

The SEEP Network Savings-Led Financial Services  
Working Group: Ratios Sub-Group

# **Ratio Analysis of Community-Managed Microfinance Programs**

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# Table of Acronyms

AIDS	Acquired Immune Deficiency Syndrome
CMMF	community-managed microfinance
CMMFG	community-managed microfinance group
HIV	Human Immuno-deficiency Virus
IO	implementing organization
M&E	monitoring and evaluation
MFI	microfinance institution
NGO	non-governmental organization
SEEP Network	Small Enterprise Education and Promotion Network
SHG	self-help group
PAR	portfolio at risk

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# 1. Introduction

## What is community-managed microfinance?

Over the last few years there has been increasing interest in community-managed microfinance (CMMF). This interest has arisen because it has become clear, especially in Africa, that microfinance institutions are generally more successful in urban and peri-urban markets than they are in rural areas. There are many factors influencing this phenomenon, but it is usually accepted that two of the more important are:

- the debt capacity of rural borrowers is limited (thereby restricting the potential for loan portfolio growth) and;
- the cost of reaching this type of client is high because transport is expensive and population densities are lower in rural than in urban areas. This is especially true in Africa, compared to Asia or Latin America.

In addition to these factors, there is a growing realization that while MFIs offer credit as their principal product, savings are more important for the very poor. Savings help the poor protect productive assets and mitigate risks to their livelihoods, especially in places where credit is likely to increase, rather than decrease, these risks. Regrettably, a majority of MFIs are not licensed to mobilize savings and usually have alternative, lower-cost means of financing their loan portfolios. As a result, savings services tend to be less important to MFIs (especially as they increasingly mobilize private investment) than they are to their poorest clients.

It has thus become clear that a different type of institution is needed to provide sustainable financial services to the very poor, especially those living in remote areas. One solution—which has emerged independently in India and in Africa—has been very small-scale, independent, CMMF groups (CMMFGs), the capital of which is initially derived solely from member savings. Because the needs of the very poor are generally satisfied by small-scale savings and credit transactions, it has been found that community groups comprised of between 10 and 30 members are able to satisfy the majority of members' needs for basic financial services.

CMMFGs substitute complex recordkeeping systems with systems that are largely based on the witnessing of transactions. They have very low operating costs, since management is occasional (usually a couple of hours a week) and requires relatively low levels of skill. A critical factor in the attractiveness of these groups is that whatever surpluses they generate from interest and fee income remain the property of the investor-members and continue to work in their local communities.

The emerging results of this endeavor are striking. CMMFGs have shown explosive growth, extraordinary returns on investment, and very high rates of sustainability. It is estimated that as many as 30 million very poor people in India are members of self-help groups, while in Africa, CMMF programs are being implemented on a very large scale and at very low cost in over 30 countries, facilitated by a wide range of local and international NGOs. The focus of these programs is the rural poor, a type of client that, until now, NGOs have been frustrated in providing accessible, sustainable financial services using conventional microfinance approaches.

## Why a new set of ratios is needed for CMMF

The microfinance industry has reached a high degree of consensus on the need to measure the results of MFI operations, with SEEP taking the lead in 1995 with the publication of *Financial Ratio Analysis of Micro Finance Institutions*. It is clear that a similar set of ratios is needed to measure the performance of community-managed microfinance groups. Compared to MFIs, however, CMMFGs are very small in scale and different in

kind, a difference apparent in their cost, complexity, products on offer, and financial administration. The SEEP ratios for MFIs cannot readily be applied to CMMF programs for the following reasons:

- CMMFGs are inherently sustainable because they incur extremely low costs. The smallest income earned from internal loans quickly covers all costs. Standard sustainability ratios are therefore meaningless.
- Current SEEP ratios determine progress and define success using technical measures. But most CMMF groups are made up not of savers and borrowers, but investors who, in addition to using the services on offer, share whatever profits or losses result from day-to-day operations. Meaningful ratios therefore need to report on client-level benefits, both in terms of satisfaction and financial returns, because CMMF groups can only survive through maintaining very high levels of member participation and satisfaction.
- Donors and implementing agencies that promote CMMF are not creating single institutions. Rather, they are often creating many hundreds of institutions and, while financial performance can only be defined at the level of the individual group, program efficiency needs to be considered at *both* the CMMFG and the implementing organization level.

Table 1. Four questions for evaluating CMMF programs

Member satisfaction	Because members are investors (not simply clients), are they sufficiently satisfied with the performance of their CMMFGs to continue their membership and maintain their investment?
Financial performance	Do CMMFGs provide a competitive return on member investment at an acceptable level of risk?
Operating efficiency (CMMFG)	Do CMMFGs succeed in giving members' access to loans? Do they maximize use of their performing assets?
Operating efficiency (implementing organization)	Are implementing organizations efficient and effective in providing training and supervision services at the lowest possible cost in a way that maintains high CMMFG performance standards?

These questions are the foundation of financial ratios that can evaluate the performance of community-managed microfinance groups. The first question translates into ratios that look at *member satisfaction*. If CMMFGs succeed in retaining members, or the number of their participants increases, it is likely that they will be sustainable and continue to attract increased investment because, at a minimum, member investments are safe and profitable (to say nothing of the benefits of being able to take a loan). These groups are profitable because they require only minimal financial income to cover all costs. Thus, member satisfaction is the most important guarantee of sustainability: people who are satisfied with the services offered will continue to participate in their CMMFG and it will stay in business.

The second question is the basis for ratios that analyze *financial performance* from a number of different perspectives. Because CMMFGs are entirely dependent on member investment to be able to offer loan and insurance services, the average amount of individual investment is a critical indicator of their attractiveness, compared to other uses of members' disposable incomes. It is thus important to measure the financial benefits derived from group profits, the average size of loans, the level of loan losses, and risk coverage.

The third question leads to ratios that examine the *operating efficiency* of CMMFGs from the perspective of the group. These ratios consider loan access and the extent to which performing assets are invested in loans, since internal loan taking is the principal source of group revenue. If too high a percentage of members' investments remain liquid, the return may be unattractive and fund growth will likely be constrained.

The fourth question is the basis for ratios that look at *operating efficiency* from the perspective of the implementing organization (IO). There is a growing awareness among donors that the per-member cost needed to create sustainable microfinance is of critical importance. For most MFIs, this cost varies between US\$100 to US\$400; in Africa, it averages about US\$250. This cost is far higher when MFIs attempt to serve a substantial proportion of rural poor clients. Yet CMMFGs are among the most efficient financial service providers in this respect, costing between 15 and 25 percent of these amounts—and an increasing variety of approaches (most of which are based on community-based trainers) are reducing this cost still further.<sup>1</sup> Tracking costs, by country and by type of operating environment, is important in order to establish norms by which program efficiency can be assessed.

In addition to these four sets of questions (or ratios), a fifth set is needed to address portfolio quality and the financial leverage of the subset of CMMFGs that take on *external debt* to increase the scale of their loan portfolios.

To date, CMMF programs have been isolated from each other and have startlingly different conceptions of efficiency. Developing norms linked to specific methodological approaches and operating environments is a necessity, so that implementers can evaluate their own efficiency and seek to learn lessons from similar programs elsewhere. As this type of organization evolves and donors become more discriminating, an IO that is not efficient in terms of staff performance and cost per member assisted will be unable to attract continuing support.

## Using ratios to evaluate CMMF

Producing ratios is not an end in itself. The fundamental purpose is to improve program performance and contribute to a body of knowledge about the kind of results that can be considered normal and those that can be considered exceptional. Managers must also look at ratios from a dynamic perspective, regularly generating ratio updates and identifying trends that tell them how, in what ways, and why their programs are changing. Ratios thus provide the means by which improvements may be engineered and tested and emerging problems identified before they become overwhelming.

It is also important to recognize that ratios are not uniformly reliable. A program that has been in existence for several years and has achieved economies of scale and capitalized on its internal learning will likely have a very different set of performance ratios compared to a newly established, small-scale program. The fundamental purpose of ratios is not so much to draw conclusions about inter-program performance but to observe the evolution of trends *within* a program and determine if they are positive or negative and whether or not the program is headed towards meeting local or regional best practices.

The contextual factors that will substantially affect useful financial ratios are, *inter alia*:

- *The scale and age of a program.* Large-scale, older programs usually perform better than smaller, younger programs.
- *The pace of growth.* IOs that are expanding quickly have portfolios that are less stable than those of a well-established program; these organizations may also experience quality problems associated with limited staff experience and inadequate supervision.
- *Type of implementation strategy.* Programs that offer direct delivery with paid professional staff have lower efficiency levels than programs that have evolved to the point where they are able to use community-based trainer-facilitators. However, direct delivery programs with paid staff may perform better at the group level in terms of financial performance and member satisfaction because the quality of supervision is likely to be higher and more consistent.
- *Multisectoral vs. single-purpose programs.* Programs that focus solely on CMMF tend to perform better on several efficiency measures at both the group and program level, than do programs that

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1. The all-in per member cost of the average CMMF program in Africa is roughly US\$25–US\$40 and declining. In Asia it is less than half this amount.

deliver a wide variety of services. This is especially the case where field staff is expected to perform multiple technical and support functions.

- *Population density and infrastructure.* Programs that operate in remote areas served by poor-quality roads are nominally less efficient than those that work in dense rural areas or in towns.
- *Meeting frequency.* Programs that operate in places where CMMFGs meet weekly tend to have lower efficiencies than programs where groups meet fortnightly or monthly. They may also have lower attendance rates, but better financial performance, because they are able to mobilize savings more reliably.
- *Extent of investment opportunities and member product preference.* Rural areas are likely to show a strong bias in favor of savings, rather than credit. This preference will result in a reduced level of return on member investments, but may have no impact on efficiency and program effectiveness.

## 2. The Ratios

Table 2. Financial ratios for CMMFGs

Ratio No.	Ratio name	Formula	Purpose	Page
<i>Group 1: Member satisfaction ratios</i>				
R1	Attendance rate	$\frac{\text{No. of members attending meetings}}{\text{No. of active members}}$	Indicates short-term relevance and value of services and appropriateness of methodology	19
R2	Retention rate	$\frac{\text{No. of active members}}{(\text{No. of active members} + \text{No. of dropouts})}$	Indicates long-term relevance and value of services	20
R3	Membership growth rate	$\frac{(\text{No. of active members} - \text{No. of members at start})}{\text{No. of members at start}}$	Indicates long-term relevance and value of services	21
<i>Group 2: Financial performance ratios</i>				
R4	Average savings per member mobilized to date	$\frac{\text{Cumulative net value of savings}}{\text{No. of active members}}$	Indicates level of confidence in CMMF system; may be compared to alternative and similar savings opportunities	22
R5	Annualized return on savings	$(\text{Net profit/loss} / (\text{Cumulative value of savings} / 2)) \times (52 / \text{Average age of CMMFGs, in weeks})$	A measure that allows for comparison of the efficiency with which different CMMFGs generate profits	23
R6	Average member investment	$\frac{(\text{Total assets} - \text{Total liabilities})}{\text{No. of active members}}$	Indicates retained individual investment (savings + earnings)	23
R7	Average outstanding loan size	$\frac{\text{Value of loans outstanding now}}{\text{No. of loans outstanding now}}$	Indicates changing debt capacity of members	24
R8	Portfolio at risk	$\frac{\text{Value of loans past due}}{\text{Value of loans outstanding now}}$	Measures amount of nominal default risk; may not be reliable indicator of loan losses	24
R9	Loan losses	$\frac{\text{Value of loan write-offs}}{((\text{Value of loans outstanding at start of period} + \text{Value of loans outstanding now})/2)}$	Indicates extent of uncollectable loans compared to the simple average value of loans outstanding over a given period	25
R10	Risk-coverage ratio	$\frac{\text{Net profit-loss}}{\text{Value of loans past due}}$	Indicates degree to which current yields cover potential maximum losses	26
<i>Group 3: Operating efficiency ratios</i>				
R11	% of members with loans outstanding	$\frac{\text{No. of borrowers}}{\text{No. of active members}}$	Indicates degree to which loan access is equitable	27
R12	Fund utilization rate	$\frac{\text{Value of loans outstanding}}{(\text{Total assets} - (\text{Fixed assets} + \text{Other funds}))}$	Indicates level of credit demand	27

Ratio No.	Ratio name	Formula	Purpose	Page
<i>Group 4: Implementing organization operating efficiency ratios</i>				
R13	Caseload: CMMFGs per field staff	No. of CMMFGs being supervised / No. of field staff (including supervisors)	Indicates operational efficiency of total field staff	28
R14	Caseload: Members per field staff	No. of active members / No. of field staff (including supervisors)	Indicates effective efficiency of total field staff	29
R15	Ratio of field staff to total staff	No. of field staff (including supervisors) / No. of all staff	Indicates level of organizational efficiency	29
R16	Cost per member assisted	Total program costs to date / (No. of active members + No. of graduated members)	Measures how much it costs to provide CMMF services to individual clients	30
<i>Group 5: External debt ratios</i>				
ER1	External portfolio at risk	Value of external borrowing past due / Value of external borrowing outstanding	Measures the amount of default risk on external loans to CMMFG; a reliable indicator of default	31
ER2	External borrowing	Value of external borrowing outstanding / (Total assets of CMMFGs borrowing externally – liabilities)	Indicates the degree to which CMMFGs are able to leverage external funds	31

## 3. Source Data

### Who constructs and uses the ratios?

CMMFG programs do not normally call for individual groups to generate ratios. The management needs of most are satisfied by measuring changed asset levels relative to savings, using transparent procedures that guarantee security and satisfy members' need for information. The purpose of the ratios presented in this report is to enable implementing organizations to understand better how field operations are proceeding, particularly with respect to member satisfaction, member benefits, CMMFG sustainability, field staff effectiveness, and operating efficiency.

The ratios call for data to be periodically gathered by IO field staff and regularly aggregated and analyzed, so as to learn what is taking place, in overall terms, across a given program. Unlike ratio analysis of individual MFIs, ratio analysis of CMMF programs does not focus on individual CMMFGs, but at an entire population of CMMF groups that are being supervised and trained by an IO. *All of the data that is collected from individual CMMFGs, is, therefore, analyzed as a totality.*

### What data is needed?

CMMF programs vary considerably. Some groups maintain no written records at all (usually in cases where literacy levels are extremely low and cash-based economic activity is at a minimum). Other programs may be sophisticated, with CMMFGs using fully developed accounting systems, engaging in very strong levels of financial activity, and having a literate, economically dynamic membership. Some may promote a time-bound methodology, where groups liquidate performing assets at a periodic share-out, while others may use formal accounting systems to measure profit and allocate it among dividends and capital.

To help accommodate this broad array of possibilities, the SEEP working group chose ratios that depend on data that, for the most part, is available across the board (either because they are required by CMMFGs to manage what they do or may easily be observed). This choice ensures that useful results can be generated by programs working with the least literate and most economically disadvantaged. The ensuing text indicates where less easily gathered data is needed to develop more comprehensive ratios.

Source data is divided into the categories listed in the following table. *All of the data listed in Table 3 needs to be available from all CMMFGs and then compiled.* It is not essential that this data be updated every month. Data updates simply need to occur as often as is compatible with a program's supervision and training operations. In any case, the data never needs to be updated more frequently than monthly.<sup>2</sup>

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2. Many programs require CMMFGs to generate comprehensive information that, while useful to the program, is not used in day-to-day management of such groups. Wherever possible, the ratios recommended in this document avoid dependence on data of this sort.

Table 3. Source data for CMMFG ratios, with sample values

<b>Group 1: Member satisfaction ratios</b>	
<ul style="list-style-type: none"> <li>• Relates to CMMFG membership</li> <li>• Means of measurement: CMMFG observation and enquiry</li> </ul>	
<i>Description of source data</i>	<i>Sample value</i>
Number of members attending meetings	19,280
Number of active members	22,300
Number of dropouts	797
Number of members recruited at start of cycle	20,200
<b>Group 2: Financial performance ratios</b>	
<ul style="list-style-type: none"> <li>• Relates to CMMFG financial and portfolio records</li> <li>• Means of measurement: observation/ enquiry/ examination of CMMFG passbooks and ledgers (as applicable)</li> </ul>	
<i>Description of source data</i>	<i>Sample value</i>
Cumulative net value of savings	34,450,000
Number of active members	22,300
Net profit/loss	4,750,000
Average age of all CMMFGs, in weeks	32
Total assets	41,800,000
Total liabilities	2,600,000
Value of loans outstanding at start of period	8,800,000
Value of loans outstanding now	32,000,000
Number of loans outstanding now	16,150
Value of loans past due	2,147,500
Value of loan write-offs	320,000
<b>Group 3: Operating efficiency ratios</b>	
<ul style="list-style-type: none"> <li>• Relates to CMMFG financial and portfolio records</li> <li>• Means of measurement: observation/ enquiry/ examination of CMMFG passbooks and ledgers</li> </ul>	
<i>Description of source data</i>	<i>Sample value</i>
Number of active members	22,300
Number of borrowers	15,940
Value of outstanding loans now	32,000,000
Total assets	41,800,000
Value of fixed assets and commodities	6,350,000
Value of other funds	0

**Group 4: Implementing organization operating efficiency ratios**

- Relates to operational efficiency of implementing organization
- Means of measurement: examination of IO records; CMMFG observation

<i>Description of source data</i>	<i>Sample value</i>
Number of CMMFGs being supervised	1,145
Number of field staff (including supervisors)	82
Total number of staff	113
Total program costs to date	41,500,000
Number of active CMMFG members	22,300
Number of graduated members in independent CMMFGs	12, 144

**Group 5: External debt ratios**

- Relates to CMMFG operational efficiency
- Means of measurement: observation/ inquiry/ examination of CMMFG passbooks and ledgers (as applicable). Derived only from CMMFGs borrowing externally.

<i>Description of source data</i>	<i>Sample value</i>
Value of external borrowing outstanding	1,500,000
Value of external borrowing outstanding past due	223,000
Total assets of CMMFGs that are borrowing externally	4,400,000
Total liabilities of CMMFGs that are borrowing externally	1,725,000

## Ratio definitions

### Group 1: Member satisfaction ratios

Member satisfaction cannot readily be measured using ratios, except through proxies. If members of a CMMFG start to leave it in significant numbers, it is reasonable to infer member dissatisfaction, just as if the number of members sharply increases, it is reasonable to infer member satisfaction. Similar conclusions may be drawn from low or high attendance rates, although this may mean something different than dissatisfaction with available services (e.g., it could have a bearing on meeting frequency or other aspects of group methodology). Member satisfaction ratios are therefore considered proxies for the specific situation of a given CMMFG or for such a program's overall methodological approach. In either case, action may be warranted.

The definitions of *aggregate* data required for these ratios are as follows:

1. *Number of members attending meetings.* This refers to members who are present at CMMFG meetings during the time a field officer or monitoring and evaluation (M&E) specialist collects data. The most reliable means is direct observation.
2. *Number of active members.* Active members are members who participate regularly in CMMFG affairs and, most reliably, are considered members in good standing. This number is not limited to members who show up at the meetings at which data is gathered. They may be absent by agreement or owing to unforeseen circumstances. This data can be determined by examination of registers or savings and loan records (either ledgers or passbooks), as well as enquiry among members
3. *Number of dropouts.* Dropouts are members who have left CMMFGs permanently for any reason at all. This may include voluntary exit, being expelled, abandonment through sickness, or even death. This data can be determined by examination of registers or savings and loan records (either ledgers or passbooks) and enquiry among members
4. *Number of members at start of cycle.* The total number of people who were members of all CMMFGs being supervised and trained by the implementing organization when these groups began savings and credit activities. It is important not to confuse this moment with the moment when the CMMFGs were originally formed. Groups may have been formed many years ago for other purposes and only recently have begun savings and credit activities. This data can be determined by examination of registers or savings and loan records (either ledgers or passbooks) and enquiry among members

### Group 2: Financial performance ratios

As with the preceding group, the ratios described below relate to the *aggregate* performance of an IO's portfolio of CMMFGs. The data required to calculate the ratios is derived from the following principal sources of individual community-managed groups:

- attendance records: these records may be recorded in a register or derived from passbooks, or ascertained from enquiry
- savings records: derived from savings ledgers, passbooks, or memory
- loan records: derived from loan ledgers, passbooks, or memory
- cash balances: obtained through observation or from cashbook records

Definitions of the data required for the aggregated financial performance ratios are as follows:

1. *Cumulative net value of savings:* total amount of savings mobilized to date, net of any withdrawals.
2. *Number of active members:* see definition under Group 1 above.
3. *Net profit/loss:* the difference between that part of member equity invested in performing assets (i.e., the loan fund and any other-income earning investments) less member savings and external debt. The main source of CMMFG loan funds is member savings, but equity in the loan fund is com-

prised of both member investments (i.e., their savings), plus retained earnings.

4. *Average age of all CMMFGs in weeks*: the total number of weeks since the CMMFGs being supervised and/or trained by the IO began savings and lending activities, divided by the total number of CMMFGs.
5. *Total assets*: all property, cash, and receivables belonging to all CMMFGs,
6. *Total liabilities*. The value of all money, property, and services owed by all CMMFGs.
7. *Value of loans outstanding at start of period*: total remaining amount of all loans held by CMMFG members that remained unpaid at the start of the period being studied, including loans that were past due as well as loans that were being repaid on time.
8. *Value of loans outstanding now*: the total remaining amount of all loans held by CMMFG members that remains to be repaid at the present time. This includes loans that are past due as well as loans currently being paid on time
9. *Number of loans outstanding now*: the total number of all loans held by members of CMMFGs at the present time, including loans that are past due.
10. *Value of loans past due*: the total remaining value of all loans that are delinquent (past due). This value is *not* equal to the amount of outstanding loans that has not been repaid (which is likely to be only a part of the principal sum outstanding), but the total principal sum outstanding.
11. *Value of loan write-offs*: the total value of all loans that have been declared unrecoverable. This is the net sum measured *after* delinquent members' savings have been set against the debt. This information is often difficult to obtain from CMMFGs, especially because loan repayments in such groups tend to be scheduled for a final date, rather than periodically. Data usually becomes clear only when assets are seized and an unpaid balance remains.

### **Group 3: Operating efficiency ratios**

These two ratios consider the percentage of group members with active loans and the percentage of funds in use. Loan access is a measure of fairness, since those members who do not take out loans may be putting their savings at undue risk, or may be having their access to credit limited by more powerful personalities within a given CMMFG.

The percentage of funds in use, together with the rate of interest charged, is an important predictor of the likelihood that returns on member savings will be attractive. Typically, places with a low level of economic activity and few investment opportunities have low rates of loan fund utilization. This is not necessarily a negative outcome, since the very poor consider savings a priority in and of itself, but low rates of fund utilization lead inevitably to lower rates of return and this fact may be considered undesirable by members.

Definitions of the data required for these operating efficiency ratios are as follows:

1. *Number of active members*. Active members are those that participate regularly in CMMFG affairs and are considered to be in good standing with a given group. They are *not* limited to the members who show up at meetings where data is gathered. They may be absent by agreement, or owing to unforeseen circumstances. Active members can be determined by examination of savings and loan records (either ledgers or passbooks), and enquiry among members.
2. *Value of loans outstanding now*: see Group 2 above.
3. *Number of borrowers*: the total number of people who have outstanding loans. This value may not be the same as the number of loans outstanding, because some members may have more than one loan.
4. *Total assets*: all assets of all CMMFGs in the program, both fixed and current, including cash, loans outstanding, cash in other funds, goods, livestock, buildings, etc. Total assets consist of all property, receivables, and cash owned by all CMMFGs that they are free to use as they see fit. This is not a net calculation (i.e., net of anything the CMMFGs may owe).

5. *Value of fixed assets and commodities*: the value of all physical assets, such as property, livestock, goods, etc., owned by the CMMFGs in the IO program. It does not include financial assets, such as cash and loans outstanding.
6. *Value of other funds*: funds that the CMMFGs have agreed not to mix with their loan funds. These funds may include funds set aside by groups for social or insurance purposes or the acquisition of an asset.

#### **Group 4: Implementing organization operating efficiency ratios**

The four recommended ratios below evaluate the organizational and financial efficiency of the implementing organization. However, they do not evaluate its effectiveness in terms of the quality of the CMMFGs that the IO creates and/or trains, nor the impact that these groups have on the livelihoods of their members. These latter parameters are interpreted in the light of the financial performance and member satisfaction ratios described earlier, backed up by periodic household-level livelihood surveys. The following definitions apply to the IO efficiency ratios:

1. *Number of CMMFGs being supervised*: the number of groups either being trained or supervised by all field officers of an IO.<sup>3</sup> This number does not include CMMFGs that field officers may have already trained and which are now operating independently.
2. *Number of field staff (including supervisors)*: all field officers and supervisors who are spend most of their time in the field. This value does not include support staff, such as drivers, who may also work in the field.
3. *Number of all staff*: field staff (i.e., field officers, supervisors), senior managers, and support staff (e.g., clerks, drivers, watchmen, etc.). This value does not normally include board members, but may include volunteers who occupy supervised positions.
4. *Total program costs to date*: all costs of implementing the program, including fixed assets, office operating costs, consultancies, workshops, overhead, etc. It may be hard to identify these costs in cases where CMMF programs are implemented by multisectoral organizations. In this case, the analyst should include all direct costs that relate to CMMF activities (e.g., time spent by staff and supervisors on CMMFG support), plus an agreed percentage of overhead, capital, and office support costs of the organization as a whole.
5. *Number of active members*: all members considered active in all CMMFGs being trained or supervised by field staff of the IO. This number is not limited only to members present at meetings (since they may be occasionally absent owing to sickness, business, or personal reasons).
6. *Number of graduated members in independent CMMFGs*: all members of CMMFGs that are no longer being trained or supervised by IO field staff or M&E staff, but who were at one time trained and supervised by the program.

#### **Group 5: External debt ratios**

For the most part, CMMFGs do not borrow externally early on, so performance ratios concentrate on their internal performance. This focus is, however, changing. In India in particular, most self-help groups (SHGs) have some kind of external line of credit via a relationship with a local bank or an apex organization. This line of credit is typically based on the group's ratio of equity to debt. In Africa, such linkages are in their infancy and present special challenges, owing to the sparse distribution of banking facilities, but this circumstance, too, is beginning to change. There are two main implications for programs that facilitate linkages between CMMFGs and external creditors:

- 
3. This value includes all CMMFGs being supervised, whatever the arrangement—whether the groups are trained directly by field officers of the IO or are being trained and supervised by community-based trainers (or other designated trainers) who themselves are supervised by field officers.

- *Quality of the external portfolio.* If only a low level of a lending institution's CMMFG portfolio is at risk, it is more likely to expand its relationship with such groups than if the risk ratio is high. CMMFGs, however, tend to engage in activities that are linked to agriculture and may have highly variable income streams throughout a given year. While normally out-performing the repayment rates of other classes of loans financed by the lending institution, CMMFG credits may suffer periodic problems associated with the borrowers' cash flow. This will show up as apparent delinquency, a risk of which an IO program must be aware (and to which it should educate lending institutions), when it begins to facilitate linkages between such groups and external lenders.
- *Indebtedness.* Experience has shown that CMMFGs are able to manage considerable amounts of external debt, but are often overwhelmed by an early injection of external capital, especially in amounts that are out of proportion to the sums that they have previously managed. Knowing the ratio of debt to equity is, therefore, an important indicator for an IO when advising both lenders and borrowers about the special challenges of managing external debt.

In IO programs where CMMFGs assume external debt, the two ratios that evaluate this debt are actually included with the financial performance ratios (Group 2 above), rather than being a separate group. The following definitions apply to these ratios:

1. *Value of external borrowing outstanding:* the total outstanding principal owed by all CMMFGs being trained and/or supervised by the IO, whether past due or currently being repaid on time.
2. *Value of external borrowing past due:* the total of all outstanding principal sums owed by all CMMFGs in the IO program that are currently delinquent.
3. *Total assets of CMMFGs that are accessing external credit:* all assets (fixed and current) belonging to the sub-set of CMMFGs that are borrowing from an external source, such as a bank, an MFI, or an individual.
4. *Total liabilities of CMMFGs that are accessing external credit:* all loans that are provided to all CMMFGs in the IO program, whatever their source.



## 4. Explanation of Ratios

### Purpose of ratios

The ratios developed for this paper are intended principally for managers of implementing organizations that promote CMMFGs until the latter become independent or reach substantial autonomy. They are not intended to be used by the community-managed groups themselves, although certain of them, such as the external debt ratios, may be helpful to these groups in decision making.

*Most of the data gathered for these ratios is thus either an aggregate or an average of the most current information available for all CMMFGs in a given IO program (or an aggregate of a subset of these CMMFGs). **The data does not pertain to single CMMFGs.***

IOs might develop other ratios for their own management purposes. The 16 basic ratios presented in this paper are meant to provide such organizations with insight into:

- the extent to which group members feel that services provided by CMMFGs are useful to them;
- how well CMMFGs perform in terms of direct financial benefit to a majority of their members, and at what scale;
- the extent to which credit provided by these groups is in demand and who benefits from it; and
- the efficiency of the implementing organization in terms of caseloads, structure, and costs.

### Ratio explanations

*All the ratios explained in this section use the sample values presented in Table 3.*

#### Group 1: Member satisfaction ratios

Ratio 1: Attendance rate (using sample values)

Attendance rate	=	$\frac{\text{Number of members attending meetings}}{\text{Number of active members}}$
	=	$\frac{19,820}{22,300}$
	=	88.9%
Trend: <b>A stable or increasing attendance rate is positive</b> and indicates a positive short-term value of group services and the appropriateness of methodology being used.		

Attendance rate is a sensitive measure that may be interpreted in different ways. It is normal for group attendance to decrease after initially high levels (which traditionally approach 100 percent). Over the longer term, however, attendance will be influenced by a number of different factors:

- *Frequency of meetings.* When meetings are frequent and time-consuming, member participation tends to fall. While members may still be considered active, they may start to send their contributions with another member and only show up for loan meetings. Programs with attendance that falls below 85 percent may need to consider whether the frequency of meetings is greater than

necessary. Where meetings are monthly and involve *both* savings and credit, attendance rates are normally high.

- *Length of meetings.* When meetings take a long time, people may limit their attendance. This can be a function of both CMMFG size and whether or not loans are disbursed at every meeting. CM-MFGs that meet frequently to save, but disburse and receive loan repayments only monthly, tend to have higher attendance rates.
- *Time of the year.* Seasonal demand for labor, especially in rural areas, may reduce attendance at meetings (and may indeed call for a suspension of activities) during certain months.
- *Migration in search of seasonal work.* Migration for work purposes has a generally negative affect on meeting attendance. Migration may, moreover, actually increase in cases where CMMFG loans are used to finance members' travel to find work.
- *Civil disturbances.*

### Ratio 2: Retention rate (using sample values)

Retention rate	=	$\frac{\text{Number of active members}}{\text{(Number of active members + Number of dropouts)}}$
	=	$\frac{22,300}{22,300 + 797}$
	=	96.5%
<p>Trend: <b>A stable or increasing retention rate is positive</b> and indicates the long-term value of group services and the appropriateness of the methodology being used.</p>		

The retention rate is a measure of the ability of the CMMFGs to keep their members. It measures the total number of dropouts who have left groups since they began savings and lending activities as a percentage of current membership. This ratio may be skewed by members who have joined the CMMFGs in question since the start of the cycle but is a reliable indicator of their ability to remain attractive to members and limit turnover over time. The retention rate is less sensitive to member dissatisfaction than attendance rates, because abandoning a group is a member's last resort. A steady decline over time indicates that the CMMFGs may be losing relevance or have limited value.

Factors that affect retention rate are:

- *Long-term assessment of costs and benefits.* If members do not receive a return on the time they invest in their respective groups, in either in financial or social terms, they will leave them.
- *Elite capture.* If specific leaders dominate their respective groups and capture the lion's share of its benefits (particularly access to credit), members may feel that they are underwriting too much risk for too little benefit.
- *Flexibility of services.* CMMFGs that stick to a fixed rate of savings or limit loan terms to very short time periods may experience declining participation and low retention. Those that do not allow members access to their savings throughout the operating cycle may also suffer membership losses.
- *Competition.*

### Ratio 3: Membership growth rate

Membership growth rate	=	$\frac{(\text{No. of active members} - \text{No. of members at start of cycle})}{\text{Number of members at start of cycle}}$
	=	$\frac{22,300 - 20,200}{22,300}$
	=	10.4%
<p>Trend: <b>An increasing growth rate is positive.</b> It indicates a positive long-term value of group services and the appropriateness of the methodology being used. <b>If negative, it can indicate inappropriate CMMFG scale.</b></p>		

The growth rate is the other side of the retention rate. It shows how many more members have been attracted to all CMMFGs being trained and/or supervised by the implementing organization than were present, in aggregate, at the first meeting. This ratio is a fairly crude measure of success, because it masks dropout.

A program may be expected to achieve early growth because people may be attracted to a new initiative, but it is the long-term growth rate that indicates continuing value. Long-term growth rates are, however, unlikely to ever be very high, since most CMMFGs have (and need to have) limits on their size and usually attract their full complement of members at a very early stage. A program with a very low growth rate is also likely to be one with a very low dropout rate. If growth rate is negative and the dropout rate high, a program needs to take corrective action. Factors that influence this ratio that need to be considered are:

- *Splitting a large group.* When CMMFGs become so large that they divide into two, smaller groups, this ratio will be negative, but is in fact the result of strong growth. This result will not affect growth rates of the aggregated total, but will affect group-to-group comparisons.
- *Reaching a size limit.* When the growth rate is very positive and the average size of a CMMFG approaches or exceeds 30 members, this value should be taken as a warning sign that group sizes may be getting too large.
- *Competition.*

## Group 2: Financial performance ratios

Ratio 4: Average member savings mobilized to date (using sample data)

Average member savings mobilized to date	=	$\frac{\text{Cumulative net value of savings}}{\text{Number of active members}}$
	=	$\frac{32,450,000}{22,300}$
	=	1,455.15
Trend: <b><i>A stable or increasing savings mobilization rate is positive</i></b> and indicates increasing confidence in the methodology being used.		

Most IOs implement programs with a large number of CMMFGs. Some of these groups will be new at the start of an annual cycle, some will be middle aged, and some will be at the point of reaching independence. All things being equal, given a relatively stable program of several years' duration, the amount of savings invested by each member will increase if their confidence in their respective group increases and will decline if their confidence does not. This ratio can be used to:

- infer a changed level of confidence in the groups being trained and/or supervised by the IO. The average level of savings in a given CMMFG by the average member is usually modest in the first year, then tends to rise quite sharply for a year or two, when it reaches a more or less stable level, with seasonal variation.
- compare the amount of savings mobilized per member with the average amounts invested by members in other types of accessible savings instruments, thus inferring the relative utility of groups' services to their members compared to the alternatives.

Factors that influence the reliability of this ratio are:

- *Competition.*
- *Choice of methodology.* If CMMFGs allow only a fixed savings contribution, this requirement will stifle optimal savings mobilization.
- *Co-variant seasonal demand for capital.* Large numbers of people usually want to withdraw money at the same time, for example, at the time of important religious festivals, when school fees are due, and during the planting or harvesting seasons when inputs and labor need to be financed. Community-managed group are likely to experience much less seasonal fluctuation in urban areas, except during important religious or national holidays.

Ratio 5: Annualized return on savings (using sample data)

Annualized return	=	$\frac{\text{Net profit or loss}}{(\text{Cumulative value of savings} / 2)}$	x	$\frac{52}{\text{Average age of CMMFGs in weeks}}$
	=	$\frac{4,750,000}{(34,450,000 / 2)}$	x	$\frac{52}{32}$
	=	44.8%		
Trend: <b>An increasing annualized return, program wide, indicates overall increases in CMMFG profitability.</b>				

Using aggregated group data, the formula for this ratio assumes that:

- *average savings is half the amount of current savings.* This assumption is likely truer for CMMF programs in which members save the same amount at each meeting, but less true for groups in which savings can be made in different amounts and withdrawals are permitted.
- *savings are mobilized throughout the operating cycle.* Some CMMFGs suspend savings activities at times when cash is in short supply, which would render this ratio less useful.

Annualized return on savings is a measure that is normally calculated for individual CMMFGs. Since CMMFGs in a large IO program will start savings activities at different times, it is difficult to compare their relative profitability. This ratio thus extrapolates *current* performance of the average CMMFG to the performance that could be expected (of the average CMMFG) at 12 months (whether or not a CMMFG is older or younger than 12 months). When this ratio is calculated for a program as a whole, a rising trend and then a plateau should be expected over time, as individual groups begin to manage their portfolios more efficiently.

When the ratio is calculated for individual CMMFGs, an IO is in a position to make approximate comparisons of the relative efficiency with which its various CMMFGs convert member assets into profits. The measure does not take account of the reinvestment of compounded interest in the loan portfolio and is of little value for CMMFGs that are less than 3–4 months old. Nevertheless, it is a practical way to segregate high-performing from low-performing groups and enables further analysis and remedial action to be more effectively directed.

Ratio 6: Average member investment (using sample data)

Average member investment	=	$\frac{\text{Total assets} - \text{Total liabilities}}{\text{Number of active members}}$
	=	$\frac{41,800,000 - 2,600,000}{22,300}$
	=	1,757.8
Trend: <b>A positive value reflects an increasing level of member investment.</b>		

The formula looks at total member investment (essentially, their equity) and divides it by the number of active members. In this case the assumption is that members are *investing* in their respective groups and that the assets of these groups (i.e., what they own) are comprised of their savings plus income, minus expenses, which is then converted to loans, cash, and property. Rather than maintain complex records to record a myriad of transactions, it is easier to determine equity investment by looking at total assets minus total liabilities.

Ratio 7: Average outstanding loan size (using sample data)

Average outstanding loan size	=	$\frac{\text{Value of loans outstanding now}}{\text{Number of loans outstanding now}}$
	=	$\frac{32,000,000}{16,150}$
	=	1,981.4
Trend: <b>An increasing value for average outstanding loan size is generally positive.</b>		

The average outstanding loan size is *not* the average loan size disbursed; it represents the average amount remaining to be reimbursed. Whereas MFIs usually require repayment on a regular schedule (meaning that their average outstanding loan size is about half or slightly more than the value of the average loan disbursed), CMMFGs commonly offer end-of-term repayment. The average outstanding loan amount for these groups is thus usually substantially greater than half the value of the average loan disbursed.

This ratio should normally increase substantially at the level of the individual CMMFG, and more slowly program wide. This divergence can be explained by the fact that individual groups will continue to save as they recycle short-term loans and interest to increase their portfolio size, but the increase in average outstanding loan size will be slower for an IO facilitating the establishment and support of hundreds of CMMFGs, as its portfolio will be representative of a cross-section of new, middle-aged, and older groups. The figure should rise fairly steadily in line with the increased confidence of new entrants that the group methodology has already proven its safety and usefulness.

Ratio 8: Portfolio at risk (using sample data)

Portfolio at risk	=	$\frac{\text{Value of loans past due}}{\text{Value of loans outstanding now}}$
	=	$\frac{2,147,500}{32,000,000}$
	=	6.7%
Trend: <b>An increasing value for portfolio at risk is negative.</b>		

Portfolio at risk (PAR) is a key indicator of portfolio health in standard microfinance programs. As a rule of thumb, a PAR in excess of 5 percent indicates the need for decisive remedial action to prevent unacceptable loan losses. This measure needs to be treated with a great deal of caution in CMMF programs, however, for two main reasons:

- *Many CMMF programs allow flexible repayment.* Usually this means that members must pay accrued interest on a regular basis, but can retire the principal sum at the end of the loan period or, commonly, retire it in differing amounts throughout a repayment cycle. This type of repayment occurs because the activity financed by the credit may not provide income until the end of a long production cycle, or because income is irregular and unpredictable. Thus the concept of a loan being past due does not apply in the conventional sense.
- *Many CMMFGs require members to forfeit their savings (and accrued interest) in the event of non-repayment.* This imperative tends to encourage very high rates of loan recovery, since members are

well aware of the double loss incurred by non-payment. This recovery mechanism also drastically reduces write-off.

To date, no “normal” standards have been established for PAR in CMMF programs. However, there is a tendency for the percentage to rise throughout a repayment cycle and then diminish towards the end of the cycle. The PAR of 12.8 percent shown above is not atypical and, although not desirable, may not represent unacceptable portfolio quality.

The flexible loan repayment terms offered by CMMFGs make it hard to determine when a loan is past due in the usual sense. A practical expedient is to consider loans past due only on the due date for final reimbursement. In this case, an average mid-cycle PAR of less than 10 percent is unremarkable.

Ratio 9: Loan losses (using sample data)

Loan Losses	=	$\frac{\text{Value of loan write-offs}}{(\text{Value of loans outstanding at start} + \text{value of loans outstanding now})/2}$
	=	$\frac{320,000}{(8,800,000 + 32,000,000)/2}$
	=	$\frac{320,000}{20,400,000}$
	=	1.6%
Trend: <b><i>An increasing loan loss ratio is negative.</i></b>		

Loan losses are calculated for a specific period, meaning that losses are calculated on the basis of the average value of loans outstanding. In the example above, the starting balance of loans outstanding is 8,800,000 and the ending balance, 32,000,000. The average value is therefore 20,400,000, of which 320,000 is 1.6 percent—a fairly typical write-off level for CMMFG programs.

Calculating loan losses for an individual group is difficult because most groups do not have write-off policies, apart from asset attachment (including savings). Losses are, in fact, often not accounted for until the end of an annual cycle, when dividends must be paid or the liquid assets of a group are shared out among members. Calculating a program-wide rate for CMMFG internal loan losses is thus a complex affair because most groups will have been operating for different lengths of time and will conduct write-offs at different times.

It is for this reason that most CMMFG programs concentrate on ratio 5 (R5, annualized return on savings to date). This ratio provides reassurance to the implementing organization that despite potential hidden loan losses, the overall result of group savings and lending activities is positive.

## Ratio 10: Risk-coverage ratio

Risk coverage ratio	=	$\frac{\text{Net Profit/loss}}{\text{Value of loans past due}}$
	=	$\frac{4,750,000}{2,147,500}$
	=	2.2:1
Trend: <b><i>A risk coverage ratio greater than 1 is desirable.</i></b>		

The risk coverage ratio compares the total value of loans past due with net profit to date. Based on present performance, if the ratio exceeds 1.0, members will receive a positive nominal return on their savings, no matter what happens. This ratio only predicts a likely outcome on the basis of historical performance, it does not guarantee it. Calculated for an entire portfolio of groups supervised by an IO, it is a useful indicator for understanding whether the average group is able to cover risks to member equity.

### Group 3: Operating efficiency ratios

Ratio 11: % of members with loans outstanding (using sample data)

% of members with loans outstanding	=	$\frac{\text{Number of borrowers}}{\text{Number of active members}}$
	=	$\frac{15,940}{22,300}$
	=	71.5%
Trend: <b><i>The trend is value neutral, since members may have a preference for savings or for benefitting from insurance services.</i></b>		

The percentage of members with loans outstanding will vary from CMMFG to CMMFG. It will also vary with seasonal demand for loans. The ratio is, however, an indicator of sensitive issues that may need to be addressed. If a program notes that there is a trend towards only a few borrowers and, at the same time, a high percentage of funds in use, the ratio may indicate elite capture of group assets. In most cases where such a finding is not evident, the fund utilization rate (Ratio 12) should rise and fall more or less in line with increases and decreases in the number of borrowers. The only exception to this trend is at the start of an individual CM-MFG's activities, when loan funds are small. Inevitably, nearly all funds are then in use by a few people, a situation that should ease after the first several months of operation, when the loan fund will have grown in size and be able to meet the current borrowing needs of most members.

Ratio 12: Fund utilization rate (using sample data)

Fund utilization rate	=	$\frac{\text{Value of loans outstanding now}}{\text{Total assets} - (\text{value of fixed assets \& commodities} + \text{Other funds})}$
	=	$\frac{32,000,000}{41,800,000 - (6,350,000 + 0)}$
	=	90.3%
Trend: <b><i>An upward trend in this ratio is positive.</i></b>		

This ratio looks at the total current assets (cash and near-cash) of all community-managed groups and compares it with the amount utilized for loans. It thus compares the amount of funds available for lending or other investments with the amount actually being borrowed.

Current assets may include other short-term investments, such as grain storage and animal fattening. They are included as assets that could be borrowed because they can easily be converted to cash and invested in the loan fund. "Other funds" are funds managed by the various groups being trained or supervised by the IO that are not available for lending. Examples are an emergency fund or a burial fund. Fixed assets are physical assets that are not expected to be sold, such as buildings, machinery, furniture. etc.

#### Group 4: Implementing organization operating efficiency ratios

Ratio 13: Caseload—CMMFGs per field staff (using sample data)

CMMFGs per field staff	=	$\frac{\text{No. of CMMFGs being supervised}}{\text{Number of field staff (including supervisors)}}$
	=	$\frac{1,145}{82}$
	=	14:1
Trend: <b>An increase in value of this ratio is positive.</b>		

This ratio measures the number of community-managed groups that are being trained and/or supervised by field staff. It includes field officers and supervisors, but not support staff. It excludes independent CMMFs (i.e., community groups that have graduated from the IO program or that formed spontaneously), which field officers may visit in order to gather long-term follow-up data. (In any case, this task is best done by specialized M&E staff). The factors that influence this ratio are:

- *Frequency of meetings.* A field officer who visits CMMFGs that meet weekly will, theoretically, only be able to carry approximately half of the caseload of a field officer who visits CMMFGs that meet every two weeks.
- *How CMMFGs are reached.* Some programs cluster CMMFGs so as to meet in the same place at the same time for supervision purposes, a policy that increases field officer efficiency.
- *Distance and road conditions.* When communities are scattered and roads are bad, a field officer supports fewer CMMFGs.
- *Collateral activities.* Some programs use CMMF as an entry point for other services, such as literacy training or HIV/AIDS awareness raising. All of these activities take time. If a program uses the same staff for all program components, the number of CMMFGs that a field officer can train and supervise will be reduced.
- *Portfolio maturity.* A field officer will start by working intensively with all of his/her CMMFGs and have a relatively small caseload. As the frequency of visits decreases, he/she will take on new groups.

It is not the purpose of this paper to suggest what this ratio should look like, but experience shows that field officers can carry between 10 and 25 CMMFGs. A program should use this ratio to compare itself with other, similar, programs as a way to determine the productivity of its workforce and develop performance norms that can be used to set targets and benchmarks for field staff.

Ratio 14: Caseload—Members per field staff (using sample data)

Members per field staff	=	$\frac{\text{No. of active members}}{\text{Number of field staff (including supervisors)}}$
	=	$\frac{22,300}{82}$
	=	272:1
Trend: <b>An increase in the value of this ratio is positive.</b>		

The member caseload per field staff is the most critical performance variable presented in this document because it determines the total number of people that can be reached by an IO. The variables that affect this ratio include most of those described above for Ratio 13. In addition, the following factor should be taken into account.

- *Size of CMMFG.* A program in which the average size of community-managed groups is 15 will have a lower rate of productivity than a program in which the average size is 25. It is common that when CMMFGs are very small, they may be clustered geographically for supervision purposes and meet less frequently than once every week. This fact is important to bear in mind in urban areas, where group sizes tend to be small and people have very little time to attend meetings.

The normal range for the field officer caseload ratio is between 200 and  $\pm 1,000$ . The value of the ratio may go well beyond the upper number when community-based trainers are recruited.

Ratio 15: Field staff to total staff (using sample data)

Ratio of field staff to total staff	=	$\frac{\text{No. of field staff (including supervisors)}}{\text{No. of all staff}}$
	=	$\frac{82}{113}$
	=	72.6%
Trend: <b>An increase in the value of this ratio is positive.</b>		

Factors influencing the ratio of field staff to total staff are:

- *Age of program.* An IO program may begin with fixed costs in the form of managers and supervisors, but only a few field staff. The program may do this deliberately in order to prepare itself for significant growth.
- *Program complexity.* If a program invests in intensive monitoring activities, or has a research agenda, it is likely to have a lower ratio of field staff to total staff.

There is no standard measure, but because CMMF programs are relatively simple to implement, management and administrative support structures can be expected to be flat. Most programs, even if small in scale, manage a ratio at least 50 percent field staff to total staff. Highly efficient programs that work at significant scale increase this ratio to over 70 percent.

Ratio 16: Cost per member assisted (using sample data)

Cost per member assisted	=	$\frac{\text{Total program costs to date}}{\text{No. of active members} + \text{No. of graduated members in independent CMMFGs}}$
	=	$\frac{41,500,000}{22,300 + 12,144}$
	=	1,204.9
	=	€13.2 @ €1 = 91.4 local currency (Euro used as example of international currency)
Trend: <b><i>A decrease in the value of this ratio is positive.</i></b>		

It is normal to express cost per member assisted in international currency in order to enable cross-program comparisons. The example above uses the euro as an example.

Factors that positively influence this ratio are:

- large program scale;
- large average CMMFG size;
- average meeting frequency greater than one week;
- ease of access (this factor is affected by population density and the quality of infrastructure);
- a flat organizational structure; and
- use of low-cost, community-based trainers.

When calculating costs, programs need to take into account the type of project that will implement community-managed microfinance. Microfinance programs are often implemented by organizations with multiple agendas, or as an adjunct to another major program goal, largely because experience has shown that the methodology is readily adopted by non-specialist organizations. If this condition is true, it is important that the numerator reflects only those costs that are directly incurred by the CMMF program, plus a negotiated share of the overhead of the larger organization.

## Group 5: External debt ratios

External debt is defined as any liability to an external agency or individual assumed by all CMMFGs being trained and/or supervised by an implementing organization. It does not include member savings. This debt is not confined to borrowing to expand the loan portfolio, but includes any debt for any purpose.

External Debt Ratio 1: External portfolio at risk (using sample data)

External portfolio at risk	=	$\frac{\text{Value of external borrowing past due}}{\text{Value of external borrowing outstanding}}$
	=	$\frac{223,200}{1,500,000}$
	=	14.9%
Trend: <b><i>An increasing value for external portfolio at risk is negative.</i></b>		

External portfolio at risk needs to be treated differently from internal portfolio at risk. As discussed previously, internal portfolio at risk is not a reliable indicator of default, even when it exceeds typical MFI norms by wide margins. It is a much more reliable indicator of risk when the CMMFGs overseen by an IO program have taken out external loans, especially if they are highly leveraged, and where the majority of member investments go to agriculture. This ratio thus needs to be closely monitored. The data required to calculate it is best gathered from individual CMMFGs and not external lenders, which may well have trouble disaggregating CMMFG borrowing from that of other clients and may also be reluctant to share portfolio information.

External Debt Ratio 2: External borrowing

External borrowing	=	$\frac{\text{Value of external borrowing outstanding}}{\text{Total Assets of CMMFGs borrowing externally} - \text{Total liabilities of CMMFGs borrowing externally}}$
	=	$\frac{1,500,000}{4,400,000 - 1,725,000}$
	=	56%
Trend: <b><i>An increasing external borrowing ratio is positive if external PAR remains low.</i></b>		

CMMFGs in many countries borrow money from financial institutions under varying conditions. Nearly all of these credits significantly leverage the loan funds of these groups. A program will normally set parameters for the maximum amount of this ratio at different points in a CMMFG's life. Keeping the external borrowing ratio to a prudent level is an essential part of a community group's development. Program wide, the ratio is calculated only for those CMMFGs that have accessed loans from external sources. Since lending to CMMFGs by multiple MFIs (or other lenders) is not uncommon, the numerator should include loans from all sources and not a single designated lending agency.



## 5. Excel ratios tool

A simple spreadsheet available on the SEEP website<sup>4</sup> requires an analyst to enter aggregated field data into a single table that automatically produces a series of financial ratios. The worksheet is password protected and data may only be entered in grey cells. Table 4 shows the data entry sheet, where aggregated data derived from the entire portfolio of an implementing agency is entered, using the sample data from Table 3.

Table 4. Aggregated data input worksheet for SEEP CMMF ratios

Description of source data	Qty/Amount
Number of members attending meetings	19,820
Number of active members	22,300
Number of dropouts	797
Number of members at start of cycle	20,200
Number of CMMFGs being supervised	1,145
Cumulative net value of savings	34,450,000
Net profit/loss	4,750,000
Average age of CMMFGs, in weeks	32
Total assets	41,800,000
Total liabilities	2,600,000
Value of other funds	0
Value of loans past due	2,147,500
Value of loan write-offs	320,000
Value of loans outstanding at start of period	8,800,000
Value of loans outstanding now	32,000,000
Number of loans outstanding now	16,150
Number of borrowers	15,940
Value of fixed assets and commodities	6,350,000
Number of field staff (including supervisors)	82
Number of all staff	113
Total program costs to date	41,500,000
Number of independent CMMFGs that have graduated from IO program	12,144
Value of external borrowing outstanding	1,500,000
Value of external borrowing past due	223,000
Total assets of CMMFGs that are borrowing externally	4,400,000
Total liabilities of CMMFGs that are borrowing externally	1,725,000

4. Listed as "CMMF Ratio Analysis Tool," this worksheet can be downloaded at the following URL: [http://www.seepnetwork.org/files/5903\\_file\\_Ratios\\_Tool.xls](http://www.seepnetwork.org/files/5903_file_Ratios_Tool.xls)

Table 5 shows how the spreadsheet re-classifies the data input into the information needed for the five groups of ratios, prior to generating those ratios. (All categories save Group 4 refer to CMMFGs aggregated as a group). This reclassification is an automatic output and reflects the same values shown in Table 3.

Table 5. Worksheet output: reclassification of input data

Description of source data	Qty/Amount
<i>Group 1: Member satisfaction ratios</i>	
Number of members attending meetings	19,820
Number of active members	22,300
Number of dropouts	797
Number of members at start of cycle	20,200
<i>Group 2: Financial performance ratios</i>	
Cumulative net value of savings	34,450,000
Number of active members	22,300
Net profit/loss	4,750,000
Average age of CMMFGs, in weeks	32
Total assets	41,800,000
Total liabilities	2,600,000
Value of loans outstanding at start of period	8,800,000
Value of loans outstanding now	32,000,000
Number of loans outstanding now	16,150
Value of loans past due	2,147,500
Value of loan write-offs	320,000
<i>Group 3: Operating efficiency ratios</i>	
Number of active members	22,300
Number of borrowers	15,940
Value of loans outstanding now	32,000,000
Total assets	41,800,000
Value of fixed assets and commodities	6,350,000
Value of other funds	0
<i>Group 4: Implementing organization operating efficiency ratios</i>	
Number of CMMFGs being supervised	1,145
Number of field staff (including supervisors)	82
Number of all staff	113
Total program costs to date	41,500,000
Number of active members	22,300
Number of graduated members in independent CMMFGs	12,144
<i>Group 5: External debt ratios</i>	
Value of external borrowing outstanding	1,500,000
Value of external borrowing past due	223,000
Total assets of CMMFGs borrowing externally	4,400,000
Total liabilities of CMMFGs borrowing externally	1,725,000

Table 6 shows the final output generated by the tool: the actual ratios calculated on the basis of aggregated data for all CMMFGs trained and/or supervised by an implementing organization. The analyst usually enters the name of the institution on this sheet, and may convert the data into an international currency to permit comparisons with programs operating in other countries.

Table 6. Final worksheet output: SEEP CMMF ratios

<b>SEEP CMMF Performance Ratios</b>			
Institution:	ABC CMMFG Promotion Program		
Date:	6-Jan-08	Currency:	€
		Rate of exchange: (€ = 91.4)	91.40
<i>CMMFG member satisfaction ratios</i>			
R1	Attendance rate		88.9%
R2	Retention rate (%)		96.5%
R3	Membership growth rate		10.4%
<i>CMMFG financial performance ratios</i>			
R4	Average savings per member mobilized to date		1,545
R4L	Average savings per member mobilized to date €		16.9
R5	Annualized return on savings		44.8%
R6	Average member investment		1,757.8
R6L	Average member investment €		19.2
R7	Average loan size		1,981.4
R7L	Average loan size €		21.7
R8	Portfolio at risk		6.7%
R9	Loan losses		1.6%
R10	Risk coverage ratio		2.21
<i>CMMFG operating efficiency ratios</i>			
R11	% of members with active loans		71.5%
R12	Fund utilization rate		90.3%
<i>Implementing organization operating efficiency ratios</i>			
R13	Caseload: CMMFGs per field staff		14.0
R14	Caseload: members per field staff		272
R15	Ratio of field staff to total staff		72.6%
R16	Cost per member assisted		1,204.9
R16L	Cost per member assisted €		13.2
<i>CMMFG external debt ratios</i>			
ER1	External portfolio at risk		14.9%
ER2	External borrowing		56.1%

Note: When an international currency is designated, brown rows report the local currency equivalent.

## THE SEEP NETWORK

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