personal savings and the reinvestment of profits. Grameen Bank's microleasing program has to be evaluated against this backdrop of ground realities faced by microentrepreneurs where they have limited opportunity to borrow for a period longer than one year. Moreover, the majority of Grameen Bank's members are women who are unlikely to get credit even for short-term needs from formal and informal sources, not to mention term lending needs.

Procedures for Grameen Bank Leasing Program

Terms and Conditions

The leasing fee (annual interest rate) is set at 20%. The principle for calculating the interest includes the purchase price of the item, transportation, and other expenses, such as insurance premiums. The maximum time for paying off the lease contract is three years. However, in the case of animals, the maximum is set at two years. The lessee has to pay off the contract amount through weekly installments. A member has to start the installment payment within a month (in the case of animals, 15 days) of receiving the leased item. The lessee could either pay off the amount by making equal installment payments or, after consulting with the branch manager, paying no less than Tk. 100 during the off-peak period and more than the installment amount during peak-period.³ However, the time limit for the off-peak period is three months. The lessee could also pay off the full or a partial amount of the lease value anytime. The lessee is liable to keep the leased item in good working condition and to fix any mechanical defects. As a result, the lessee carries the risk of obsolescence.⁴ Further, the lessee has to insure the item if insurance is available. For example, all transportation related items and cellular phones are insured with commercial providers and the lessee bears the expenses.

The bank will repossess the leased item if the lessee fails to pay the full amount during the stipulated time. If necessary, the

repossessed item could be released to another member. The area manager/program officer and the branch manager, in consultation with the new lessee and the defaulting lessee or his or her representative, will reassess the value of the leased item. If the reassessed value is greater than the remaining payment on the leased item, the surplus will be first used to pay off any remaining lease payment. If there is still money left, that will be given to the defaulting lessee as cash. If the reassessed value is less than the remaining rent on the leased item, the defaulting lessee will be liable to meet the shortfall.

Selection of Leasing

- A member will be given a lease on an individual basis. A group or a center cannot get a lease on the basis of a collective ownership.
- There will be no prespecified list for leasing items. The zonal manager by his or her own discretion can give any item for leasing. However, the item should be such that it could be transferred later, if necessary, without any major wear and tear.
- Leasing will not be given for any business where there is daily sale and purchase, e.g., grocery shops, variety shops, or pharmacies.⁵
- Livestock could be leased under the leasing regulation. However, goods that could be financed under the ceiling of general/seasonal loan would not be leased.

Qualification

To be eligible for a lease contract, members and centers have to fulfill the following criteria. Branches do not have to meet any specific condition to initiate a leasing program.

Members

- A member must be at least a three-time loanee.
- A member must have an additional source of income so that installments can be paid.

- The lessee or a member of the family must have prior experience in managing the leased item; and in the latter case, the member of the family must oversee the item.
- In the case of transport items, the lessee or a member of the family must be an experienced and licensed driver.
- Leased item must be used properly and the repayment rate must be satisfactory.
- A member must have or create an appropriate space to store the leased item.

Center

- A center must be at least two years old.
- A center should not have any trouble loanee. The zonal manager could initiate a leasing program with good members of an irregular center if he or she thinks that by adopting such program the overall performance of the center could be improved. However, this cannot be done indiscriminately.

Lease Proposal and Approval

The bank assistant as well as the branch manager will provisionally select members and centers to initiate a leasing program, provided they meet the conditions mentioned in the qualification section. Once the selection is completed, the branch manager will invite the area manager/program officer to visit the center. He or she will visit the center during the regular weekly meeting, or a special meeting, and then evaluate the lessee's income, prior experience in managing the leased item, and the venture's potential. He or she will further inform the member about the risk involved in the venture and the method of payment, and will visit the member's house. Once the visiting team is convinced that everything is satisfactory, it will finally approve the member for the leasing contract. According to the current practice, the branch manager will forward the leasing proposal to the area manager. After examining the proposal, the area manager can approve leasing with a ceiling of Tk. 50,000 (\$1111). All proposals exceeding the ceiling of Tk. 50,000 require the zonal manager's approval. The zonal manager can approve proposals up to Tk. 300,000. If the proposal is for more

than Tk. 300,000 (\$6666.67), it would need the approval of the Technology and Development unit housed at the Headquarters.⁶

Buying of the Lease Item

Depending on the value of the lease item, bank staff⁷ may be involved in the purchase of the lease item. A representative of the bank monitors the buying and usage of the leased item. Whenever appropriate, the staff will take spot quotes from at least three vendors and will buy the item from the vendor with the lowest price. Some of the preconditions of leasing, such as a perfect credit record, prior experience with the activity to be financed, licensing requirement for operator of transport items, existence of an additional income, and availability of space to store the leased items, make leasing very close to a collateralized loan. These preconditions suggest that the bank is looking for relatively better-off borrowers, and the conditions will lead to self-selection by the borrowers.

Leasing is a relatively new product in Grameen's portfolio; however, it is different from other loan products in many ways. Firstly, there is no group tax in leasing. Group tax is a contentious issue with Grameen borrowers, and many of them perceive it as hidden levy that effectively increases the cost of borrowing.⁸ Secondly, loan for leasing is not fungible. The members are given a product instead of cash. For example, in the case of general loans, members will sometimes borrow money to pay for paddy husking, but instead use it to lease land (Todd, 1996). This is not possible in case of leasing, because the item is bought in the presence of bank workers through a competitive bidding process. This ensures that the item is used strictly for productive purposes and thus reduces the probability of default of the lease contract. Thirdly, candidates for lease are chosen who have other sources of income and have the ability to store the leased item. These conditions are not used, at least formally, for many other loan products. Fourthly, except for housing loans and types of seasonal loans, all other loans are given for a short term, i.e., one year, whereas the leasing term is for more than a year. Fifthly, the grace period for a lease item is one month (in the case of livestock lease, the grace period is 15 days); for other loan products, the installment payment has to start

in the second week after the disbursement of the loan. Sixthly, a lessee could pay off the loan amount prior to the expiry of the loan contract, and the installments could be fixed as well as variable depending on the season. Since the installment is calculated on a declining balance, prepayment will entitle the lessees to a rebate on interest payments. Seventhly, unlike other products, some leased items can be insured, which protects both the lessee and the lessor from undue risk. Lastly, the most significant difference is the absence of “joint liability” in the case of leasing. Even though the center and the groups are involved in appraising lease proposals, and the group chairperson signs the contract as a witness, they are not held liable for the repayment in case of default. Through leasing, Grameen Bank is experimenting with pseudoindividual, collateralized loans.

As we mentioned earlier, Grameen’s leasing program is similar to hire-purchase arrangements. However, it is even different from pure hire-purchase leasing. For example, the borrowers do not have to pay any down payment to initiate the contract. Unlike the true “lease-to-buy” contract, the borrowers do not have to pay the residual value that the asset has at the end of the lease period, if it is greater than zero. This more than compensates the borrower for bearing the risk of obsolescence. Also, in contrast to a rent-to-own agreement, the borrower in a leasing agreement cannot terminate the contract and return the item.

Evaluation of the Leasing Program

In a short period, leasing has become a very popular program with Grameen borrowers. The following two tables show the annual disbursement of leasing by zone, along with the gender of the lessee. Table 1 shows the number of lease contracts and Table 2 shows the value of lease contracts.

Table 1 illustrates the remarkable growth achieved by the leasing program. Since its inception in 1994, leasing has grown exponentially. The cumulative growth rate for male leaseholders is 580%, for female leaseholders it is 1370%, and the overall growth rate is an impressive 1297%. The same trend is captured in Table

Table 1. Annual number of lease contracts across zones and according to the gender of the borrower

Zones	1994			1995			1996			1997			Cumulative total as of December 1997			
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	
Chittagong	0	46	46	34	129	163	8	47	55	17	81	98	59	303	362	
Tangail	5	0	5	4	3	7	11	4	15	83	172	255	103	179	282	
Rangpur	35	158	193	19	57	76	5	33	38	24	70	94	83	318	401	
Dhaka	16	117	133	4	19	23	0	5	5	38	286	324	58	427	485	
Patuakhali	0	9	9	1	1	2	3	5	8	22	269	291	26	284	310	
Bogra	0	15	15	4	31	35	1	2	3	4	84	88	9	132	141	
Sylhet	0	0	0	2	19	21	0	4	4	0	14	14	2	37	39	
Rajshahi	0	6	6	0	84	84	1	203	204	5	764	769	6	1057	1063	
Dinajpur	0	186	186	13	458	471	3	106	109	4	199	203	20	949	969	
Faridpur	0	5	5	0	40	40	2	15	17	2	299	301	4	359	363	
Comilla	0	4	4	0	9	9	0	1	1	0	1563	1563	0	1577	1577	
Mymensingh	0	0	0	0	19	19	0	62	62	5	1672	1677	5	1753	1758	
Narayanganj	0	0	0	0	0	0	4	173	177	3	87	90	7	260	267	
Khulna	0	0	0	0	0	0	0	103	103	1	290	291	1	393	394	
Total	56	546	602	81	869	950	3	8	763	801	208	5850	6058	383	8028	8411

Note. M= Male, F=Female, and T=Total. From Monitoring and Evaluation Department of Grameen Bank

2. The rates are unusually high because the program started from a low base. Both tables show that the majority of leaseholders are women—95% in terms of numbers and 91% in terms of values.

We have already shown that leasing is very popular with Grameen borrowers. However, one of the most important indicators of success is the repayment rate. Table 3 shows the repayment rate of the leasing program by zone and by the gender of the borrower, at the end of each year.

In some of the zones, the repayment rate declined over time from a perfect repayment record attained in the beginning of the program. Even though some of the zones have more than 100% repayment rate,⁹ the slight declining trend in repayment performance is carried over to the overall repayment rate. The overall repayment rate is still very high—98% in terms of value and 97.6% (8209 leases out of 8411) in terms of the number of lease contracts. These figures are well within the repayment rates of other products of Grameen Bank. The repayment rate data

Table 2: Annual amount (in million Takas) of lease distribution across Zones and according to the gender of the borrower

Zones	1994			1995			1996			1997			Cumulative total as of December 1997		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Chittagong	0.00	2.50	2.50	2.0	7.48	9.48	0.59	2.55	3.14	0.67	3.02	3.69	3.26	15.57	18.83
Tangail	0.31	0.00	0.3	0.39	0.3	0.69	0.72	0.11	0.84	5.18	10.07	15.25	6.61	10.49	17.10
Rangpur	1.0	3.97	4.97	0.59	1.99	2.58	0.55	0.39	0.94	5.61	2.92	8.54	3.43	9.29	12.72
Dhaka	0.72	5.08	5.80	0.31	1.91	2.22	0.00	0.39	0.39	3.39	23.65	27.04	5.42	33.39	38.81
Patuakhali	0.00	0.32	0.32	0.08	0.04	0.12	0.10	0.13	0.23	0.89	11.98	12.87	1.07	13.48	14.55
Bogra	0.00	0.85	0.85	0.15	0.55	0.70	0.02	0.03	0.05	0.20	2.53	2.73	0.37	3.97	4.34
Sylhet	0.00	0.00	0.00	0.12	1.42	1.54	0.00	0.41	0.41	0.00	0.80	0.80	0.11	2.64	2.76
Rajshahi	0.00	0.21	0.21	0.00	1.53	1.53	0.09	4.71	4.80	0.07	11.76	11.83	0.16	18.20	18.36
Dinajpur	0.00	4.21	4.21	0.25	7.29	7.54	0.08	1.94	2.02	0.06	4.23	4.29	0.39	17.68	18.07
Faridpur	0.00	0.22	0.22	0.00	2.01	2.01	0.11	0.81	0.92	0.12	8.88	9.00	.23	11.93	12.16
Comilla	0.00	0.19	0.19	0.00	0.53	0.53	0.00	0.05	0.05	0.00	28.54	28.54	0.00	29.32	29.32
Mymensingh	0.00	0.00	0.00	0.00	0.95	0.95	0.00	0.81	0.81	0.15	21.40	21.55	0.15	23.16	23.32
Narayanganj	0.00	0.00	0.00	0.00	0.00	0.00	0.49	8.96	9.45	0.55	4.24	4.79	1.04	13.21	14.25
Khulna	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.28	3.28	0.06	9.69	9.75	0.06	12.98	13.04
Total	2.03	17.56	19.59	3.89	26.05	29.95	2.76	24.62	27.38	16.97	143.76	160.74	22.34	215.33	237.67

Note. M= Male, F=Female and T=Total, 1 million Taka=\$22,222.22 at the exchange rate \$1 = 45 Taka. From Monitoring and Evaluation Department of Grameen Bank

Table 3: Annual (at the end of each year) repayment rates across Zones and according to the gender of the borrower

Zones	Repayment Rates											
	Up to Dec 94			Up to Dec 95			Up to Dec 96			Up to Dec 97		
	M	F	T	M	F	T	M	F	T	M	F	T
Chittagong	---	100	100	---	100	100	99	100	100	98	99	99
										(5)	(8)	(13)
Tangail	100	100	100	98	100	100	97	100	97	102	101	102
							(2)					
Rangpur	100	100	100	98	99	99	85	90	89	85	87	86
							(19)	(58)	(77)	(19)	(56)	(75)
Dhaka	100	100	100	97	98	95	72	73	73	95	95	95
							(1)		(1)	(1)	(15)	(16)
Patuakhali	100	100	100	100	90	84	100	88	89	100	98	99
							(3)	(3)		(3)	(3)	
Bogra	100	100	10	100	100	100	101	98	99	100	99	99
							(1)	(4)	(5)		(5)	(5)
Sylhet	100	100	100	100	98	98	100	97	97	100	98	98
										(4)	(4)	
Rajshahi	---	100	100	---	103	103	100	101	101	100	100	100
Dinajpur	100	100	100	100	97	97	100	98	98	100	96	96
							(24)	(24)		(69)	(69)	
Faridpur	---	100	100	---	100	98	100	98	98	100	103	103
							(3)	(3)		(2)	(2)	
Comilla	---	100	100	---	100	100	---	100	100	---	102	102
Mymensingh	---	100	100	---	99	99	---	82	82	41	98	98
										(1)	(8)	(9)
Narayanganj	---	---	---	---	---	---	82	101	100	75	100	99
							(7)	(7)		(1)	(5)	(6)
Khulna	---	---	---	---	---	---	---	100	100	---	101	101
										(1)	(1)	
Total	100	100	100	98	98	98	92	96	96	95	98	98
							(23)	(99)	(122)	(27)	(176)	(203)

Note. Figures in parenthesis represents the number of defaulting lessees. No lease was repaid in 1994 and no information was available on default in 1995. Because of prepayment, repayment rate could be more than 100 per cent. From Monitoring and Evaluation Department of Grameen Bank

reported here includes prepayments and late payments in addition to timely payments. Including prepayment and arrears overstates the actual repayment rate. A better gauge of repayment status would be to add prepayers and timely payers and express that as a percentage of total outstanding leases. Another option would be to record loans by cohort (year of award and length of award), because a two-year lease will have more problems than a one-year lease and a new lease rarely has problems. The way repayment is calculated, it pools experience, which in a growing program allows defaults to be hidden by good loans.¹⁰

Another indicator of success is to determine how many borrowers have fully repaid the lease contract and in the process attained full ownership of assets. Tables 4 and 5 show the status of asset ownership through the leasing program. Table 4 demonstrates the distribution of asset ownership across gender and zones. Out of the 383 items leased to male members, 96 are now owned after full

Table 4: Distribution of asset ownership across zone and according to the gender of the borrower

Zones	Cumulative total as of December 1997		
	M	F	T
Chittagong	26	127	153
Tangail	13	17	30
Rangpur	33	140	173
Dhaka	0	4	4
Patuakhali	0	12	12
Bogra	4	34	38
Sylhet	2	14	16
Rajshahi	1	118	119
Dinajpur	13	476	489
Faridpur	2	23	25
Comilla	0	13	13
Mymensingh	0	38	38
Naraynganj	0	64	64
Khulna	0	25	25
Total	96	1118	1214

Note. M= Male, F=Female, and T=Total. From Monitoring and Evaluation Department of Grameen Bank.

repayment. This makes the ownership ratio an impressive 25%; out of the 4 leased items outstanding to male members so far, one of the items is already owned by the member. The female ownership ratio is 14% (1118 out of 8028 items leased). The overall ownership ratio is 14.5% (1214 out of 8411 total items leased).¹¹ The lower female ownership ratio can be explained by the recent nature of the female lease contracts. Table 5 shows asset ownership by male and female borrowers in the top 15 activities funded by the leasing program.

Women face credit constraints in obtaining loans from institutional sources. Commercial Banks don't maintain records on the gender of the loanee; however, a review of the types of activities financed and the nature of collateral requirements would reveal the gender bias of the loans by formal sources. Grameen Bank was a pioneer in opening up women's access to credit. Through the leasing program, the bank is continuing that tradition. In this case the leasing program is enabling poor women to have access to medium-term loans.

A review of the leasing program shows that women are given lease contracts for activities that are not considered typical female activities. It is true that women may end up using a man to run many of these activities. This, however, is more of a reflection of the social realities faced by women in rural Bangladesh rather than men capturing the businesses of their wives. A woman can own a power tiller, but she is not expected to operate it in the field. This is true for all activities that entail women going outside of their homes and coming in contact with males who are not family members. But

Table 5: Ownership of asset as of December 1997 according to the gender of the borrower in top fifteen activities funded by the leasing program

Leased Item	Number of borrowers		
	M	F	T
Shallow machine	35 (4.9)	687 (95.1)	722
Power Tiller	19 (12.6)	132 (87.4)	151
Power loom	0 (0.0)	58 (100.0)	58
Cow	4 (12.2)	45 (91.8)	49
Rice Mill	4 (13.8)	25 (86.2)	29
Baby Taxi	9 (42.9)	12 (57.1)	21
Dairy Farm	3 (15.0)	17 (85.0)	20
Power Pump	5 (26.3)	14 (73.7)	19
Buffalo cart	0 (0.0)	19 (100.0)	19
Poultry Farm	3 (16.7)	15 (83.3)	18
Nursery	0 (0.0)	16 (100.0)	16
Fridge	2 (22.2)	7 (77.3)	9
Tempo	2 (25.0)	6 (75.0)	8
Shallow boat	1 (14.3)	6 (85.7)	7
Fish Farms	0 (0.0)	5 (100.0)	5

Note. M= Male, F=Female, and T=Total; figures in parentheses are the percentage of the total number of item in each activity. From Monitoring and Evaluation Department of Grameen Bank.

it is highly unlikely that any commercial bank in Bangladesh will ever approve loans to poor woman for dairy farms, welding machines, mini garments, washing machines, dish antenna, computers, or cellular phones, even if they are accompanied by their husbands. Through the leasing program, the bank is trying to break the gendered nature of activities financed by financial institutions (Hossain and Afsar, 1989).

Research shows that whenever a borrower creates a surplus fund through income generating activities, they almost always like to convert it to an asset, e.g., livestock or equipment. Leasing has caught the imagination of the borrowers as it allows them to own assets without delay. In the case of a traditional loan product, the borrowers have to use several rounds of loans to generate enough surplus to buy any livestock or equipment.

The success of the leasing program can be attributed to the flexibility of its design. As we mentioned earlier, a lessee can make partial or full payment of the leased amount at any time without any penalty. This allows the borrowers to take advantage of improved market conditions. If they have a windfall they can easily pay off the balance on the contract and in the process become owners of an asset much more quickly than in the stipulated time.

The introduction of installment payments for peak and off-peak periods is also an excellent innovation and this further adds to the flexibility. For example, the most sought-after item in the leasing program is the power tiller. Power tillers are in peak demand during the early part of each crop season because they are required to prepare the land; after that, they are most likely to stay idle. During the monsoon season, the roads can be impassable and, as a result, income from many transportation items, e.g., baby taxis, bullock carts, or rickshaw van, could be low. The ability to make variable installments enhances the debt capacity of the borrowers because it allows them to synchronize payment with income flow.

In many of Grameen's other loan products, there is no grace period and repayments have to start almost immediately. Because of this, many borrowers are known to withhold a part of their loan to cover the early repayments. This would mean that return from

the investment has to be substantial to pay off the principle and the interest payments. The less-than-full use of the loan could adversely affect the return from investment and the eventual repayment. In leasing, as there is a grace period of one month, and lessees are selected who have other sources of income, and the loan is given in kind rather than in cash; there is little possibility of a less-than-full investment of the approved amount.

Leasing appears to be more conducive to enhance borrowers' sustainability. It could solve the problem of low rates of graduation of successful borrowers. In group lending, members of the group differ in ability and entrepreneurship. In these situations, it is difficult for a creditor to separate entrepreneurial borrowers from ordinary borrowers in order to reward them with large scale and flexible loans. The lessee, on the other hand, is self-selected and belongs to the group of relatively well-off borrowers, as implied by the rules of the program. Through the leasing program, the bank is able to reward members who are capable and who have a good repayment record, and leasing can be used to reward successful centers as well. Recent developments in group lending theory suggest that, if the limited liability constraint binds and borrowers are risk averse, the relatively wealthier among the poor borrower may prefer loans based on individual incentives (Madajewicz, 1997). This is because as the wealth of the borrower increases, their incentive to monitor others in the group decreases.

Introducing leasing as a separate product of the bank instead of opening a new company for leasing was a sensible option. This allowed the bank to take advantage of its vast network and existing infrastructures to expand the leasing program. Unlike the commercial leasing companies, Grameen could market and expand the product easily and cheaply. Besides, through the leasing program, the bank is able to take advantage of the economies of scope—the ability to provide many products at the same cost. “In economic terms, financial intermediaries enjoy economies of scope. These arise from providing a large numbers of products that can be produced jointly, such as checking accounts and savings accounts and loans. By offering clients a broader array of services they can

economize on overhead costs and increase profits” (Von Pischke, 1991, p. 230).

As mentioned earlier, there is no preset list of activities that can be funded through the leasing program. The area office, in consultation with the branch, can approve any item for lease. This type of decentralized decision making based on each staff’s knowledge of their borrowers operations and local market conditions also increases the debt capacity of the borrowers and empowers the staff. Besides this, leasing is a loan in kind is that is not fungible which minimizes auditing costs for the bank.

Even though the probability of default is similar between pure loans and leasing loans, leasing provides a special advantage over lending in that it offers the ability to seize and sell the leased item if the borrower defaults on the loan (Westley, 2003). On the contrary, if a borrower defaults on a loan, MFIs have very few options to recover the loan.¹² In this way, pure loans are more risky than a lease contract. Most MFIs provide a one-year loan because the probability of default increases with time. MFIs use the promise of enhanced credit limit after a successful completion of a one-year loan to minimize the probability of default. Leasing allows the MFIs to provide multi-year loans without the same risk entailed in giving mid-term business loans.

Earlier we saw that the leasing program has a good repayment record. What is not clear is the incentive mechanism that keeps the repayment rate so high. One explanation is that the possibility of further lease contracts, as well as access to other Grameen loan products, induces the lessee to make timely payments. It is fair to assume that a subsequent lease would be larger than the current lease amount. An indirect way of finding that out is by examining the average size of the leases over time. Table 6 shows that the average size of the lease for male members is increasing over time. For female members, however, the average size of the lease is declining over time. There are several tentative explanations for this trend. First, male members usually lease big-ticket items, because they have access to the markets and greater social mobility compared to female borrowers. Second, many of the male members are repeat

Table 6: Size of the average lease across years and according to the gender of the borrower

Gender	1994	1995	1996	1997	Cumulative as of December 1997
Female	32,161 (\$715)	29,985 (\$666)	32,276 (\$717)	24,375 (\$542)	26,822 (\$596)
Male	36,285 (\$806)	48,123 (\$1,069)	72,684 (\$1,615)	81,625 (\$1,814)	58,345 (\$1,289)
Total	32,544 (\$ 723)	31,531 (\$ 701)	34,193 (\$ 760)	26,534 (\$ 590)	28,257 (\$ 628)

Note. Figures in parentheses represent approximate US \$ value at the rate of \$1= Tk 45.00.

lessees and it is likely that the size of a repeat lease would be bigger than the original lease, which would explain the increasing size of their average lease. Most of the female lessees are relatively new to the program, and the large number of female leases could explain the smaller average size of their lease contracts. Third, even though female lessees can and do use male relatives for the operation of their leased items, they still might not feel secure about borrowing money for big-ticket items. Male borrowers on the other hand can tolerate more risk than female borrowers and do not feel inhibited by borrowing larger amounts.

Anecdotal evidence suggests that many members of MFIs borrow from multiple organizations—a phenomenon known as overlapping. The MFIs find overlapping problematic, as it could lead to a loan-pyramiding scheme that could collapse. However, another way to view overlapping is that it is an indicator of credit rationing, i.e., the amount supplied is less than the amount demanded. Since multiple memberships entail costs, the tendency to borrow from multiple organizations could also imply that the borrowers are looking for products that meet their special and diverse needs. Leasing, being a much more flexible product, will be likely to reduce the problem of overlapping. Further, leasing will allow the bank to retain a good borrower who assumes larger loans, of which the cost per unit is very low. Since giving larger loans is

more profitable, these clients will allow the banks to cross-subsidize poorer borrowers.

The most exciting application of the program has been the leasing of cellular mobile phones to successful women borrowers in rural Bangladesh. Research by Bayes, von Braun, and Akhter (1999) suggests that the availability of phones has benefited the whole village both economically and socially. Phone ownership has increased the income of the women and increased their mobility inside and outside their villages. More importantly, access to phone service increased villagers' bargaining power vis-à-vis middlemen who would otherwise enjoy information advantage.

Despite the remarkable success, the program faces certain problems. Most of these problems originate from the failure of the staff to follow the rules and procedures of the program as outlined in the official circulars of the bank. The standard problem faced by the program is default. However, this is a problem not unique to leasing. Another problem includes leased transportation items that were involved in accidents. In many of these instances, the bank was unable to collect insurance money when the vehicles lacked necessary papers, such as a valid driving license for the operator, an up-to-date insurance certificate, or a road permit and fitness certificate. In some cases, the borrower sold the leased item prior to the full payment of lease value, and in others, the lessee used non-family members to operate the leased item instead of limiting use to self and a family member. In some zones, several items were leased that could not be repossessed and released to other members, e.g., poultry farms, pharmacies, sweetmeat shops, or grocery shops. An analysis of the problem cases suggests that the lessee could benefit from some training on how to do market analysis and how to operate the item safely.

Conclusion

In this paper we have tried to evaluate the leasing program of the Grameen Bank. We have not attempted a full-fledged impact assessment of the leasing program. It is not clear whether a complete impact assessment of leasing can be done. It will be difficult

to isolate the effect of leasing from the effect of Grameen's other products. Analysis of program level data and a case study show that the program is successful in terms of outreach and repayment performance. Through the program, poor men and women have become owners of power tillers, power looms, shallow machines, and even computers. The program is facing some problems, mostly caused by failure of the lessee or staff to abide by the rules.

The success of leasing suggests some important lessons for MFIs. It shows that poor people have diverse credit needs. To help the poor borrowers to graduate out of poverty, MFIs have to provide different and flexible products. The success of leasing shows that if an MFI has a good institutional setup in place and it can carefully design a product that is flexible, members will use the product to their advantage. Despite the success of the group lending methodology of credit delivery, members within a group vary in entrepreneurial ability. New products such as leasing can be used to reward a good member within a group.

Some of the commercial leasing programs in Bangladesh are having repayment problems. Most of these programs have leased items to business houses and the average size of their lease contract is much higher than Grameen's lease contract. Compared to Grameen, however, they are at a disadvantage—they don't have access to a pool of borrowers with a detailed credit history. Von Pischke notes, "Experience accumulated through lending on different terms provides information that makes it possible for the lender to have greater confidence in borrowers and more information about their use of finances" (1991, p. 309). In addition, the commercial leasing programs have to incur costs to market their products. The success of Grameen leasing program shows that it is possible to issue medium-term loans to small borrowers without incurring a high cost of marketing or a large down payment. The key to success is constant supervision, monitoring, and knowing one's clients well.

The RISP surveyed the proprietors of cottage industries and asked them to rank the top three things they need for developing the enterprise. Eighty-five percent of the proprietors ranked credit

for working capital as the top priority. Grameen Bank might think of up-scaling some of the leasing activities by introducing working capital finance through a “sale and leaseback,” in which the client sells an existing asset to the bank and then leases it back from them, thus releasing the funds for working capital. In the future, the bank might want to consider leasing complementary items, for example, a trolley along with a power tiller. This will enable the power tiller owner to use it throughout the year and reduce the variability of income from this item. The bank could have a bulk contract with one insurance company to provide insurance for transport items. By doing so, the bank could get a discount on the rate for the borrowers. The bank may reap the benefit of economies of scale in purchasing popular assets such as power tillers and irrigation pumps, and thus may get a discount for purchasing in bulk. This will benefit the borrowers by lowering the price of these items.

Notes

This paper was written while the author was spending his sabbatical leave as a Visiting Scholar at the Program for Research on Poverty Alleviation of Grameen Trust (PRPA). American Institute of Bangladesh Studies (AIBS) and Grameen Trust's sabbatical program provided funding for the project. The author is grateful to Professor Syed Hashemi, Director, PRPA, and Mr. Dibal Barua, General Manager of Grameen Bank, and his staff for their help. David Cracknell, Erik Nelson, J. D. Von Pischke, Mark Schreiner, J. Morduch, Klaas Kupier, and Katie Claire provided helpful comments on the earlier version of the paper. All views and any errors are mine solely.

1. Leasing is only available for centers that do not have any problem loanee. So, if a branch has many centers with problem loanees, it is unlikely that leasing will be introduced there. Moreover, leasing is unlikely to be introduced in branches that are relatively young (only few years in existence) as these units are dealing with learning and getting comfortable with the well-established product of the Bank.

2. For a recent review of microleasing in Latin America, see Westley (2003).

3. In the leasing literature this is known as step-up/step-down lease (Carter, 1996).

4. However, most of items that Grameen leases have useful lives of more than three years.

5. These types of activities are excluded because they cannot be released in intact condition. Suppose the bank leased out a pharmacy and the lessee defaulted on the

Microleasing: The Grameen Bank Experience

lease contract. By regulation the bank will have to repossess the item and try to release to another member. However, when the bank repossesses the pharmacy, the inventory of medicine might be less than the amount remaining on the lease.

6. For a lease contract worth up to Tk. 50,000, the processing time would be a week to ten days. A lease proposal with value exceeding Tk. 50,000 may need two weeks processing time.

7. For items worth up to Tk. 50,000, the branch manager will be present at the time of the purchase. For items that are worth more than Tk. 50,000, in addition to the branch manager, area manager or program officer from the area office will be present at the time of the purchase. In all cases, the lessee or a representative of the lessee and a co-signor from the Center will be present.

8. Group tax entailed 5% of the loan amount that was set aside as group fund. Borrowers had access to these funds with the approval of the whole group.

9. If the borrowers make advance payments, the repayment rate can be more than 100%.

10. I am grateful to Klaas Kupier and Erik Nelson for these recommendations. Data limitations, however, preclude me from following up on these suggestions.

11. This measures the number of leases that are already owned as a proportion of total number of lease contract signed to date. The actual ownership ratio is close to 100%—lease contracts that matured were fully repaid and the lessee owned the asset.

12. Grameen Bank's charter allows it to take the borrowers to court and confiscate their property in case of a default. As a policy, however, the bank has never used the legal recourse to recover a loan. In case of seizure and sale of leased equipment the bank rarely involves the law enforcement authority.

References

- Ahmed, M. U. (1984). Financing rural industries in Bangladesh. *Bangladesh Development Studies*, 12(1&2), special issue on rural industrialisation in Bangladesh.
- Alamgir, Dewan. (1997). *Micro credit for fishing community: The community development center (CODEC) in Bangladesh* (Case Study No. 9, Credit and Development Forum, Bangladesh).
- Banik, Arindam. (1993). Structure of the credit market and its link with the other markets—An analysis of village survey data in Bangladesh. *Indian Economic Review*, 28(1), 55–71.
- Bayes, A, J. von Braun, & Akhter, R. (1999). *Village pay phones and poverty reduction: Insights from a Grameen Bank initiative in Bangladesh*. (Discussion Paper on Development Policy No. 8). Center for Development Policy (ZEF Bonn).

- Carter, Laurence. (1996). *Leasing in emerging markets*. Washington, DC: The World Bank and International Finance Corporation.
- Gallardo, Joselito. (1997). *Leasing to support small businesses and microenterprises* (Policy Research Working Paper No. 1857). World Bank.
- Hasse, Dwight. (1995). *Asset accumulation and change of income for Grameen Bank borrowers*. Unpublished manuscript.
- Hossain, M. (1998). *Credit for the alleviation of rural poverty: The Grameen Bank in Bangladesh* (Research Report No. 55, IFPRI, Washington, DC.).
- Hossain, M., & Afsar, Rita. (1989). *Credit for women's involvement in economic activities in rural Bangladesh* (BIDS Research Report No. 105).
- Islam, Reazul, Von Pischke, J. D., de Waard, J. M. (Eds) (1994). *Small firms informally financed: Studies from Bangladesh: Conclusions*. Washington, DC.: World Bank.
- Madajewicz, Margaret. (1997). *Capital for the poor: The role of monitoring*. Harvard University, unpublished manuscript.
- Pitt, Mark, & Khandker, Sahidur. (1995). *The impact of group-based credit programs on poor households in Bangladesh: Does the gender of participants matter?* Unpublished manuscript.
- Todd, Helen. (1996). *Women at the center: Grameen Bank borrowers after one decade*. Dhaka: University Press Limited.
- Von Pischke, J. D. (1991). *Finance at the frontier: Debt capacity and the role of credit in the private economy*. Economic Development Institute.
- Westley, Glenn D. (2003). *Equipment leasing and lending: A guide for microfinance* (Sustainable Development Department Best practices series; MSM-122). Inter-American Development Bank.
- Yunus, Muhammad. (2002). *Grameen Bank II: Designed to open new possibilities*. Grameen Bank.