

MFIS ASSET PRICING – A CRITICAL ANALYSIS

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ABSTRACT

An important goal of extending credit to as many unbanked borrowers as possible is coming into conflict with sustainability of microfinance institutions and the institutions are gradually transforming into profit ventures. The major drawback is that it would fire up attracting interest from selfish private operators who would look for a financial rate of return in comparison to other risk attuned financial rate to return elsewhere. MFIs started increasing their income from microlending by levying various charges / fees and following dubious accounting practices. mainstream of MFI borrowers are poor and illiterate women. They are not expected to understand and realise different financial jargons used by MFIs and their effective cost. Fancy nomenclature like, membership fees, service charges, flat rate of interest, margin money, savings, insurance etc are quite baffling to many of them and they are not in a position to understand the true cost of finance through microfinance. To make operations translucent, MFIs must reveal effective interest rates including all changes using standardised and basic mathematics applicable. The borrowers have a right to know the actual cost of a loan as an effective interest rate.

INTRODUCTION

MFIs that had emerged in the developing economies as a socially tuned vehicle to alleviate poverty among susceptible segment of population is gradually being seen as a profitable business opportunity. In the primary stages of development, these activities were perceived to be done with a laudable intuition without any unfair undertone. As the institutions are maturing, they started facing performance quandary, known as outreach vs. sustainability (JIC 2003). The greater focus on original social objective is coming into conflict with sustainability of microfinance institutions.

Sustainability of MFI is vital because poor people are to be served both now and in the future. Unsustainable microfinance organisations might help poor now, but they will not be capable to help the poor in the future as they will probably disappear and die in a short time (Schreiner 2000). Sustaining performances require profits to be made after accounting for subsidies, if any. Just as infant organisation need venture capital, infant microfinance organisations may need subsidised resources. But such resources will probably be limited and MFI must try to manage their operations without subsidy. The primary means to achieve self sufficiency is to charge an effective real rate of interest, high enough to cover full cost, including cost of capital fully adjusted for inflation and a decent return on assets employed.

But, the major disadvantages of transforming MFIs into for profit financial institution is that it would start attracting interest from selfish private operators who would look for a financial rate of return in comparison to other risk adjusted financial rate to return elsewhere. Their interest in the social obligation to the organisation will be limited to the extent that increases their return on equity (ROE) and social mission will invariably become a subordinate objective. Such MFI will work out

microfinance schemes in a manner that will enhance their profitability with scant regard to the cost paid by poor borrowers.

Rising interest rate will eat into the surpluses generated by borrowers and this will in turn reduce the demand for financial services for the poor, undermining the original intension of microfinance (Dehejia & others 2005). High rates of interest charged by many microfinance institutions have engrossed the attention of policy makers throughout the world. Governments of about 40 developing countries have fixed some kind of obligatory interest rate ceilings to address this kind of concern (CGAP 2004b). Supporters of high interest rate argue that such ceilings make it difficult for MFIs to cover their costs and driving them out of market.

Demand and Supplies Of Micro Credit In India

About 400 million people are below poverty line and 75 million household needs microfinance loans accumulated to annual credit usage of ₹ 465,000 million adjusted for 1998 prices (Mahajan & Nagasri 2000). Though the demand for microfinance loans is gigantic, there is no authoritative countrywide estimate of micro credit disbursed. Under NABARD SHG-Bank linkage programme, cumulatively banks have lent ₹ 38,040 million to ₹ 1,079,091 SHGs representing 16.7 million poor families (NABARD website). Thus, out of 75 million households needing microfinance facility only 16.7 million are served by NABARD schemes leaving a large unmet demand for other operators.

Microfinance Service Providers in India

NGOs : They are registered as societies under Societies Registration Act 1860 or as trusts under Indian Trusts Act 1882. These MFIs are extending microfinance to the poor by forming Self Help Groups (SHGs) wherein each member of the group is responsible for loan repayment of other group members. Average loan given to individual clients varies from ₹ 1000/- to ₹ 25000/- and repayments are collected in weekly meetings. However, the interest on loan charged to poor borrowers is not regulated and interest rates are left to the discretion of MFIs. It is no surprise that some such MFI charge an effective rate of interest exceeding 100% per annum. These NGOs are considered as “charitable” entities under Section 12A of the Income Tax Act. This allows them to accept donor grants and carry forward a surplus in the business without paying any income tax. However, charging sustainable interest rate is certainly not charitable and these NGOs may soon loose their tax-free status if they try to make their lending ventures profitable.

SHG-Bank Linkage Programme: It is the flagship microfinance intervention of NABARD introduced in 1992. The informal thrift and credit groups of poor came to be recognised as bank clients. The guiding spirit behind NABARD’s microfinance initiatives has been to facilitate empowerment of the poor, effectively pursue the macro-economic objectives of growth, develop collateral substitutes, offer cost effective approaches to formal institutions for expanding outreach to poor and focus on rural poor.

Indigenous Bankers: Informal sources include money lenders, pawn shops, loan from relatives and friends etc with unstructured interest rates for short duration enjoy greater bargaining power. Contribution of this sector for financial intermediation and improvement in living conditions is minimal.

High Lending Rates

The provision of financial services to the poor is a difficult task because the poor usually live in remote and inaccessible places without basic infrastructure. It is not only difficult to make personal contact to these remotely located poor but such contacts are also expensive. Some of the reasons often put forward in favour of high interest rates in microfinance literature (CGAP 2002a; CGAP 2002b) are given below:

1. Interest rates charged by money lenders are overwhelmingly higher than MFI rates. Money lenders charge an interest rate of over 10% per month.
2. For a poor micro entrepreneur, the cost of micro credit loan represents a small portion of her total business cost. A ₹1,000 micro loan repayable in 3 months with 6% interest per month, calculated on a declining balance, costs a client only ₹ 122, which is a very tiny amount as a percentage of her total costs.

3. A vegetable vendor in India can buy vegetables from wholesaler at ₹2 per kg and sell the same to retail customers at ₹12 per kg earning 500% income a day!
4. MFIs charging very high interest rates almost always find that demand for loans outstrips their ability to supply it. Many poor takes repeated loans: This demonstrates that loans allow them to earn more than the interest they have to pay.
5. When women SHG members lend to each other, they can lend on whatever terms they wish. When such arrangement prevails, the women commonly charge each other an interest rate that is substantially higher than what MFI charges to SHG.
6. A vast amount of literature in the internet, conference proceedings, discussion groups advocates charging market based (high) interest rate. There are no instances that a microfinance program ran into trouble by driving away clients with interest rates that are too high.
7. Range of investment opportunity available to rural poor is endless. When poor women receive a ₹.1,000 loan, she will look through her range of investment possibilities and spent her money one that offers highest rate of return (for example in vegetable selling with 500% returns a day).
8. The access to finance to poor is much more important issue than the cost of finance. When a poor women need ₹ 1000/- for treatment of her ailing son, the timely availability of credit alone is important for her, not the interest rate.
9. When poor are willing to pay high interest rates to MFI loan, why talk about high interest rates. Any cap on interest rates is likely to be detrimental for growth of MFI and not in the interest of poor.

Price Of MFI Loan

MFIs increase their income from microlending by imposing various charges and fees. Poor customers do not always clearly understand that these fees are part of the loan cost: the lack of transparency and uniformity hurts the poor by undermining their ability to comparison shop for loans (CGAP 2004a). In addition, definition of interest rate is not clear as evident from following commonly misunderstood interest rate concepts.

Use of Flat Rates of Interest

When flat rate of interest method is used, the interest is charged on the original face value of loan for the entire period of loan. Though the balance loan amount of the micro finance borrower reduces with each weekly instalment payment, the borrowers are made to pay interest on full amount. Let us have a look on how much interest is charged by an MFI with a stated 12% flat rate of interest per annum. Consider a simple example of a ₹ 5,000/- loan given at a flat rate of 12% interest per annum repayable at 12 monthly instalments at the end of each month depicted in Table 1 below

	Total in the Year	Per Month
Principal	₹ 5,000	₹ 416.67
Interest @ 12 %	₹ 600	₹ 50
Total	₹ 5,600	₹ 466.67 (EMI)

Month	EMI	Interest paid on EMI	Principal repaid in EMI	Principal outstanding in the beginning of the month	Principal outstanding at the end	Interest as % of principal outstanding
1	466.67	50	416.67	5000.00	4583	12
2	466.67	50	416.67	4583.33	4167	13
3	466.67	50	416.67	4166.66	3750	14
4	466.67	50	416.67	3749.99	3333	16
5	466.67	50	416.67	3333.32	2917	18

6	466.67	50	416.67	2916.65	2500	21
7	466.67	50	416.67	2499.98	2083	24
8	466.67	50	416.67	2083.31	1667	29
9	466.67	50	416.67	1666.64	1250	36
10	466.67	50	416.67	1249.97	833	48
11	466.67	50	416.67	833.30	417	72
12	466.67	50	416.67	416.63	0	144

As can be seen from the table 2 that principal outstanding at the beginning of month-1 is ₹.3000 and interest for the month is ₹ 37.50. Thus the annualised rate of interest for month-1 works out to $\frac{50}{5,000} \times 12 = 12\%$ per annum. If we compare interest rate paid in the 12th month, when principal

outstanding is only ₹ 416.63, the annualised rate of interest for month-12 works out to $\frac{50}{416.63} \times 12 = 144\%$ per annum. Thus for a stated interest rate of only 12% per annum flat rate, the borrower pay effective interest of 12% to 144% per annum. The effective rate of interest for the above repayment schedule can be calculated using the following financial argument.

$$PV * (1 + k)^n + E \left(\frac{(1 + k)^n - 1}{k} \right) + FV = 0 \dots\dots\dots\text{equation-1}$$

Where

- *PV* = the net amount given to borrower
- *k* = effective interest rate per period
- *E* = EMI
- *n* = total number of repayment periods
- *FV* = amount paid to the client at the end of the loan period. This is return of security deposit with interest or return of the accumulated savings.

In the above annuity function, from the MFIs point of view, all cash payouts (e.g. loan disbursement) are to be represented by a negative number; whereas the cash received back in form of periodical instalments are to be represented by a positive number.

The effective interest rate (*k*) of the repayment table 2 works out to 1.79% per month. On a monthly compounding basis the effective annual rate of interest works out to $(1 + 0.0179)^{12} - 1 = 23.70\%$ per annum.

Collection of Security Deposit

MFIs deduct security deposit or margin from the loan disbursement ranging from 0% to 25% at the discretion of MFI which is intended by MFIs to promote savings habit of poor which are to be returned with interest at the end of the loan period.

Let us find out the interest rate applicable to poor micro borrower when such security deposit is compulsorily deducted. We will rework the previous example with following changes.

- Loan sanctioned : ₹ 5,000
- Security Deposit : 10% of loan = ₹ 500
- Actual amount paid to the lender at the time of loan disbursement : ₹ 4,500
- Interest on security deposit : 5%
- Security deposit refunded with interest after one year : ₹ 525
- Other loan terms remain unchanged i.e. the entire loan is to be repaid by 12 monthly instalments of ₹ 466.67 per month.

The effective rate of interest of the above loan scheduled can be estimated using following parameter values in equation-1.

- *PV* = ₹ 4,500

- $E = ₹ 466.67$
- $n = 12$
- $FV = ₹ 525$

The value of effective interest rate per month using the equation-1 is 2.08% per month, and on monthly compounded basis the same works out to $(1 + 0.0208)^{12} - 1 = 28.02\%$ per annum.

4.3 Compulsory Savings Collected With Loan Instalments

MFIs strongly advocate need for providing regular savings services to microfinance borrowers. So that poor people's tiny savings grow over time, and they may not depend on loan in future. While the stated intention is undoubtedly honest, the financial implication in terms of profitability to the MFI is tremendous. Again consider the previous example, wherein the client is required to save an additional amount of ₹. 100/- per month to be paid at the time of making loan repayments. The savings will be refunded to the clients with 5% interest at the end of the loan period.

Monthly savings of ₹ 100 @ 5% per annum will grow to $100 * \left[\left(1 + \left(\frac{.05}{12} \right) \right)^{12} - 1 \right] / \left(\frac{.05}{12} \right)$

= ₹ 1227.89 and will be refunded to the client at the end of the year.

The equation-1 can again be used to calculate effective rate of interest with following parameter values.

- $PV = ₹ 4,500$
- $k = ₹ 466.67 + ₹ 100 = ₹ 566.67$ per month.
- $n = 12$
- $FV = ₹ 525 + ₹ 1227.89 = ₹ 1752.89$

The value of effective interest rate per month using the equation-1 is 2.55% per month, and on monthly compounded basis the same works out to $(1 + 0.0255)^{12} - 1 = 35.28\%$ per annum.

When savings are made an integral component of the loan, the effective interest rate goes up. This is primarily due to the reason that the microfinance borrowers are paid a mere 5% interest per annum for their savings, whereas for loan they are charged a very high effective interest rate. A borrower who is forced to save gets a very little cash in hand after deduction of security deposit from the loan disbursement but continues to pay high interest for the entire loan amount.

Insurance Premium

Some MFIs charge an insurance premium that is deducted upfront from the loan amount to provide insurance facility in case of death of the borrower.

An arbitrary premium of about 2% deducted upfront increases cost of loan by about 6%-10% per annum after considering various deductions in form of security deposit and savings from the borrowers. The root question is whether such microfinance - plus services really help the poor or they are another earning opportunity for the MFI.

After considering insurance premium effective interest rate per month using the equation-1 goes to 3.06% per month, and on monthly compounded basis the same works out to $(1 + 0.0306)^{12} - 1 = 43.58\%$ per annum.

Effective Interest Rate With Weely Repayment

In the example given in preceding section, monthly repayments were considered for the sake of simplicity. In practice, loan repayments and savings are usually collected in weekly instalments, so that, each instalment amount remains low. In this section, we will calculate effective interest rate of a MFI product, which contain added features like, security deposit, savings, insurance, etc. and instalments are collected on weekly basis. The particulars of the loan product are detailed below.

The Loan Product

The loan given to a borrowing client carries a service charge of 17.5% flat rate of interest and the loan is to be repaid in 47 weekly instalments. Thus for an ₹ 1000 loan interest for the year is 17.5% of ₹

1,000 = ₹ 175 and the borrower has to refund both principal (₹ 1000) and interest (₹175) in 47 instalments of $1175/47 = ₹ 25$ per week. Following are more details in table 3

Particulars	Cash Flows in ₹
Loan Sanctioned @ 17.5%	1,000
10% Security Deposit deduction	100
Insurance Premium Deduction @ 2%	20
Net Amount Paid to Borrower	880
Repayment in 47 Weeks (per week)	25
Weekly Savings (per week)	10

Money refunded to the client after 47 weeks

1. Refund of Security Deposit 5% interest = $100 \left(1 + 0.05 \left(\frac{47}{52} \right) \right) = ₹ 104.52$

2. Refund of weekly savings of ₹ 10/- for 47 weeks with 5% interest p.a.=

$$10 * \left[\left(1 + \left(\frac{.05}{52} \right) \right)^{47} - 1 \right] / \left(\frac{.05}{52} \right) = ₹ 480.55$$

Effective Interest Rate

The following parameter values can be used in equation-1 to find the effective interest rate of the loan product..

- $PV = ₹ 880$ (net amount paid to the borrower)
- $k = ₹ 35$ (Rs.25 for loan & Rs.10 for savings)
- $n = 47$ (week)
- $FV = ₹ 585.06$ (₹ 104.52 for security deposit + ₹ 480.55 for savings)

The weekly effective rate of interest (k) of the product works out to 1.534% per week and when compounded on weekly basis for 52 weeks, the annualised rate goes up to 120.67%.

The situation become worse when security deposit is deducted 20% of loan amount at the time of disbursement and in such cases annualised effective rate of interest goes up to 193.8% per annum.

Making Microfinance A Fair And Transparent Process

It is often argued that cost of micro lending is much higher than lending offered by commercial bank for big loans. This is indeed a valid argument but this does not mean anything can be charged for micro loan. MFI should learn to offer services at lowest cost by cutting their operational cost. There are ample of right examples, where MFIs are able to reduce their operating cost to less than 5% of the amount lent. A MFI operating in Bangladesh has reported in their website that their operating cost is a mere 3-4% of amount lent. This is possible as they are able to bring down their operating cost. A single employee caters services to about 400 to 500 clients without much supervisory overheads. They keep their branch offices located in remote areas with minimal staffing and each small office work as a distinct responsibility centre. As a result they are able to break even within 6-9 months of operation in a branch.

Financial literacy is important it inculcates knowledge, skills and attitudes required to adopt good money management practices for earning, spending, saving, borrowing and investing (CGAP, 2004b). MFI may look into following aspects to make microfinance a fair and transparent mission.

- Instead of charging flat rate of interest, let the borrower know the true cost of interest. When a housing loan is taken from a housing finance company, instead of “flat” rate, an EMI (equated monthly instalment) worked out taking effective stated cost of interest. Home loan borrowers are generally educated and can not be fooled easily.
- MFIs are supposed to extend loan to poor borrowers without any monetary collateral. An effective alternative of monetary collateral is to take collective group collateral, wherein each

member of the group guarantees loan repayment of member borrowers. Such arrangements are already working very well in many places with over 99% recovery rates.

- Insurance protects loan for MFI, but premium is paid by the poor borrowers. With over 99% loan recovery rate, security deposits and social collateral, is there any need for separate insurance premium? If any such premium is to be charged, the rate of premium is to be fixed after detail study and such premium should come under proper regulatory scrutiny.
- Saving needs for the poor are unquestionable and justified. But, when a poor borrower taking loan at high rate of interest (say at 50% per annum) is motivated (or forced) to save at a low rate of interest (about 5% per annum), it forms another form of abuse. When savings needs are to be satisfied, separate saving schemes are to be promoted and should not be mingled with loan product in a manner that ultimately prove costlier to the poor and profitable to MFI.
- A well designed performance monitoring system will enable MFIs to know their costs and take steps to streamlining their procedures for efficiency gains. As MFIs become more efficient, they are able to lower their interest rates (CGAP 2004a).
- Competition is the single most effective way to reduce both micro credit costs and interest rates. Policies to promote competition among credit providers, combined with relevant consumer protection can go a long way toward expanding the reach of sustainable micro credit while safeguarding consumer interests (CGAP 2004a).

CONCLUSION

The cost of microfinance loan to poor borrowers in India varies anything between 12% p.a. to as high as 120% p.a. depending on nature of MFIs that provide service to the poor. If several micro lenders can lend at an effective rate of 12% p.a., there is no reason for another MFI to charge over 100% p.a. citing high operating cost. MFI need to cut their cost instead of passing the same to the poor borrowers.

If microfinance is to be made a successful mass movement, the operations need to be made streamlined, cost effective and transparent. MFI should disclose effective interest rate to the borrowers. Hiding effective interest rate to poor and illiterate borrowers by using “creative” accounting practices is highly immoral. The poor borrowers have a right to know the true asking price of the micro loan in form of effective annual interest rate, so that, they can take right borrowing decisions.

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