GRASSROOTS CAPTIAL MANAGEMENT, LLC

The Investment Opportunity in Microfinance

An overview of current trends and issues

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June 2007

The microfinance industry is growing rapidly, both in clients served and the volume and types of investment it attracts. This overview provides a brief summary of available information on the industry to help prospective investors orient themselves within the market, and further refine their expectations with respect to financial and social returns.

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What is microfinance?

Microfinance is the provision of small scale financial services, primarily credit and savings, to low income households and enterprises which have traditionally been excluded from the mainstream financial system because they were thought not to need financial services, were considered un-creditworthy or too expensive to serve. As with higher income people, savings services allow low income households and entrepreneurs to store and earn a return on excess liquidity for future use and credit enables them to use anticipated income for current investment or consumption. Thus, microfinance provides the means for its clients to initiate and expand productive activities (micro-enterprises), meet extraordinary expenses such as education, weddings, and funerals, and deal with emergencies such as accident or illness. Put in economic terms, access to financial services helps the poor as well as the better off reduce risk, raise productivity, obtain higher returns on investments, and generally manage financial resources and requirements such as to build assets and income security. Originally characterized by the provision of small unsecured loans of less than $100; microfinance increasingly includes a broader range of financial services, including savings, insurance and money transfers, which have developed in response to a better awareness and understanding of the full range of needs of the poor.

Why is microfinance important economically?

While micro-enterprises are often defined as small businesses which employ less than 10 people, in the developing world they are frequently informal businesses which are owned and operated by a single person and family members usually working from home. Examples of micro-enterprises include small scale production (e.g., garment making, handicraft artisanship, prepared food production, furniture making and auto tire repair), service provision (e.g., taxi driving, hairdressing and the provision of telecommunication services), trading (e.g., shop/stall keeping, and fruit and vegetable vending) and small scale farming or livestock production. Such enterprises play a key economic role in many countries throughout the world and in some developing countries it is thought that as much as 80% of employment and up to 50% of GDP is provided by micro-enterprises.

One of the many constraints faced by micro-entrepreneurs in the developing world has been their inability to access capital and other financial services. Formal financial institutions, such as commercial banks, have considered these entrepreneurs to be un-creditworthy and the costs of providing financial services to them to be prohibitively expensive. Public sector development banks or other initiatives have targeted these populations but have traditionally suffered from poor performance, complicated and time consuming procedures, unpredictable availability, and in some cases corruption. Money lenders and informal financial arrangements have operated in the resulting vacuum, often characterized by very high interest rates, fraud or other costs. MFIs have sought to address the need for appropriate financial services for the poor by providing access to credit and other financial services necessary to help stabilize their financial circumstances and begin to build a better future for themselves, their families and their communities.

Fundamental Characteristics of Microfinance[1]

What is now recognized as microfinance emerged out of 2-3 decades of experimentation and innovation around the world and takes numerous forms and models. Most share a few defining characteristics in terms of transaction size and operating expenses, interest rates, and repayment rates.

***Transaction Size and Operating Costs*:**

While the average transaction amount varies significantly by region, it is generally small and operating costs relatively high. Although some models, such as group lending, can help to offset some of these higher operating costs, other factors, such as doorstep service or widely disbursed rural populations, can work against cost reduction.

Average Loan Sizes

	MFIs
Africa	$319
South Asia	$100
East Asia	$560
Latin America and Caribbean	$1,189
Middle East and North Africa	$931
Europe and Central Asia	$2,682
All	**$964**

Source: MiX data cited in Otero and Rhyne 2006, p 10.

A key proxy measure used in discussions of social impact is the average loan size of an MFI as a proportion of GDP.[2] While there are variations by region, reflecting business opportunities and the operating environment, as a general matter below 20% of per capital GDP

[1] Data on the microfinance sector is notoriously inconsistent because of the various questions being asked and different definitions used. Many institutions and programs -- government, private, not for profit and quasi governmental -- provide financial services to the poor. These can include banks, non-bank consumer lenders, leasing companies, savings pools, post office banks, coops and credit unions, and government programs, as well as MFIs. Understanding the role and strengths and weaknesses of these other sources is important to be able to understand the market opportunity for investors. This enormously complicates attempts to delineate the "microfinance market," compile meaningful data and ascertain trends. Different sources of data have different advantages. The MicroBanking Bulletin, for example, offers consistent, peer group data collected periodically over ten years. The MiX collects less data on a larger number of institutions. The Microcredit Summit uses a comprehensive definition of microcredit, including for example a number of very large government programs. Other ad hoc surveys provide snapshots, like the CGAP Alternative Financial Institutions census which helps to fill out the context in which microfinance operates, or surveys by the Council of Microfinance Equity Funds, which provide data on MFI balance sheets and ownership. For the most part, data is self reported. This note draws upon multiple sources to answer specific questions or to illustrate trends. Except where specifically required, no effort is made to reconcile the various databases and surveys.

[2] Most precise commentators try to focus on "first time" loan size, to correct for an upward bias in older institutions with longstanding and successful clients, although these data are often not available.

is considered to be reaching the very poor, and 150-250% is considered the upper end of the microfinance range.[3]

MFI Loan Sizes Relative to Per Capita GDP

Region		**Institutional Type**	
Africa	86.3%	Banks	133.2%
Asia	20.3%	Credit Unions	65.9%
Europe and Central Asia	73.7%	Non Bank Financial Institutions	56.1%
Latin America and Caribbean	35.2%	NGOs	22.5%
Middle East and North Africa	15.1%	Rural Banks	40.7%

Source: MBB 13

The pressure on efficiency of such small loan sizes is straightforward. It is exacerbated by the tendency of many microfinance methodologies to be "high touch" (characterized by very frequent direct contact between borrowers and loan officers, in some cases daily). This interaction typically occurs at the borrowers' home or place of business, rather than at a bank branch, generating further time and travel expenses.[4]

Operating Expense to Average Portfolio Outstanding

All MFIs	21.5%	MF Banks	15.2%	Small MFIs	31.8%
New	34.6%	Credit Unions	13.2%	Large MFIs	15.5%
Mature	20.9%	MF NGOs	29.1%		

Source: MBB 13.

Substantial improvements in the efficiency of MFIs might be possible. The averages noted above mask wide variations within each category, as well as trends over time. One of the most efficient MFIs in the world is ASA of Bangladesh, with an operating expense ratio of 6.5% of portfolio. ASA is one of the largest MFIs' in the world, with over 4 million clients, yet its efficiency is still significantly better than other large MFIs in its market and nearly twice that of the average. Its average loan size is relatively small, both on a global basis and within a comparable peer group.[5] For reporting MFIs as a whole, operating expense as a proportion of average portfolio dropped from 36.7% in 1999 to the 21.5% reported today.[6]

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[3] MBB peer group definitions.

[4] While it is generally believed that implementation of new technologies can help mitigate some of these costs, for example through use of POS or smart cards, there are few successful examples of their adoption on a large scale to date in the microfinance sector, and some trepidation that portfolio quality may suffer if the personal relationship is sacrificed.

[5] For example, against a peer group of large, Asian MFIs which are not financial intermediaries, ASA's operating cost is half the peer group average of 12.8%, with a loan size of $111 compared with an average of $94 or 16.3% of GDP. (MBB 13 and ASA 2005 Annual Report).

[6] MBB 3.

High interest rates

Microfinance interest rates are a function of two factors: (i) the absence of lower cost alternatives and (ii) the relatively high costs of providing microfinance services. Surveys of informal moneylenders around the world typically come up with effective rates of 10% - 30% *per month* or more.[7] Often, the loans made by these moneylenders are very short term (a day or a week). Depending on the source -- suppliers, middlemen, employers, landlords or actual "moneylenders" – the actual interest rate may be very difficult for a borrower to determine.[8] The most expensive microfinance loans rarely reach the lower end of the interest rates range charged by money lenders. The vast majority of MFIs charge effective *annual* interest rates of 25-45% which is substantially less than almost all money lenders. Even these lower rates raise two obvious questions: how the poor can pay such high rates, and why should they pay more than better off borrowers?

In some markets there is little alternative to money lenders while in others there are formal institutions, such as banks, cooperatives, credit unions, leasing companies, hire purchase finance companies and post office savings banks that offer at least some types of savings and loan services. These institutions are specifically focused on lower income clients and fall within the category of "Alternative Financial Institutions." While many of these Alternative Financial Institutions offer products at better base rates than MFIs, effective rates may be much less favorable due to additional transaction costs such as travel, application procedures, bribes, mark ups over the cash price, delays and fraud. In one detailed study of bank borrowing by the poor in India, it was found that while the nominal loan rate was 12% (well below typical MFI rates of 24% and up) the effective rate averaged 27% for a three year loan when transactions costs were considered.[9]

Nominal Yield on MFI Loan Portfolios

All MFIs	31.9%	MF Banks	26.4%
Small MFIs	33.5%	Credit Unions	21.4%
Large MFIs	22.8%	MF NGOs	40.3%

Source: MBB 13.

Borrowers are able to pay the rate charged by MFIs because the impact on their productivity of a small amount of capital is large, and the relative burden of a high interest rate on this small amount of capital is low. "There is abundant proof that poor people's tiny businesses can often pay interest rates that would strangle a larger business. Still, this

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[7] Robinson 2001, p 13-17. Mahajan documents more formalized money lending systems in India, such as registered pawn lenders, whose rates may range from 45-80%.

[8] It is often pointed out that moneylenders offer very low or zero transactions costs -- no forms, no bribes, no travel to an office, no interruption in daily activities – and that the effective cost of these burdens can be substantial. However, in most cases, they compensate for only a fraction of the high rates that moneylenders command, which is largely explained by lack of alternatives.

[9] Mahajan 1996, pp IIB-6-7.

proposition strikes many as confusingly counterintuitive."[10] Some examples help illustrate the underlying economics:

- The income of a woman who sells small items from a blanket spread on the sidewalk is directly proportional to the time she is sitting on the street. Because she has no working capital, she spends two hours of each 10 hour workday purchasing inventory. If a small working capital loan allows her to purchase two days worth of goods on one visit to a supplier in addition to the one day she financed herself, she has eight more hours to sell in each six day week, or a 17% increase in time, which equals income. If her gross profit is 25%, she could afford to pay up to 40% per month on her loan and still break-even.[11]

- Data on returns to non-farm micro enterprises collected in the field in Africa and Asia found that the average annual incremental return on the "215 investments, after subtracting the opportunity cost of their owners' labor, was 847%. The returns ranged from minus 480% to plus 19,200%, but only in 40 cases, mainly the larger businesses with investments of over $500, was the annual return less than 100%. The return was over 1,000% in 44 cases. There were only ten businesses where the owner would have made more money by being employed. These extraordinarily high returns do not, of course, mean that the owners of these micro-enterprises are wealthy. The amounts invested are very small, and the opportunity costs of the owners' labor are often very low. An 847% annual return on an investment of $100 is only $847, which is about $2.30 a day and may be the sole income for a household of five or more people."[12]

- Small scale producers who may be using only hand tools to make furniture, metalworking or small scale food production will see their daily output increase permanently not by 10% or even 50% but by many times after purchasing simple pieces of equipment like electric saws, sanders or larger stoves and ovens. At the same time, for such producers, the cost of the equipment and therefore the interest burden can be an insignificant part of their total expenses.[13]

The general point is that rates of return generally decrease as the scale of investment increases. A rickshaw puller can earn a higher percentage return on his investment in the rickshaw than a taxi driver can earn on his car, and a tailor can earn a larger proportionate return on the cost of her treadle-powered sewing machine than an investor can make on her investment in a garment factory. Most MFIs, however, are not in the business of financing taxis or garment factories. Their high interest rates, as well as their often quite onerous demands for group membership, regular savings and weekly meetings effectively discourage larger borrowers

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[10] Rosenberg, 1996.

[11] Ibid.

[12] Cited in Harper and Dichter, forthcoming, Chapter 8.

[13] Examples from Rosenberg, Harper, Chu. There are critics who warn against extrapolating from the fact that some borrowers can pay high rates on small loans to the conclusion that most or all poor entrepreneurs can afford high rates, such as Morduch, 2000.

from using their services, and thus protect them from client or mission "drift" towards higher income clients and larger loans.[14]

That micro enterprises, can sustain what may strike us as intolerably high interest rates often masks important variations that determine both the social impact and the prospects for investors. In particular, not all micro enterprises achieve the same yields. Evidence suggests, for example, that returns on agricultural activities at the micro scale tend to yield between 40-100%.[15] While still high by mainstream standards, such returns are significantly lower than those reported on the non agricultural micro-enterprises reported above. They are also, at the lower end of the range, much closer to the rates charged by MFIs, meaning that there is a higher risk that the loan is not suitable to the underlying economics of the business activity. Investors need to be sensitive to how MFIs are positioned in their markets in terms of their operating costs and interest rates and the underlying economics of their borrowers to ensure that their niche is a sustainable one on business grounds, if social impact and financial objectives are to be achieved.

Low write offs

A key revelation of the early work in microfinance in the 1970s and 1980s was that the poor were in fact creditworthy. If products were tailored to their needs in terms of size and repayment schedule, processes were responsive to their travel and time constraints, and institutions were sufficiently reliable that borrowers could expect that good performance would ensure future access to credit; the poor would achieve repayments rates consistent with financial viability of the lender. The experience of these early microfinance programs demonstrated that very low repayment rates of many development banks, which typically offered highly subsidized interest rates, more often than not reflected what was expected of borrowers rather than what they were capable of.

Furthermore, there is evidence that the poor not only repay but often are better credit risks than the more established and wealthier borrowers preferred by conventional lenders and that MFIs maintain better portfolio quality throughout the business cycle than many mainstream financial institutions. While it is often difficult to compare directly portfolio quality measures for MFIs and mainstream institutions because of different reporting conventions or mismatched periods or markets, some direct comparisons can be found. In Bolivia, for example, both MFIs and conventional banks must report to the Superintendency of Banks using the same framework. Data for 2004-2005 for eight MFIs responsible for 84% of the Bolivian micro credit portfolio found late payments as a proportion of gross portfolio ranging from 2.1-5.7% as of end 2004 and 2.1-6.6% as of late 2005. This compared to late payments rates for conventional banks of over 14% during these periods and between 8-11% for cooperatives.[16]

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[14] Harper and Dichter, 2007.
[15] Ibid.
[16] Chu 2005, p8.

Loan Loss Provision Expense (2005)

All MFIs	1.6%	MF Banks	1.3%
Small MFIs	1.7%	MF Credit Unions	2.7%
Large MFIs	1.5%	MF NGOs	1.5%
Solidarity group lending	0.8%		
Individual lending	1.9%		

Source: MBB 13.

Often MFIs will report repayment rates of close to 100%, particularly MFIs using group lending models. While this, and other means by which MFIs manage credit quality, are undoubtedly effective, there is evidence that portfolio quality can be overstated. Reasons include the tendency of explicit or implicit joint liability to overstate credit quality of individual members, when other members cover missed payments. Of greater concern is the danger of systemic over indebtedness, where the lack of effective credit reporting across lenders can lead to borrowers drawing multiple loans from different lenders, a situation that occurred in Bolivia in the late 1990s.[17] The lesson to be drawn is that while there are compelling reasons why microcredit portfolio quality is generally strong, it cannot be taken for granted, and investors must closely monitor the competitive trends in the markets in which they operate.

Low correlation with business cycle

As noted above, not only are microfinance portfolios often of better quality than other loan portfolios in the same countries, but there is some evidence that they perform better through the business cycle or during periods of financial stress. The intuitive case for this is appealing: since much microfinance is focused on subsistence producers and the informal economy, it makes sense that demand for low cost essentials would be more stable than for goods and services that depend on higher incomes. Similarly, an economic downturn would actually increase demand for low cost, local producers. Anecdotal evidence to back up this intuition is suggestive but scarce, including studies in Colombia, Bolivia and Indonesia. One more rigorous study completed in early 2007 tentatively suggests that MFIs show low correlation with equity indexes and with most measures of domestic macroeconomic conditions, and much lower correlations in general than commercial banks. Thus, while the case for microfinance as an uncorrelated or negatively correlated asset has not been conclusively demonstrated, microfinance does seem to show solid performance compared to other assets in periods of stress.[18]

[17] Rhyne 2006
[18] Walter and Krauss, 2007

Key Trends in the Microfinance Industry

The fundamental features of (i) portfolio yield, (ii) operating cost and (iii) credit quality are the primary drivers of MFI performance, and trends and developments affecting them must be closely monitored in each market in which an investor is active to ensure that social and financial objectives remain on track. Much of the impetus in all three areas relates to the competitive landscape. While estimated market demand on a global basis far outstrips supply, in specific sub-markets competition can be intense. In addition, even in the absence of direct competition, international investors have increasingly emphasized the quality of service, including cost, instead of the earlier goal of simple access so that MFIs may find themselves effectively competing for funds on a global basis.

Beyond these fundamentals there are a number of other trends which are altering the financial dynamics of microfinance. One is the speed at which MFIs achieve break even. Review of MFI data finds that the period required to achieve breakeven has dropped from nine years for MFIs founded in the early 1990s to four years by the end of the decade.[19]

Another trend relates to leverage. As microfinance NGOs, many MFIs were very limited in their ability to borrow: lenders had concerns about the quality of equity, lack of governance, and the generally un-secured loans. Reflecting this, leverage or capital/assets ratios were generally very conservative in comparison to conventional financial institutions. Even today, for example, microfinance NGOs report an average capital/assets ratio of over 40% and a debt/equity ratio of only 1.4 times, while microfinance banks report 13.7% and 6.1 times, respectively.[20] At these levels of leverage, still conservative by conventional bank standards, corporate MFIs can generate dramatically higher returns on equity than based on the traditional low leverage that has historically characterized microfinance.

	MBB Average All MFIs (446)	**MBB MF Banks (51)**
Portfolio Yield	31.9%	26.4%
Operating Expense	15.7%	11.3%
Cost of Funds	6.4%	6.3%
Leverage	3.6x	7.3x
Loan Loss Expense	1.6%	1.3%
ROA	0.9%	1.2%
ROE	4.4%	7.9%

Source: MicoBanking Bulletin (MBB) 14.

As the chart above illustrates, all these factors – interest rates, operating costs, loan loss expense, leverage and others, can powerfully impact profitability. Furthermore, while one might expect yields to come under pressure over time, the trends on leverage and efficiency, as well as in certain circumstances cost of funds, will likely move to enhance returns in the

[19] Unpublished 2007 analysis of sample of 60 MFIs using MiX and MBB data.
[20] MBB 13.

coming years.[21] However, as noted above, while the overall trends may be favorable, specific MFIs can expect to be buffeted by continued rapid and disruptive developments with respect to yield, efficiency and credit quality.

Market Penetration of Microfinance

The growth in outreach of microfinance since its establishment in the 1970s has been dramatic, but market penetration by any measure remains low.[22] In 1997 it was estimated by the Microcredit Summit Campaign that MFIs served 13.5 million clients whereas by 2006 3,100 reporting MFIs[23] served approximately 113 million clients worldwide,[24] representing annual growth in outreach of between 25 and 30%[25] over this period. The MicroBanking Bulletin, which has been tracking the sector for 10 years, has seen its database of institutions grow from 28 MFIs in 1997 to 446 serving 33 million borrowers and 48 million depositors with $13 billion in loans and $9 billion in deposits. A CGAP survey of "Alternative Financial Institutions" including MFIs estimated that there were about 500 million active clients, most of them savers in postal banks and not all of them poor.

Cross referencing the various databases and surveys provides a rough picture of an industry composed of a core of about 500 MFIs reaching about 50 million borrowers and perhaps another 50 million depositors.[26]

Despite this rapid growth, the aggregate number of clients reached is dwarfed by estimates of the current total worldwide demand for microfinance services. Estimates of demand suffer from the same type of conceptual problems as in the case of supply. The simplest estimate of the potential market takes the world population (6 billion), subtracts the populations of rich countries and citizens of developing countries who have access to commercial banks (1 billion) and people above or below working age (2 billion) to arrive at a target market of 3 billion.[27]

Somewhat more refined estimates use the number of people living on less than $2 per day (2.8 billion) or $1 per day (1.2 billion) or the working age subset of each group (1.8 billion and 0.7 billion).

Other analyses, as in the chart below, locate microfinance more precisely within the financial landscape of the poor by using the concepts of extremely poor (living on less than $0.75 per day) economically active poor, and lower middle income. Most of these analyses assume that those at the upper end of the range ("vulnerable" as distinct from "moderately poor") have some access to appropriate conventional bank services, while those at the bottom

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[21] One interesting development with respect to effective leverage is the emergence of off balance sheet financing of MFIs, through agent models, known in variants as the "service company" or "partnership model" pioneered by Accion International in number of countries and ICICI Bank in India. In most cases these are with some recourse, so leverage is still constrained by capital. The first non-recourse securitization was completed by BRAC in Bangladesh in 2006.

[22] Statistics on the total outreach of the microfinance sector vary from one recognized information source to another. For example the Microfinance Information Exchange (MiX) puts the number of active borrowers in 2005 at 62 million which was approximately 30 million less than the Microcredit Summit Campaign figure at the same date. The difference is largely explained by the Microcredit Summit Campaign figures including government-run programs and large Indian self-help group movements.

[23] The actual number of MFIs in operation is estimated to be about 10,000. Many of these operate on an extremely small scale.

[24] Microcredit Summit Report 2006 – of this information, the campaign verified that provided by 410 of the largest MFIs.

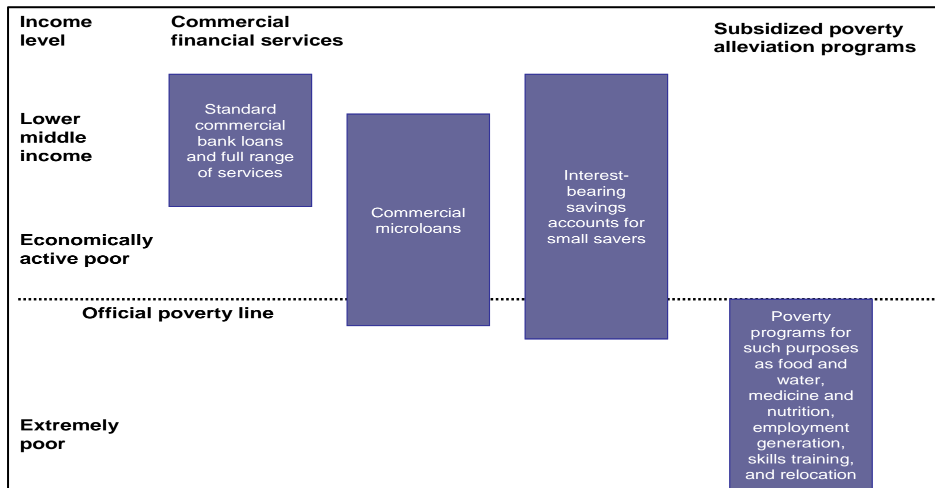
[25] UNCDF

[26] Otero and Rhyne, 2006, p 7.

[27] CGAP Occasional Paper 8, p 13.

("destitute" as distinct from "very poor") are not suitable clients for financial services without significant non financial interventions. Thus the core microfinance market might be defined as some substantial proportion of the 1.1 billion working age people with incomes between $1 and $2 per day.

Financial Services in the Poverty Alleviation Toolbox



Source: Reproduced from Robinson 2001, p21.

Summarizing these various approaches and concepts suggests that on a global basis microfinance is likely reaching no more than about 10-15% of potential clients today, and that the potential demand for microfinance services remains largely unfulfilled. Furthermore, demographic and economic trends, including the high proportion of youth, low education and skills development, rural to urban migration and sluggish absorptive capacity of the formal sector, ensure that the pool of potential clients in all developing countries will continue to grow.[28]

A number of attempts have been made to refine these global estimates to provide a better sense of the challenge facing poverty alleviation efforts and the potential opportunity facing investors. A comprehensive 2004 survey by CGAP of "Alternative Financial Institutions" provides an upper limit of how many people in different regions are receiving any financial services from institutions dedicated to reaching clients not well served by the conventional financial system. The actual number of the poor and near poor effectively reached is much less than the gross numbers reported because many clients were found not to be poor and 80% of the accounts reported were savings accounts. The study found that even by this very accommodating standard, market penetration is low everywhere, with no more than 1/3 of the working age poor reached except in East Asia. Penetration by MFIs, which are generally the most responsive to client needs, was negligible. Coops and credit unions are significant in some regions (8-15%). State and postal banks reached 20% of the working age poor in four regions or

[28] Otero and Rhyne 2006.

countries, including India and China. Commercial banks' penetration appeared to be growing, but was only significant in Brazil and Central and Eastern Europe at the time of the study.

Penetration by Alternative Financial Institutions

Region	India	China	Other S Asia	Other E Asia	SS AF	ECA	Brazil	Other LAC	MENA
Working Age Population	525mm	415	155	195	230	70	25	55	45
MFIs	1%	0%	11%	42%	2%	1%	1%	8%	3%
Coops and Credit Unions	0%	0%	11%	9%	3%	8%	4%	15%	0%
State, Rural And Postal Banks	29%	23%	9%	18%	5%	9%	0%	0%	20%

Source: Unpublished presentation, Sep 2005 based on CGAP OP #8, 2004.

An alternative approach to crudely estimating penetration is to simply use population, and benchmarking to countries known to have relatively robust microfinance activity. Countries with the highest penetration in the world include Bangladesh, Bolivia, Mongolia and Bosnia. The access and dynamism of these markets suggests that such borrower penetration rates relative to total population (4 to 9%) may provide a very crude target for other countries.

Countries with MF High Penetration

Country	MFIs	Borrowers/ Population	Population
Bangladesh	44	9.2%	147mm
Mongolia	2	8.1%	3mm
Bolivia	9	4.4%	9mm
Bosnia	11	4.1%	4mm
Cambodia	9	3.5%	14mm
Nicaragua	10	3.4%	6mm
Peru	23	3.1%	28mm

Source: Otero and Rhyne 2006, p 11 based on MiX data as of 2005.

Most other countries are well below these levels and some of the largest countries, with the largest populations of poor show the greatest shortfalls. Among the larger countries, with the exception of Bangladesh, Indonesia had the highest penetration rate at 1.3% of population as of 2005. For India to achieve even this relatively low level of penetration, it would need to add 12mm borrowers vs. 1.6mm in 2005.[29] Russia and Nigeria would need to add nearly 2mm borrowers each to their 2005 levels of under 200,000.

[29] Indian MFIs have roughly 2.5mm borrowers today.

Penetration in Large Countries

Country	MFIs	Borrowers/ Population	Population
China	0	0.0%	1,313mm
India	26	0.1%	1,095mm
Indonesia	6	1.3%	245mm
Brazil	2	0.1%	188mm
Pakistan	12	0.3%	166mm
Bangladesh	44	9.2%	147mm
Russia	2	0.0%	143mm
Nigeria	3	0.1%	132mm
Mexico	6	0.4%	107mm

Source: Ibid, p 12.

On a country level, a number of other factors further complicate the penetration issue.

- While poverty tends to be disproportionately concentrated in rural areas, many successful microfinance models have demonstrated better performance in urban areas, and so urban penetration tends to be higher. Worldwide, population is almost evenly distributed between urban and rural (48% versus 52%) but 74% of the poor are rural.
- Overlaid over the rural urban mal-distribution, there are often geographic concentrations as well. A prime example is India, where until recently nearly all microfinance activity was concentrated in the state of Andhra Pradesh with some spill over to a few neighboring states.
- Many large countries, such as China and Nigeria, are only now beginning to permit shareholder MFIs, so that balance sheets to support growth have to be built more or less from scratch.

The overall conclusion to be drawn from all the available data is that the market for microfinance is expected to continue expanding rapidly. Estimates of ten fold growth over the next ten years to an industry with over five hundred million clients and total industry assets of $200-300 billion do not appear unreasonable.

State of the Microfinance Equity Market

Proliferation of Shareholder MFIs

The trend for many MFIs to transform themselves from not-for-profit to for-profit entities has given rise to a rapidly increasing number of shareholder-owned MFIs. A recent survey found 222 regulated, commercial and shareholder-owned (excluding government controlled) MFIs worldwide as of September 2006 compared to 124 such institutions only two years earlier.[30] The increase has been worldwide but has been fastest in Asia, Eastern Europe and Africa.

[30] Council of Microfinance Equity Funds, "The Growth of Commercial Microfinance 2004-2006", 2006.

The need for Equity in the Microfinance Sector

While, as noted above, many MFIs are underleveraged as compared to other financial institutions, growth rates of assets are absorbing the equity "cushion" rapidly, and capital requirements going forward will be only partially met through retained earnings.

Of equal importance, new shareholder equity, particularly when drawn from a variety of investors who share a common vision for an MFI but bring different perspectives and expertise, can greatly enhance the MFIs governance, with positive implications for strategy, senior staff management and succession planning, balance sheet management and other critical considerations. This is particularly critical for institutions that are planning a medium term high growth strategy. From a quantitative standpoint, building a microfinance sector that can begin to achieve minimal levels of penetration has just begun. For example, in order to reach a penetration of 1.3% of population, equivalent to penetration levels in Indonesia but far short of the 3-5% levels seen in Bolivia, Bosnia, Cambodia or Nicaragua, the seven countries below would have to add 37mm borrowers, ignoring population growth. At current average loan sizes this would require loan portfolio growth of $10.8 billion, roughly doubling the current size of the sector in terms of clients and portfolio. Assuming a capital assets ratio of 12% for this incremental portfolio generates fresh equity requirements of $1.3 billion. To move to penetration levels seen in the countries with the most highly developed microfinance markets, for example 5%, would require additional equity of $6.5 billion.

Market Penetration and Estimated Equity Requirements in Selected Large Countries

	Incremental Borrowers (to 1.3% of population)	Average Loan size ($)	Equity Requirement (12% of total assets and 1.3% penetration)	Equity Requirement (12% of total assets and 5.0% penetration)
China	17.1MM	$82(e)	$168MM	$646MM
India	13.1MM	$82	$129MM	$528MM
Indonesia	0.0MM	$1245	$0MM	$135MM
Brazil	2.3MM	$235	$64MM	$260MM
Pakistan	1.7MM	$176	$35MM	$165MM
Russia	1.9MM	$3,847	$858MM	$3,301MM
Nigeria	1.6MM	$41	$8MM	$32MM
Mexico	1.0MM	$298	$34MM	$176MM
Total	**38.5MM**		**$1,296MM**	**$6,461MM**

Source: Based on Otero and Rhyne.

These macro level analyses are consistent with country level sector studies. For example, two recent studies of the India microfinance sector came up with estimates ranging from $260 million to $475 million of incremental new equity required over the next five years.[31]

However estimated, whether by projecting current portfolio growth rates or looking at global or regional penetration levels, substantial increases in the equity base of the sector will be required over the next 5-10 years. With equity finance in the worldwide microfinance sector currently estimated at about $2.5-3.0 billion, increases of 10 times over a 10 year period can be anticipated, translating into a dollar requirement of $25-30 billion.[32]

Sources of Equity Funding

Traditional sources of equity have been founding institutions, typically NGOs, retained earnings and foreign official institutions, also known as International Financial Institutions (IFIs). Foreign private investment in equity of MFIs has been modest. A survey by CGAP found of about $1.2 billion in foreign investment in MFIs as of mid 2004, foreign private investment in MFI equity totaled $130 million, or about one quarter of total private investment.[33]

To meet the future needs of the sector, all these sources and more will be required to play a role. An increasingly important component of this mix will be private foreign investment, both because of its capacity and appetite for such assets and also because of the important non-financial role that such capital can play through governance and linkages to capital markets and complementary institutions.

Public Investors

Public investors, the IFIs, continue to have a strong appetite for microfinance assets. As of the end of 2005, the IFIs had committed $2.4 billion to microfinance investment, and this was projected to grow by at least 30% annually.[34] However, this appetite has been quite concentrated in the past, in terms of investors, regions, and MFIs. The vast majority of investment, nearly 80%, is in debt; 70% has been by four official institutions: the IFC, KfW, AECI and EBRD; 70% has been in Europe and Latin America. Nearly 40% of IFI direct investment is in 15 institutions, and eight of those are part of the ProCredit group. Of less than $400 million of equity investment by IFIs as of end 2005, 60% was by KfW and IFC. While many trends since then are favorable, in terms of focus on new regions and new MFIs, the strong institutional bias towards lower risk instruments and institutions is strongly entrenched and seems unlikely to change dramatically enough for IFIs to play a major role in meeting the anticipated equity requirements.[35]

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31 MCRIL and Intellecap studies.
32 "Optimizing Capital Supply" SEEP 2006.
33 CGAP Focus Note 30, August 2005.
34 CGAP, "Public Investor Microfinance Portfolio" Nov 2006.
35 MicroRate, "Crowding Out: Are IFIs Displacing Private Funding in Microfinance?" Jan 2007.

Public Investors (IFIs) Investment in MFIs

	Total	Equity %	Equity $
LAC	$852MM	6%	$51MM
SS Af	$155	25%	$39
CEE	$838	16%	$134
S Asia	$110	42%	$46
E Asia	$85	5%	$4
MENA	$118	12%	$14

Source: CGAP Survey, Nov 2006

Local Investors

While local investors, particularly depositors, have become the most important source of liabilities, with public deposits accounting for well over half of the aggregate industry liabilities, with the exception of founding NGOs local investors' appetite for equity has been very limited to date. A CGAP - Grameen Foundation study went so far as to state that it is "Difficult to impossible to find suitable local investors to invest in MFIs." While this will inevitably change, current evidence suggests that private *foreign* investors will lead rather than follow local investors.

Increased Leverage

There is clearly some scope for increased leverage to support asset growth without additional equity. To illustrate using aggregate numbers for the whole industry, if the existing capital base is as much as $3 billion and the assets as little as $17 billion, a decrease in the capital assets ratio from 17% to 10% would support a 75% increase in assets, perhaps two years of projected portfolio growth. While not insignificant, even if this capacity could be fully utilized, a binding constraint is fast approaching. Of course, available equity is not easily redistributed to those MFIs that can best utilize it. Many of the fastest growing and most efficient MFIs are exactly those with the highest leverage already, whole others with lower leverage have ownership and governance structures that will discourage lenders from accepting higher leverage.

Off Balance Sheet, Non Recourse Finance

Securitization of microfinance assets is in its nascent stages, but could also play an important role for the largest MFIs. The only true non-recourse securitization to date has involved BRAC of Bangladesh and a collaborative team of foreign entities including the IFIs KfW and FMO and CitiBank Dhaka. About $180 million of underlying assets have been securitized to date. While an important breakthrough, it is important to bear in mind that BRAC is one of 4-5 largest MFIs in the world, with over four million borrowers. The ability of other, smaller MFIs which may offer multiple products to reliably take advantage of non recourse securitization on significant scale still has to be demonstrated.

Philanthropic Investors

There have been a number of high profile announcements by philanthropic individuals or institutions of new programs for investment in microfinance. The most prominent to date has been a $45 million program of Opportunity International to help it launch new MFIs

in five African countries, including $15 million from the Gates Foundation. More generally, the Gates Foundation will be unveiling its microfinance strategy in the fall of 2007 and it is not clear to what extent equity investment might play a role. A number of other, smaller philanthropic or concessional initiatives also have an equity component, such as Unitus, OikoCredit and Accion International. While these initiatives could play a significant role in specific markets, there is no indication that the magnitudes committed could be relevant to meeting projected equity requirements over the next 5-10 years.

Commercial Bank Downscaling

Often referred to as "downscaling," mainstream commercial banks are becoming increasingly active in microfinance, both as a source of wholesale funding to MFIs and as direct providers of microfinance services. A recent CGAP survey found that half of the institutions providing microfinance do not categorize themselves as MFIs; most of these are commercial banks. A Calmeadow study of Latin America found that as early as 2001, nearly half of microfinance loan portfolios and clients were held by mainstream commercial banks "downscalers", and the general expectation was that this proportion would increase.[36] A more recent survey found that of 120 institutions reporting, 17 commercial banks held 35% of the outstanding portfolio and 26% of the clients.[37] To the extent that commercial banks directly fund microfinance assets on their own balance sheets, the equity requirements of the specialized microfinance sector are reduced.

Equity Focused MIVs (Microfinance Investment Vehicles)

As of mid 2007, there were roughly 85 MIVs focused in whole or large part on investing in the microfinance sector. This is quite a diverse universe, including debt and equity funds, highly concessional and largely commercial, private equity funds, corporate entities and special purpose vehicles. Of these, about 17 are more or less commercial funds focused on only equity investment in MFIs. Excluding ProCredit Holdings with $390 million, total capitalization of the remaining 16 funds is about $225 million. In addition there are perhaps as many as a dozen debt funds that devote in total about $100 million in total to equity investment.

A recent CGAP survey fleshed out similar conclusions. It found 74 MIVs as of end 2006 with about 15 new MIVs created in each of 2005 and 2006. Total investment was $2 billion, up strongly from $1 billion as of 2005. As with the IFIs, investment was highly concentrated, with Latin America and Europe and Central Asia accounting for 80% and ten MFIs, five from the ProCredit group, accounting for 25%. One third of MIV funding was provided by IFI investors and half by socially responsible investors. Nearly four in five funds were less than $20 million in size; only nine had more than $50 million in investments and of these only one, ProCredit Holdings, is an equity fund. Roughly one quarter of total MIV investments, or about $500 million, are in MFI equity, with the overwhelming majority represented by ProCredit.

The first microfinance equity fund was ProFund, created in 1995 and liquidated by 2006. A number of other funds, including Accion Investments, ShoreCap International were

[36] Chowdri & Silva, 2004, p 12.
[37] Marulanda and Otero, 2005, p C.

created in the early 2000s, and a fresh crop emerged in 2005-2006, including LFS Access, Bellwether, Unitus Equity Fund, MicroCred, and Catalyst. A number of others are being planned.

While there had been something of trend away from mixed debt and equity funds, this has recently reversed with a number of large debt funds, such as OikoCredit, Responsibility, and the SNS fund recently setting an equity allocation. There has also been a trend away from funds set up to exclusively invest in transforming NGOs, and more funds are focusing on start-ups, such as LFS Access, MicroCred, and Catalyst. More MIVs are also structuring themselves as investment companies or holding companies rather than limited life private equity funds.

Each of the Equity MIVs has its own investment strategy and such strategies can be classified into the following broad categories:

Global/Multiregional

A number of MIVs, typically based in Europe or the U.S., target MFIs globally or in several major regions. Among these are ShoreCap, the Triodos Funds, Unitus Equity Fund, OikoCredit, and Responsibility (the latter two have earmarked about 10% of much larger debt funds to relatively new equity allocations). These funds often take a board seat, despite the logistical challenges of doing so, and with the exception of OikoCredit, typically invest alongside other foreign funds or IFIs. Such funds often benefit from managers with substantial experience in investment in mainstream capital markets.

Local funds

These funds focus on a specific region or country and typically have managers based in and drawn from the target region, and benefit from continuous presence, knowledge of and contacts in local capital, financial and microfinance markets, often enjoy lower cost base, and usually have native speakers of the local languages. Among these are Bellwether, Lok Capital, Antares, AfriCap and the Balkans Financial Sector Fund. In some cases, it is difficult to find local managers with deep investment experience who are willing to work for relatively small funds.

Greenfield Grant Led/Owner-Operator

A special category among the local funds are the "greenfields" or owner/operator funds, many inspired by the apparent success of the ProCredit model. These funds typically have a close relationship with IFIs or a microfinance network which in addition to investing in the MIV, will frequently provide parallel grant funding for technical assistance during the early years of operation of the MFI. Often these funds aim to create a holding company of wholly owned or controlled MFIs, sharing some common functions, and aim to generate liquidity for investors primarily by eventually listing the entire holding company on a stock exchange. Funds of this type have been created in the past year by LFS (Access), Planet Finance (MicroCred), Catalyst Microfinance Investors (ASA International), and Horus (LaFayette).

Networks

Many of the major microfinance networks have created funds in order to provide affiliates with a source of equity and to preserve the network relationship as the MFIs transform

and grow. The first of these was the Accion Gateway Fund created in 1996. More recently Opportunity International and FINCA have created network funds and several others are contemplated.

Name of MIV	Date of Establishment	Committed Capital	Key Strategy Classification
Access Fund	2006	$23MM	Greenfield holding company
Accion Investments	2003	$20	Multiregional
Africap	2003	$13	Local – Africa
Antares	2005	$10	Secondary markets
Avishkar – Goodwell	2007	$ 5	Local – India
BFSF	2005	$24	Local – Balkans
Bellwether	2005	$10	Local – India
Catalyst	2005	$ 3	Owner/Operator Holding Company
Accion Gateway	1996	$ 6	
Lafayette	2005	$18	Greenfield
Lok Capital	2006	$12	Local – South Asia
MicroCred	2006	$25	Greenfield
Opportunity Transformation Investments	2001	$33	Network
ProCredit	1998	$390	Owner Operator Holding Company
Shorecap	2003	$28	Global

A number of these funds have recently recapitalized or are in the process.

	Initial Capitalization	Current Target
Accion Investments	$20MM	$50MM
AfriCap	$13	$45
Bellwether	$5	$26
Catalyst	$3	$100
Unitus Equity Fund	$8	$22

Taking into account these recapitalizations, equity portfolio allocations by debt funds, some of which are growing quite rapidly, and new funds under consideration, it is estimated that the capital dedicated to MFI equity by commercial MIVs will reach nearly $1 billion by the end of 2007.

Managers of Equity Focused MIVs

Each of these funds has a dedicated management team, typically comprising 2-3 investment professionals. Exceptions are Triodos, with an investment team of 8-9 individuals handling three global debt/equity funds, and OikoCredit, which relies on a small headquarters staff of 4-5 investment professionals and a large network of local offices around the world. The overwhelming majority of investment staff is based outside the target regions, and most are still drawn from Europe and the US.

A number of managers are emerging with families of funds. To date, most of these involve debt funds. A number of these experienced debt fund managers are looking at moving into equity management as well, including ResponsAbility, Blue Orchard, and Cyrano. Generally, the plan is to create a separate equity management function with 1-2 fully dedicated staff.

In addition, a number of institutions have made significant commitments to microfinance over the past 1-2 years and could include investment in microfinance equity either directly or through MIVs as a major part of their strategy. These include Omidyar Network, Omidyar Tufts Microfinance Fund, TIAA-CREF, PGGM and ABP (Dutch pension funds), SNS Bank, ICICI Bank and others. In most cases these initiatives are assembling their own in-house staff while in others they are entering into advisory relationships with existing managers.

To date there are two "funds of funds" in the private investor community: the Gray Ghost Microfinance Fund and the St Honore Fund of Blue Orchard, which is a debt fund. In addition, a number of public (IFI) investors also function as funds of funds, including IFC, IDB, KfW and EBRD.

Families of MF Funds

Manager	Equity Funds	Debt Funds
Omtrix	ProFund (completed), Antares	ELF, STLF, GROWTH
Cyrano		LACIF I, Solidus, GMF, LACIF II
Blue Orchard	In formation	Dexia Microcredit Fund, MFS I, BOLD, St Honore
Deutsche Bank Community Development	Planned	MDF, GCMC, Start up Fund

Finally, as microfinance attracts greater attention and interest, there are numerous initiatives in the concept or early test phase promoted by various managers and advisors that are new to the sector, many with mainstream capital markets experience. Inevitably, the list of active managers will look much different a year or two from now than it does today. As with microfinance itself, one major question is the extent to which the investment management will be absorbed into the mainstream emerging market private equity sector in the years ahead, and what role the existing specialized managers will play. A number of these can be expected to provide competition for existing specialized managers.

Potential sources of competition

Type of Competitor	Current	Anticipated
Equity Fund of Funds	Gray Ghost Microfinance Fund	Deutsche Bank, Blue Orchard
Equity Advisor	Developing World Markets, Symbiotics	
Equity Fund Investor	IFIs, Omidyar Network, Omidyar Tufts Microfinance Fund	Blue Orchard, Responsibility,
Debt/Equity Funds	Triodos, OikoCredit, MicroVest	

Performance of microfinance equity investment

Through the end of 2006, there had been a limited, but growing, number of exits from MFI equity investments. These yielded a wide range of returns to investors, affected importantly by currency movements in specific cases. Only over the past year has multiple expansion begun to become a factor in generating returns to investors; more important has been the growth in equity of the MFIs; dividends are rare though becoming more common.

Microfinance Equity Transactions through 2006

Country	Entity	Date	% Purchased	Price/Historic Book Value	Price/Historic Net Income
Peru	Mibanco	Dec. 2004	5.02	1.48	6.52
		Dec. 2004	22.8	1.35	5.95
		Oct. 2004	7.80	1.36	5.99
		Jul. 2004	0.41	1.08	4.74
		Jul. 2004	4.61	1.07	4.71
Average				1.27	5.58

Microfinance Equity Transactions through 2006 **(continued from previous page)**

Country	Entity	Date	% Purchased	Price/Historic Book Value	Price/Historic Net Income
Bolivia	BancoSol	Dec. 2004	47.2	0.98	4.31
			*	1.0	n/a
Colombia	Finamerica	Nov. 2004	90.1	1.80	42.8
			*	1.4	n/a
Equador	Solidario	Oct. 2004	2.6	0.85	4.32
		Aug. 2003	19.8	0.86	4.69
			*	1.0	n/a
Nicaragua	Confia	2002	*	0.9	n/a
Average for Latin America				1.08	5.15[38]
Ghana	First Allied S &L	Apr. 2004	33.5	n/a[39]	17.2[40]
	SASL	Aug. 2004	100[41]	1.0	n/a
Kenya	K-Rep	Sep. 2004	13.4	0.62	5.35
	Equity Build Soc'y	Apr. 2003	15.9	1.59	7.86[42]
Malawi	OIBM	Mar. 2003	30.5	1.13	n/a
Average for Africa				1.09	6.6[43]
AVERAGE				**1.09**	**7.50**

Source: Reproduced from B. O'Brien 2006 based on ACCION, www.africapfund.com, www.procredit-holdings.com and Silva (2005) (marked*)

With the exception of ProFund, no microfinance equity fund has been fully liquidated. ProFund achieved an overall (all inclusive) IRR of 6.60%. Before operating expenses, that figure would have been 9.07%. An analysis of ProFund's IRR of 6.6% by the International Finance Corporation (an investor) found that for emerging market venture capital and private equity funds raised in 1995, a total of 14, ProFund placed in the top quartile, and

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[38] Excluding Finamerica.

[39] Using the price of $600,000 to be paid by AfriCap for new shares equivalent to 33.5% and existing equity as a 31 December 2003, an approximate price/book ration of 1.8 times can be deduced.

[40] Discussions with AfriCap suggest that the multiple paid was 4-5 times adjusted forecast earnings.

[41] This was the original capitalization of Opportunity International's commercial bank in Ghana.

[42] Excluding First Allied (see above note).

[43] Based on the average for all Mibanco transactions and excluding the outlying values for the other transactions, being Finamerica at the top end.

only two funds achieved a higher return, with the top performer returning 12.2%. The median return for the 14 funds was a negative 0.6%.[44]

Another equity fund with a similar duration is the Gateway Fund, created by Accion in 1996, which has made investments in nine Latin American MFIs. Valuing equity at a conservative 1x book, Gateway estimates its returns after estimated fees are about 22%.

A recent general survey of available data on exits found that the average price/book multiple for Latin American MFIs of about 1.08 and a price to net income multiple of about 5.15. For four transactions in Africa, the multiples were 1.09 and 6.6.[45] Overall, book multiples ranged from 0.6 to 1.6 and earnings multiples from 4.3 to 17.2. Nearly all of these were private sales. Until this year, there had been a limited number of listings of MFIs, Banco Sol, Bank Rakyat Indonesia and Equity Building Society, which with the exception of the last also were floated at prices within this range. In April 2007, Compartamos, a Mexican MFI sold $470 million in shares at 17x projected (2008) earnings and 6x projected book value.

To put the MFI multiples in some context, the same study collected equity sales and trading price data on commercial banks in the same or related markets.

Indicator (number in each sample)	**Price/Historic Book Value (x)**	**Price/Historic Net Income (x)**	**Return on Equity (%)**
Bank Transactions:			
Eastern Europe (28)+	2.0	19.8	13.0
Asia (29)	2.5	15.0	n/a
Bank Trading Multiples:			
Eastern Europe (15)	2.3	14.3	15.4
Asia (18)	2.8	15.8	21.7
Latin American (9)	2.9	14.4	22.7
South African (4)	2.6	13.0	19.9

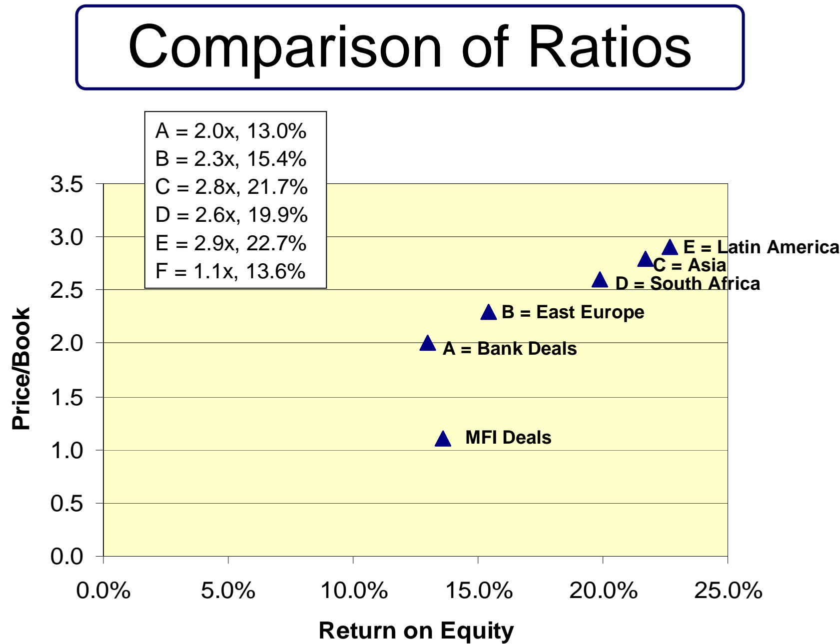
+: Averages exclude the outlying values for these transactions

Source: O'Brien 2005 citing ING, Citigroup (July 2005)

Banks and MFIs and the specific transactions represented may differ in important respects and may not always be directly comparable. For example, all but two of the sales in Eastern Europe involved transfer of a control position and the banks are uniformly much larger than the MFIs. Nevertheless, the discrepancy between MFI and bank prices in terms of multiple to book or P/E is large: there is a "consistent pattern of banks selling at multiples 2-3 times that seen in MFI sales."

[44] Cited in Chu 2005.
[45] O'Brien 2005, p 11.

One obvious source of the discrepancy between banks and MFI equity prices could reflect different levels of ROE. The study examined this possibility and found that while there is a strong relationship between return on equity ("ROE") and multiples, the discrepancy between MFIs and banks persists even at comparable levels of ROE.



Source: Reproduced from O'Brien 2006

A number of other factors that might explain the discrepancy were also identified, although no attempt was made to quantify their relative impact. Roughly speaking, it would appear that there are as many good reasons for MFIs to command a discount to commercial multiples as a premium.[46]

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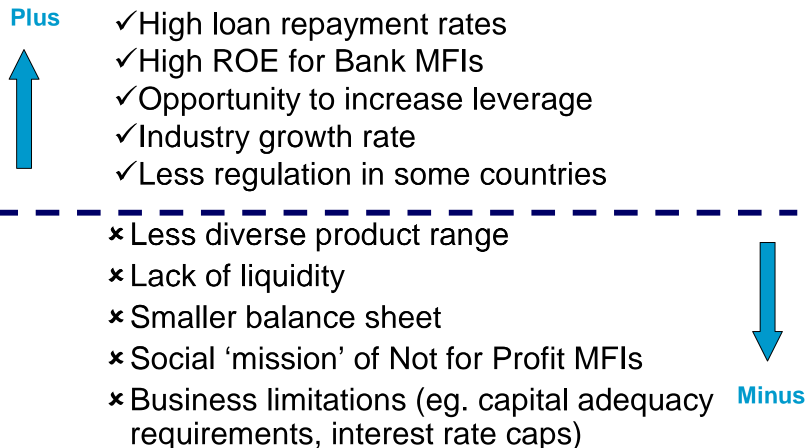
46 Ibid.



Source: Reproduced from O'Brien.

Of these factors, two of the most important contributing to a discount are likely to be lack of liquidity and the ambiguity about financial and social missions. Overall, these and other "discount" factors could be considered to reflect the immaturity of the microfinance industry, the related unfamiliarity of potential investors with MFIs and their performance, and the difficulty in distinguishing between different types of MFIs, particularly those with an overriding social agenda and those with strong financial performance discipline.

It is reasonable to expect that as a broader range of investors become more familiar with MFIs and as MFIs track records are extended, a large proportion, if not all, of the discount in trading prices between banks and MFIs will disappear and MFI multiples will rise, a process that may have begun with Compartamos.

The Investment Case – Financial Performance

Extensive past data on MFIs is unavailable. The major conclusions of this section have been derived from two sources: MicroRate and M-CRIL data on fifty MFIs from 2000-2005 and the Council for Microfinance Equity Funds data on seventy one MFIs from 2004-2006.

MicroRate/M-CRIL Survey: Data from 50 MFIs over Five Years

Data on 50 MFIs from 2000 to 2005 was been assembled and analyzed by the authors via the two leading microfinance rating agencies: MicroRate which produced data on thirty one MFIs in Latin America and M-CRIL which produced data on 19 Asian MFIs. The major statistical findings can be summarized as follows:

Compound Annual Growth Rates of 50 MFIs 2001-2005

	CAGR Local Currency
Number of borrowers	32.1%
Loan portfolio	42.6%
Pre tax profit	50.8%
Net worth	31.0%

Profitability Ratios, in Local Currency of 50 MFIs 2001-2005

	2001	2002	2003	2004	2005
Portfolio yield (Income from loans/Average gross loans)	40.7%	34.1%	34.6%	36.1%	34.0%
Cost of borrowed funds (interest cost/average debt)		8.9%	9.3%	8.9%	8.3%
Portfolio spread (portfolio yield less cost of borrowed funds)		24.8%	25.8%	25.3%	24.0%
Administrative efficiency (Administrative costs/Average gross loans)	22.2%	17.3%	15.5%	16.7%	15.0%
Loan loss provision ratio (Loan write offs/average gross loans)	4.1%	1.9%	1.8%	2.0%	2.1%
EBITDA/Assets					
ROA	3.6%	3.1%	3.1%	4.3%	4.4%
ROE	13.6%	14.1%	14.8%	16.4%	19.2%

These 50 MFIs are composed of 25 "for profit" corporate entities and 25 "not for profit" organizations. Interestingly, the growth rates of number of borrowers, total loan portfolios and loan loss ratios have been very similar as between the two groups. However, profitability and efficiency of the "for profit" MFIs have been significantly higher than the "not for profit" organizations:

Growth and Profitability Comparisons of 'For Profit' MFIs Versus 'Not For Profit' MFIs

Median	For Profit MFIs	Not for Profit MFIs
Number of borrowers (CAGR 2001-2005)	32.9%	31.9%
Loan portfolio (CAGR 2001-2005)	42.7%	42.5%
Portfolio yield (2005)	33.5%	34.9%
Cost of borrowed funds (2005)	8.5%	8.0%
Portfolio spread (2005)	24.4%	23.8%
Administrative efficiency (2005)	11.8%	19.2%
Loan loss provision ratio 2005	2.0%	2.1%
EBTDA /Assets (2005)		
ROA (2005)	3.6%	4.5%
ROE (2005)	23.1%	17.6%

Debt: Equity Ratios

Median	2001	2002	2003	2004	2005
For-Profit MFIs	3.98	5.04	4.46	4.78	4.91
Not-for-Profit MFIs	0.91	1.24	1.30	1.72	1.66

The major conclusions to be drawn from the 5 year /50 MFI data are therefore:

1. Median growth rates of numbers of borrowers have been more than 30% per year;

2. Median growth rates of loan portfolios have been more than 40% per year;

3. Median portfolio yield is generally similar for both the for-profit and the not-for-profit MFIs at 33-35%;

4. Median administrative costs appear much lower with the for-profit entities: 11.8% v 19.2% with the not-for-profit entities;

5. Median EBITDA/Total Assets Ratio was higher in 2005 for the for-profit entities 12.9% than the not-for-profit entities 11.1%;

6. The for-profit entities became increasingly profitable over the five years with median Return on Equity rising from 14.3% to 23.1%; and

7. The for-profit entities are generally more highly geared but still only had a median debt: equity ratio of 4.9: 1.

Council for Microfinance Equity Funds: "Growth of Commercial Microfinance: 2004-2006" Rhyne and Busch

This study looked at a larger number of MFIs (222) but over a shorter period (2004-2006) and looked at the headline numbers in terms of borrowers and balance sheets but not the profitability. They key findings of the CMEF report were:

1. The universe of "commercial" MFIs is expanding rapidly.

("Commercial" MFIs are those with a shareholder structure which are not NGOs, co-operatives or Government owned entities.)

Growth of "commercial" MFIs 2004-2006

	2004	**2006**	**CAGR**
# "commercial" MFIs	124	222	
# clients	3MM	11MM	91%
Loans outstanding	$1.5BN	$9.0BN	145%
Assets	$2.5BN	$ 14.0BN	137%
Equity	$0.36BN	$ 1.5BN	103%

2. Comparable data was available for only 71 of these MFIs for both years. This showed growth rates as follows:

Growth rates of 71 MFIs 2004:2006

	2004	2006	CAGR (2004-2006)
Number of borrowers	2.3 million	4.0 million	+31%
Loan portfolio	$1.4BN	$4.8BN	+82%
Total Assets	$2.3BN	$6.7BN	+70%
Equity	$0.36BN	$0.79BN	+49%

Assets to equity ratio	6.6x	8.6x
Average loan size	$623	$1,193

The CMEF report therefore re-confirms the major conclusions of the MicroRate, M-CRIL study with regard to high overall growth rates in loan portfolios and numbers of borrowers and an increasing in gearing.

3. Regional Growth

a. Africa. There were 14 MFIs which were surveyed in both 2004 and 2006

	2004	2006	CAGR (2004-2006)
Number of borrowers	630,000	887,000	+19%
Loan portfolio	$230MM	$450MM	+40%
Total Assets	$310MM	$670MM	+47%
Equity	$63MM	$141MM	+50%

Assets to equity ratio	4.9x	4.7x
Average loan size	$322	$501

b. Asia. There were 11 MFIs which were surveyed in both 2004 and 2006

	2004	2006	CAGR (2004-2006)
Number of borrowers	631,000	922,000	21%
Loan portfolio	$71MM	$248MM	87%
Total Assets	$97MM	$370MM	95%
Equity	$39MM	$68MM	32%

Assets to equity ratio	2.5x	5.4x
Average loan size	$112	$268

c. Eastern Europe. There were 14 MFIs which were surveyed in both 2004 and 2006

	2004	2006	CAGR (2004-2006)
Number of borrowers	122,000	332,000	65%
Loan portfolio	$416MM	$2,063MM	123%
Total Assets	$827MM	$3,028MM	91%
Equity	$80MM	$224MM	208%

Assets to equity ratio	10.3x	13.5x
Average loan size	$3,410	$6,213

d. Latin America. There were 32 MFIs which were surveyed in both 2004 and 2006

	2004	2006	CAGR (2004-2006)
Number of borrowers	968,000	1,918,000	41%
Loan portfolio	$776MM	$2,090MM	64%
Total Assets	$1,102MM	$2,728MM	57%
Equity	$174MM	$358MM	122%

Assets to equity ratio	6.3x	7.6x
Average loan size	$800	$1,090

Currency depreciation

As in most cases MFIs conduct business in local currency and their balance sheets are very almost entirely also in local currency, investors in MFIs are exposed to currency movements.

The authors ran an analysis of forty six currencies into which a globally diversified fund is likely to invest looking back over the period 1996 to 2006. This is based upon an allocation as follows and then weighted as between countries amongst these regions:

Name of region	Percentage of portfolio of the Partnership
Latin America and Caribbean	24%
Africa	10%
South Asia	30%
South East Asia	18%
Balkans and Central Asia	13%
Middle East	5%

This analysis shows that the weighted average annual depreciation over the ten years through year end 2006 against the dollar was 4.6% per year. While the past can never be a certain guide to the future, this figure of 4.6% annual currency depreciation provides a useful starting point when considering the net returns from a portfolio of MFIs over time.

Returns from Investment in MFIs

Investing in MFIs is no different to any other emerging market private equity investment: the returns are a function of:

1. Entry price (multiple of net book value/earnings);
2. Increase in profits and profitability;
3. Increase in balance sheet leverage;
4. Plus dividends/other payments to shareholders;
5. Exit price (multiple of net book value/earnings);
6. Less all fees, expenses and taxes; and
7. Less currency depreciation.

Entry Price

Typically the entry price when investing in an MFI is between 1.0 x and 1.5 x net book value. Generally the more mature the MFI, the higher the multiple. In current market conditions it is typical that MFIs will issue shares at a multiple of net book value rather than a multiple of earnings or based upon a discounted cash flow model.

Increase in Profits and Profitability

As shown from the analysis above, MFIs have been growing rapidly in terms of total assets and total loans. It is expected that high growth rates will continue across the industry even if there is a slow down in rate of growth in some of the more mature markets.

In addition to high growth of loan portfolios, it is expected that the profitability of the better run MFIs will increase over time as they reduce administrative costs to the total loan portfolio. Although this may be countered by some reduction in headline interest rates charged (portfolio yield) in general, it appears that the trend towards increased profitability is likely to continue. Further positive influences on MFI profitability include adding new product lines such as savings and insurance products as well as new loan products such as home mortgages and rehab loans.

Increase in Balance Sheet Leverage

As has discussed above, many MFIs have lower balance sheet leverage than comparable banks or credit institutions: 4:1 or 5:1 debt to equity ratios would be typical at the point of investment. It is anticipated that higher debt to equity ratios can be achieved over time through a mixture of senior and subordinated debt. This will assist in raising the return on equity.

Dividends

Investments in individual MFIs will typically be structured as pure equity investments and so dividends will usually only start being paid once a high level of operating cash flow is achieved. This is usually the case in more mature MFIs. In a number of cases, investments will be structured as quasi-equity and may carry a running yield. In general, investors should expect to achieve the bulk of return through capital gains rather than through current income.

Exit price

As noted above, there have been relatively few "exits" from MFIs. However, the tendency will be for MFIs to be valued on a comparable basis to small banks in the relevant market, which would suggest exit multiples of 7-10 x fully taxed current year earnings. This will generally be equivalent to approximately 2 x net book value.

Fees and expenses

The main expenses of investors would be in management fees to MIVs and, if a fund of funds strategy is employed, at that level as well.

Based on the existing and anticipated crop of funds, management fees at the MIV level can be expected to range between 2.0% and 3.0% per year together with a "management carry" of around 20% of realized and distributed capital gains after a modest hurdle of 3-6%. Actual "leakage" can be much lower than these gross numbers suggest.

At the fund of funds level fees can be expected to be (i) 1.5% per year prior to the earlier of (a) the termination of the Commitment Period or (b) the date upon which at least eighty percent (80%) of the Committed Capital has been invested or committed to make such Investments and (ii) 1.25% thereafter based upon the invested capital. In addition, 10% of realized and distributed capital gains will be for the manager.

Currency exposure

As discussed above, the underlying assets of equity funds are generally held in local currencies. Therefore, investors will have to suffer any depreciation in the value of the local currencies against the dollar. Based on the experience of the last ten years, an annual depreciation of 5% of the underlying assets in terms of the dollar might be assumed.

Overall returns

Combining these factors with forecasts of future growth and profitability and forecast entry and exit multiples investors might look to a target rate of return of 20% in dollars at a fund of funds level.

The Investment Case – Social Return

Microfinance is not only another asset class but also a powerful contributor to the alleviation of global poverty. Many current investors seek to invest in profitable MFIs because profitable MFIs serve more poor clients than non-profitable MFIs and generally expect that MFIs

will maximize their social and financial performance by preserving a focus on the low income clients they were created to serve, because this is where an attractive and underserved market opportunity intersects with their specialized expertise. In this way, investors can expect, though not guarantee that MFIs will continue to operate in such a way as to maximize achievement of both financial and social returns.

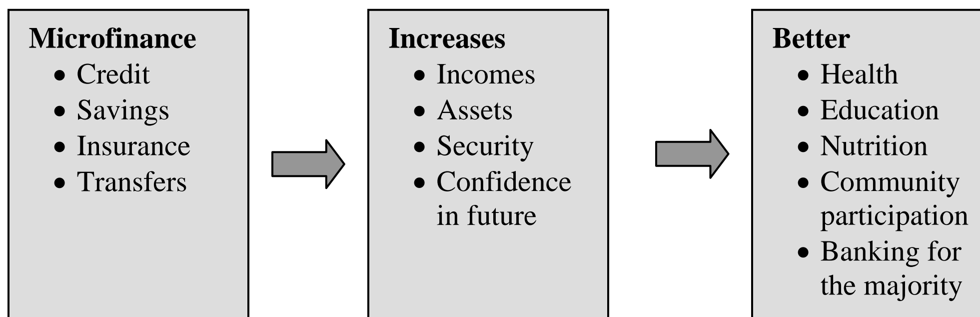
Social return on investment

Investment in microfinance helps reduce poverty and increase economic opportunities for the poor. Microfinance is not a panacea for poverty. However, in concert with other interventions in areas such as health, education, infrastructure, market access and a functioning and responsive government, microfinance can play an important supporting role in helping poor families around the world create more secure and rewarding lives for themselves and their communities.

The social returns on investment – from credit for micro enterprise, as well as savings, insurance and other financial services – include:

- Increased incomes, a growing enterprise sector and job creation;
- Increased assets and wealth;
- Reduced vulnerability of poor households to economic shocks and to risk;
- Helping individuals out of over-indebtedness; and
- Economic empowerment of women.

By reducing vulnerability and increasing earnings and savings, financial services also allow poor individuals to make the transformation from "every-day survival" to "planning for the future." Households are able to spend more on food and education for their children and can afford health services. Overall access to finance matters to people's well-being**.**



Social Performance Results – Selected Facts

Credible measurement of the impact of microfinance is challenging. However, there are reliable studies which provide evidence of the positive impacts of microfinance.[47] Below are findings from some of these studies:

Eradicating poverty

- Global level: World Bank data show that poverty rates are negatively correlated with access to finance.[48]
- Bangladesh: a major study in the early 1990s of the impact of three large microfinance institutions – Grameen Bank, BRAC, and RD-12 – found that female clients increased household expenditure by 20 takas for every 100 takas borrowed, and that 5 percent of clients graduated out of poverty every year.[49]
- India: a study of SEWA Bank borrowers found that their incomes were 56 percent higher than non-clients.
- Indonesia: borrowers of Bank Rakyat Indonesia (BRI) increased their incomes by 13 percent compared to increases of 3 percent for control group members.[50]
- Ghana: a study of Freedom from Hunger clients found that clients had increased their incomes by $36 compared to $17 for non-clients.[51]

Achieving education for all

- Bangladesh: All girls in Grameen Bank households had some schooling, compared to only 60 percent of the comparison group.[52]
- Uganda: Clients of three MFIs spent significantly more on school fees for their children (and other children, too) than non-clients.[53]

[47] Among governments and international development agencies, the Millennium Development Goals (MDGs) are used as a framework for action in eradicating poverty. Evidence on the impact of microfinance is being linked to the attainment of these universally agreed goals. The Millennium Development Goals are: (1) eradicate extreme poverty and hunger; (2) achieve universal primary education; (3) promote gender equality and empower women; (4) reduce child mortality; (5) improve maternal health; (6) combat HIV/AIDS, malaria, and other diseases; (7) ensure environmental sustainability; and (8) develop a global partnership for development.

[48] World Bank (2005): Measuring Financial Access. Washington D.C.

[49] Khandker, Shahidur (1998): Fighting Poverty with Microcredit. Dhaka, Bangladesh: University Press Limited.

[50] Remenyi Joe and Quinones Benjamin, eds., (2000): Microfinance and Poverty Alleviation: Case Studies from Asia and Pacific, New York: Pinter Publishers Ltd.

[51] MkNelly, Barbara and Christopher Dunford (1999): "Impact of Credit with Education on Mothers and Their Young Children's Nutrition: CRECER Credit with Education Program in Bolivia." Davis, California: Freedom from Hunger

[52] Khandker (1998), Fighting Poverty with Microcredit

[53] Barnes, Carolyn, Gary Gaile, and Richard Kimbombo (2001): "Impact of Three Microfinance Programs in Uganda." Washington, D.C.: AIMS.

Improving health

- Bolivia: CRECER in Bolivia provides basic health education along with financial services. An impact study showed that clients had better breast-feeding practices, were more likely to give re-hydration therapy to children with diarrhea, and had higher rates of immunization for their children.[54]
- Bangladesh: The large survey of Grameen Bank, BRAC and RD-12 clients found substantial improvements in children's nutritional status from women's borrowing, but not from male borrowing, which had an insignificant or even negative effect.[55]

Social risks

The main social risks of microfinance are over-indebtedness of clients, extortionate interest rates and cohercive collection practices.

Although microfinance typically improves the economic opportunities of the poor, in some cases, clients can be left worse-off. Ill-advised credit or taking loans from several microfinance institutions at the same time can lead to too much debt. This may in turn bring about stress and despair, and in some cases suicide.

Concern about over indebtedness is not just a poor country concern. Over the last ten years it has become a major social problem in the western world. However, it appears that it is a small minority of microfinance clients who find themselves with serious debt problems, and the emergence of formal credit bureaus or other means by which MFIs can more accurately monitor overall indebtedness of clients can help further reduce this phenomenon. The majority of clients manage credit successfully and use it for productive purposes. For them credit is a tool and an enabler.

High interest rates charged by MFIs have attracted criticism from governments in Asia and Latin America.[56] At a microcredit summit in Dhaka in 2004, the Minister of Finance for Bangladesh described microcredit interest rates in that country as "extortionate." In 2006, the Chief Minister of the Andhra Pradesh government in India recently expressed concern over high interest rates, as well as coercive loan recovery techniques. He suggested that MFIs offer loans at 3% a year.

Microcredit interest rates are high because micro-lending remains a high-cost operation. Many practitioners believe that the key to reducing microcredit interest rates in a sustainable manner is to reduce costs through improved market competition, transparency, innovation and efficiency. Government interest rate ceilings are not an appropriate intervention.

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[54] MkNelly, Barbara and Christopher Dunford (1999): "Impact of Credit with Education on Mothers and Their Young Children's Nutrition: CRECER Credit with Education Program in Bolivia." Davis, California: Freedom from Hunger.

[55] Khandker (1998), Fighting Poverty with Microcredit.

[56] Fernando, Nimal (2006): Understanding and Dealing with High Interest Rates on Microcredit. Asian Development Bank, Manila; Consultative Group to Assist the Poorest

MIV's can help diminish social risk by only investing in MFIs with ethical lending practices and a demonstrated commitment to transparency to clients, investors and other stakeholders. In addition, after years of effort, there appears to be some progress in developing cost effective means of tracking social performance of MFIs which will enable investors to more concrete assess and compare social returns alongside financial performance.

Global Standards on Social Performance

The definition and measurement of social return is an inexact science. A great deal of work is underway to develop global conventions and standards that can be used to consistently evaluate social return. The task is analogous to the process that established the parameters and indicators for financial reporting in microfinance, which required the better part of a decade or more. Financial indicators for measuring the financial performance of microfinance providers are now established and accepted as 'basic' and integrated within information systems and reporting. The challenge now is to agree upon a social performance framework and indicators.

From an investment perspective, tracking social performance is important because financial indicators do not always tell the whole story about an MFI's level of success. In some cases, programs with excellent social outcomes may have more moderate financial ones and may not get the recognition (or investments) they merit. Social performance measurement can even out this information imbalance so that programs with excellent social benefits receive support.

In 2005, a social performance task force (the "Social Performance Task Force") was established to promote and support the management of social performance by MFIs. It includes over 100 participants representing practitioners, donors, investors and raters worldwide and brings together the different initiatives in social performance measurement. This task force is working towards developing standards and guidelines for social performance, as well as a common reporting format.

Emerging elements of a potential common social performance measurement framework around which there is growing consensus include indicators linked to the MFIs' context, social performance management process (i.e. governance, policies and systems) and results or achievement of social goals. The Social Performance Task Force sub-committee on social rating and report has proposed the following key social performance dimensions.

Social Performance Dimensions[57]

Context: profile of operating environment (secondary data), MFI profile, services and client data

Social Performance Management [SPM] – mission definition and whether management systems (including targeting, incentives and reporting) are strategically aligned to MFI's stated social objectives

[57] Sinha, Frances (2006): Social Rating and Social Performance Reporting in Microfinance: Towards a Common Framework, EDA (UK) Ltd., in association with Micro-Credit Ratings International Ltd., and the Social Performance Task Force Sub-committee on Social Rating and Reporting, for the Argidius Foundation.

Social Responsibility [SR] – to clients (client protection – code of conduct and systems to comply); includes (where applicable) Gender Approach, Member Governance, and Non-Financial Services; other dimensions of SR (to community, staff, environment) may be included

Social Goal Outreach [SGO] – depth and width: distribution of clients in underdeveloped areas, depth ratio (based on portfolio data); direct client level information profiling poverty, household income levels and quality of life indicators (recently joined clients – no impact yet); hired (non-family) employment in credit supported enterprises (for 'indirect' outreach)

Social Goal Services [SGS] – range of services; client feedback on client protection issues (awareness and experience), client satisfaction; drop-out rates and reasons for drop-out.

Social Goal Change [SGC] – any evidence on outcomes or impact from available reports (including indicators relevant to MFI's social objectives, as well as those contributing to the MDGs)

The limitations of microfinance

Despite its impressive evolution and performance over the past 30 years, it is worth bearing in mind the limitations of microfinance as well as its potential. Microfinance is not the solution to poverty, and it is not the solution to development. On the one hand, as Marguerite Robinson points out in The Microfinance Revolution "Commercial microfinance is not appropriate for extremely poor people who are badly nourished, ill, and without skills or employment opportunities. Starving borrowers will use their loans to buy food for themselves and their children. Such people do not need debt. They need food, shelter, medicines, skill training and employment, for which government and donor subsidies and charitable contributions are appropriate. For these people, microfinance is the next step – after they are able to work."[58]

On the other hand, the premise or illusion of many microfinance programs that they should only finance "productive" activities – micro entrepreneurs – rather than consumption is also subject to challenge. First, it is debatable whether health or education should be considered consumption. More fundamentally, the implicit economic model of promoting millions of small businesses may not be sound: As one insightful expert observer has noted, "I've never seen what one would call a rich, developed economy which consists of millions of women sitting around selling bananas."[59]

Around these two fundamental observations on what microfinance can and can't do, there has emerged an active "debunking" industry in recent years, many of whose participants are among those most responsible for the advances of the "microfinance revolution," but who have grown frustrated by the exaggerated claims made by some proponents. These observers do not deny the potential of microfinance, and its role as part of a comprehensive attack on poverty, but despair at the frequency with which microfinance's role is deliberately mischaracterized to justify the defunding of crucial interventions that are unlikely to ever be self

[58] Robinson, 2001, p 8

[59] Interview with Malcolm Harper,,Institute for Financial Management and Research, Center for Microfinance, Aug 1, 2006

sustaining, in such areas as health, education and skills training, extension services, and basic infrastructure.

Many of the fiercest debates revolve around the issues of targeting and impact: is microfinance “drifting away” from serving the poor, or at least the poorer, in pursuit of profit, and is it stripping away, in the interests of efficiency and transparency, complementary features that ensured that finance would actually help the poor? There is evidence that this need not be the case, but investors must be clear on their goals and hold management and each other to a sustained commitment to the combination of social and financial performance.

Even within the sphere where microfinance is generally acknowledged to be relevant -- and it is important to bear in mind that even in its most limited delineation it encompasses hundreds of millions of people -- there is active debate over numerous issues. Among the most provocative is that microfinance has developed backwards, with its core loan product, while for most of its natural target population the most relevant services are first savings, then insurance – life, property, health – then perhaps remittances, and only then credit.[60]

While many if not most of these critiques are valid, at least in part, and point to a substantial need for additional work and resources, both within the ambit of microfinance and beyond, if poverty is to be significantly reduced, it seems irrefutable that commercial microfinance does offer to hundreds of millions of people tools and opportunities that many of us take for granted in navigating our lives and providing for our families. Indeed, it can be argued that the poor need these services *more* than the better off, both because their incomes are more uncertain and irregular, and because the amounts of cash they deal with are very small, so that most expenditures will require financing out of yesterday’s or tomorrow’s income.[61] To argue that such tools are irrelevant to people who are more vulnerable and have fewer opportunities seems at least as much an exaggeration as promoting microcredit as a panacea for the world’s ills.

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[60] Dichter

[61] Rutherford 2000, p2.

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