The SEEP Network Savings-led Financial Services Working Group: Ratios sub-group

Financial Ratio Analysis of Community-managed Micro-finance Institutions

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1 Introduction

1.1 What is Community-managed Micro-finance?

Over the last few years there has been an increasing interest in community-managed micro-finance (CMMF). This 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 broadly accepted that the debt capacity of rural borrowers is limited (thereby restricting the potential for portfolio growth) and the costs of reaching this type of client is significantly higher, because transport is expensive and population densities are lower than in Asia and most parts of Latin America. Added to this is a growing realisation that while MFIs offer credit as their principal product, the service most needed (and in demand) by the very poor is savings: to protect productive assets and ensure livelihoods in places where credit is likely to increase, rather than decrease, risk. Regrettably, a majority of MFIs are not licensed to mobilise savings and usually have alternative, lower cost means of financing their loan portfolios.

Thus, it has become clear that a different type of institution is needed to provide sustainable financial services to this class of client. One solution, reached independently in India and in Africa, has been to facilitate the creation of very small-scale, independent, CMMF institutions whose capital 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, numbering between 10 and 30 members are able to satisfy the majority of their members' needs for basic financial services. These groups substitute complex record-keeping systems with systems based substantially on the witness of transactions and have extremely low operating costs, since the management demands are occasional and require relatively low levels of skill (and in any case, meet only periodically).

The emerging results of this endeavour are striking. Community-managed microfinance-institutions have shown explosive growth 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, community-managed microfinance programmes are being implemented at very large scale and very low cost in over 30 countries with extraordinary results in terms of sustainability and impressive financial returns to participants.

1.2 Why a new set or ratios are needed for CMMF

The microfinance industry has reached a high degree of consensus about the measurement of results for MFIs, with SEEP taking the lead in 1995 with the publication of Financial Ratio Analysis of Micro Finance Institutions. But CMMF institutions are very small-scale and different in kind to MFIs in terms of cost, complexity, products on offer and financial administration. The SEEP measures

cannot readily be applied to measuring the success of CMMF programmes for the following reasons:

- CMMF institutions (CMMFIs) are inherently sustainable because they have extremely low costs. The smallest income earned from internal loans quickly covers all of their costs. Standard measures of sustainability are therefore meaningless.
- The current SEEP ratios focus on technical measures to determine progress and define success. But most CMMF Institutions are made up not of savers and borrowers but investors. Meaningful ratios need to report on client-level benefits, both in terms of satisfaction and financial returns to members because CMMF institutions 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, but often many hundred and, while financial performance can only be defined at the level of the individual CMMFI, programme efficiency needs to be considered at *both* the CMMFI and the Implementing Organisation (IO) levels.

Thus, most CMMF programmes need to ask four sets of questions:

Member satisfaction	Because members are investors are they sufficiently satisfied with the performance of their CMMFIs to continue their membership?
Financial performance	Do CMMFIs provide a competitive return on member investment at an acceptable level of risk?
Operating efficiency (CMMFI)	Do CMMFIs succeed in facilitating member access to loans and maximise the use of performing assets?
Operating efficiency (Implementing organisation)	Are IOs efficient and effective in providing training and supervision services at the lowest possible cost, compatible with maintaining high CMMFI performance standards?

The first group of ratios looks at *member satisfaction*. If CMMFIs succeed in retaining their membership, or having the number of participants increase, it is likely that they will be sustainable. This is because they require only minimal financial income to cover all of their costs. Thus, member satisfaction is the most important guarantee of sustainability: those who are satisfied with the services on offer will continue to participate in their CMMFI and it will stay in business.

The second group analyses *financial performance* from a number of different perspectives. Because CMMFIs are entirely dependent on member investment to be able to offer loan and insurance services, the average amount of individual savings investment is critical to measuring the effectiveness of CMMFIs vis-à-vis alternatives. It is, then, important to measure the financial benefits derived from CMMFI profits; the average size of loans available to members and thelevel of loan loss and risk coverage.

The third group looks at CMMFI *operating efficiency* from the perspective of the CMMFI. It considers loan access and the degree to which performing assets are profitably invested, since internal loan taking is the principal source of revenue.

The fourth group looks at *operating efficiency* from the perspective of the IO. There is a growing awareness of the per-member costs of sustainable microfinance programmes. CMMFIs are amongst the most efficient in this respect, but there are increasingly a variety of approaches, mostly based on community-based trainers, that are substantially reducing this cost. It has been the case that CMMF programmes have been isolated from each other and have startlingly different conceptions of efficiency. Getting to develop norms that are linked to specific methodological approaches and operating environments is important, so that implementers can self-evaluate their efficiency and seek to learn lessons from similar programmes elsewhere. An IO that is not efficient in terms of staff performance and costs per member assisted will not be able to attract continuing support as CMMF methodologies evolve.

1.3 Using ratios in CMMF

Producing ratios is not an end in itself. The fundamental purpose is to improve programme performance and to be able to contribute to a body of knowledge about the sorts of results that can be considered norms, or exceptional. Managers must also look on ratios from a dynamic perspective, by regularly generating ratio updates and thus being able to identify trends that tell them how, in what ways, and potentially, why their programmes are changing. They provide the means by which improvements may be engineered and emerging problems identified before they become overwhelming.

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

The contextual factors that will substantially affect the ratios are, *inter-alia:*

- The scale of a programme. Large-scale programmes perform better than smaller programmes.
- The pace of growth. Ios that are expanding quickly have portfolios that are younger than a long-term average of a stable organisation and may have quality problems associated with staff experience and supervision
- The type of implementation strategy. Programmes doing direct delivery with paid professional staff have lower efficiency levels than programmes that have evolved towards the use of community-based trainer-facilitators, but

they may tend to have a higher quality in terms of CMMFI financial performance and member satisfaction

- Multi-sectoral vs. single-purpose programmes. Programmes that focus solely on CMMF tend to perform better on several efficiency measures at both the CMMFI and programme levels than programmes where a wide variety of services are delivered by the same institution. This is especially the case where Field Staff are required to perform these multiple roles, rather than having them provided by specialised staff
- Population density and infrastructure. Programmes that operate in remote areas, served by poor-quality roads, are less nominally efficient ahn those that work in dense rural areas or in towns.
- Meeting frequencies. Programmes that operate in places where CMMFIs meet weekly will tend to have lower efficincies than programmes where CMMFIs meet fortnightly or monthly. They may also have lower attendance rates, but better levels of CMMFI financial performance.
- The level of investment opportunities and member product preference. Low-potential rural areas are likely to show a strong bias towards saving, in preference to credit. This will result in a reduced level of return on member investments, but may not reflect at all on efficiency and programme effectiveness.

2 The Ratios

Ratio No.	Ratio/No.	Formula	Purpose	Page
Group 1: Member Satisfaction Ratios				
R1	**Attendance rate**	No of members attending meeting / No. of active members	Indicates short-term relevance and value of services and appropriateness of methodology	18
R2	**Retention rate**	(No. of active members – No. of dropouts) / No. of active members /	Indicates long-term relevance and value of services	19
R3	**Membership growth rate**	(No. of active members – No. of members at start / No. of members at start	Indicates long-term relevance and value of services	20
Group 2: Financial Performance ratios (CMMFI level)				
R4	**Average savings per member mobilised to date**	Cumulative value of savings / No. of active members	Indicates level of confidence in CMMF system and may be compared to alternative and similar savings opportunities	21
R5	**Annualised return on savings**	(Profit-loss / (Cumulative value of savings / 2)) x (52 / Average age of all CMMFIs, in weeks)	A measure that allows for comparison of the efficiency with which different CMMFIs generate profits	22
R6	**Average member investment**	(Total assets – liabilities) / No. of active members	Indicates retained individual investment (savings + earnings)	23
R7	**Average outstanding loan size**	Value of loans outstanding / No. of loans outstanding	Indicates changing debt-capacity of members	23
R8	**Portfolio at risk**	Value of loans past due / Value of loans outstanding	Measures amount of nominal default risk, but may not be reliable indicator of loan losses	24
R9	**Loan losses**	Value of loan write-offs / Average value of loans outstanding	Indicates extent of uncollectible loans over a given period	25
R10	**Risk-coverage ratio**	Net profit-loss / Value of loans past due	Indicates degree to which current yields cover potential maximum losses	25

Ratio No.	Ratio/No.	Formula	Purpose	Page
Group 3: Operating Efficiency Ratios (CMMFI level)				
R11	**%of members with loans outstanding**	No. of loans borrowers / No. of active members	Indicates degree to which loan access is equitable	27
R12	**Fund utilisation rate**	Value of loans outstanding / (Total assets – (Fixed assets + Other funds))	Indicates level of credit demand	27
Group 4: Operating Efficiency Ratios (Implementing organisation level)				
R13	**Caseload: CMMFIs per Field Staff**	Total No. of CMMFs being supervised / No. of Field Staff	Indicates operational efficiency of total Field Staff	28
R14	**Caseload: members per Field Staff**	Total No. of active members / No. of Field Staff	Indicates effective efficiency of total Field Staff	29
R15	**Ratio of Field Staff to total staff**	No. of Field Staff / Total No. of all staff	Indicates level of organisational efficiency	29
R16	**Cost per member assisted**	Total programme costs to date / (Total No. of active members + Total No. of graduated members)	Measures how much it costs to provide CMMF services to individual clients	30
Group 5: CMMFI External debt				
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 CMMFI. Reliable indicator of default	31
ER2	**External borrowing**	Value of external borrowing outstanding / (Total assets of CMMFIs borrowing externally – liabilities)	Indicates the degree to which CMMFIs are able to leverage external funds	31

3 Source Data

3.1 Who constructs and uses the ratios?

CMMFI programmes do not normally call for individual CMMFIs to create ratios to assist in internal management. The purpose of the ratios is to enable implementing organisations better to understand how field operations are proceeding, particularly with respect to member satisfaction, member benefit and CMMFI sustainability and operating efficiency. They call for data to be regularly gathered by IO field staff and to be regularly aggregated and analysed, so at to learn not only what is taking place, in overall terms, across the programme. Unlike ratio analysis of individual MFIs, ratio analysis of CMMF programmes does not focus on individual CMMFIs, but at the totality of the CMMFIs being supervised and trained. *All of the data that is suggested for collection in this section, from individual CMMFIs, must be entered into a database and analysed as a toitality.*

3.2 What data is needed?

CMMF programmes vary considerably. Some use methodologies in which CMMFIs 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 programmes may be sophisticated, with CMMFIs using a fully developed accounting system, engaging in very strong levels of financial activity and characterised by a highly literate, economically dynamic membership. Some may promote a time-bound methodology with CMMFIs regularly liquidating performing assets at an annual share-out (as is the case in many African CMMFI), while others may use formal accounting systems to measure profit and periodically allocate this to dividends or capital.

To help accommodate this broad array of possibilities, the working group has chosen ratios that for the most part are available across the board, to ensure that useful results can be generated by programmes working with the least literate and most economically disadvantaged. The second principle that has guided the choice of data is mainly to depend on CMMF level performance information that can be derived from data that the CMMFIs themselves routinely use to manage their activities.

Source data is divided into the categories listed in the following tables, with data requirements specified:

Data input: Group 1 – CMMFI Member satisfaction ratios

- Relates to CMMFI membership
- Means of measurement: CMMFI observation and enquiry

Source Data Description	Sample Data
• Number of members attending meeting	19,820
• Number of active members	22,300
• Number of dropouts	797
• Number of members at start	20,200

Data input: Group 2 – CMMFI Financial performance ratios

- Relates to CMMFI financial and portfolio records
- Means of measurement: Observation/enquiry/examination of CMMFI passbooks/ledgers, as applicable

Source Data Description	Sample Data
• Cumulative value of savings	32,450,000
• Number of active members	22,300
• Net profit/loss	6,200,000
• Average age of all CMMFIs, in weeks	30
• Total assets	40,250,000
• Liabilities	1.600,000
• Value of loans outstanding	32,300,000
• Number of loans outstanding	13,150
• Value of loans past due	4,147,500
• Value of loan write-offs	640,000
• Value of loans outstanding at start of period	16,800,000
• Value of loans outstanding at end of period	32,300,000

Data input: Group 4 – IO Operating efficiency ratios

- Relates to: Implementing organisation operating efficiency
- Means of measurement: Examination of IO records. CMMFI observation

Source Data Description	Sample Data
• Total number of CMMFIs being supervised	1,143
• Total number of Field Officers	67
• Total number of Field Staff (including supervisors)	93
• Total number of all staff	89
• Total programme costs to date	21,500,000
• Total number of active members	22,300
• Total number of graduated members (independent CMMFIs)	12,144

Data input: Group 3 – CMMFI Operating efficiency ratios

- Relates to CMMFI financial and portfolio records
- Means of measurement: Observation/enquiry/examination of CMMFI passbooks/ledgers, as applicable

Source Data Description	Sample Data
• Number of borrowers	13,150
• Number of active members	22,300
• Value of loans outstanding	32,300,000
• Total assets	40,250,000
• Fixed assets	6,350,000
• Other funds	0

Data input: Group 5 – CMMFI External debt ratios

- Relates to CMMFI Operating efficiency
- Means of measurement: Observation/enquiry/examination of CMMFI passbooks/ledgers, as applicable

Source Data Description	Sample Data
• Value of external borrowing past due	223,000
• Value of external borrowing outstanding	3,500,000
• Total Asssets of CMMFIs borrowing externally	2,000,000
• Total liabilities of CMMFIs borrowing externally	500,000

3.3 Group 1: CMMFI Member Satisfaction Ratios - definitions

Member satisfaction cannot readily be measured using ratios, except through proxies. If members of a CMMFI start to leave the CMMFI in significant numbers or if the number of members sharply increases it is reasonable to infer dissatisfaction on the one hand and satisfaction on the other. Similar conclusions may be drawn from low or high attendance rates, although this may mean something rather different to dissatisfaction with the services on offer, and may have a bearing on meeting frequency or other aspects of the methodology. The ratios are to be considered, therefore, an early warning system that may reflect upon the specific situation of a given CMMFI, or the overall methodological approach. In either case, action may be warranted.

This definition of data required for these ratios are as follows:

1. *Number of members attending meeting.* This refers to the members who are present in a meeting at the time a Field Officer or M&E specialist collects data during a CMMFI meeting. The most reliable means is direct observation.
2. *Number of active members.* Active members are those that participate regularly in CMMFI affairs and, most reliably, are considered to be members in good standing. They are not just the members who show up at the meetings in which the data is gathered. They may be absent by agreement or owing to unforeseen circumstances. This can be determined by examination of registers or savings and loan records (either ledgers or passbooks), and enquiry amongst the members
3. *Number of dropouts.* A dropout is a person who has left the CMMF permanently, for any reason at all. This may include voluntarily leaving the CMMFI, being expelled, abandonment through sickness or even death. This can be determined by examination of registers or savings and loan records (either ledgers or passbooks) and enquiry amongst the members
4. *Number of members at start.* These are the number of members who were active members at the start of the CMMFIs savings and credit activities. It is important not to confuse this with the time that the CMMFI was originally formed. It may have been formed many years ago for other purposes and only recently begun its savings and credit activities. This can be determined by examination of registers or savings and loan records (either ledgers or passbooks) and enquiry amongst the members

All of this data needs to be available in aggregate form from all CMMFIs. It is not essential that the data be updated every month, but as often as is compatible with supervision and training operations: in any case never more frequently than monthly.

3.3 Group 2: CMMFI Financial Performance Ratios - definitions

These ratios relate to the *aggregate* performance of the IO's portfolio of CMMFIs. The data is derived from the following principal sources:

- CMMFI attendance records. These may be in a register or may be derived from passbooks or enquiry
- CMMFI savings records. These may be derived from savings ledgers, passbooks or memory
- CMMF loan records. These may be derived from loan ledgers, passbooks or memory
- CMMFI cash balances. These may be obtained through observation or from cash book records

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

1. *Cumulative value of savings.* The total amount of savings mobilised to date. This is net of any withdrawals
2. *Number of active members.* See 3.2 above
3. *Profit-loss*. The difference between that part of member equity invested in performing assets (the loan fund and other income earning investments) less member savings and external debt. The main source of loan funds in CMMFIs is member savings, but this does not represent equity, because equity in the loan fund is comprised of investments (savings), plus retained earnings.
4. *Average age of all CMMFIs in weeks.* These are the total number of weeks since all CMMFIs being supervised/trained by the IO began their savings and lending activity, divided by the total number of CMMFIs
5. *Assets.* This is all property, cash and receivables belonging to all CMMFIs
6. *Liabilities.* This is all money, property and service due that are owed to all CMMFIs
7. *Value of loans outstanding.* This is the total remaining amount of all loans held by CMMFI members that is yet to be repaid. This includes loans that are past due as well as loans being paid on time
8. *Number of loans outstanding.* This is the total number of all loans held by members of CMMFIs. It includes loans that are past due
9. *Value of loan write-offs*. This is 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 their debt.
10. *Average value of loans outstanding*. This is the total value of loans outstanding, divided by the total number of current borrowers

All of this data needs to be available in aggregate form from all CMMFIs.

3.4 Group 3: CMMFI Operating Efficiency ratios - definitions

These two ratios consider the percentage of members with active loans and the percentage of funds in use. Loan access is a measure of fairness, since those who do not take out loans in favour of those who do may be putting their savings at undue risk, or may be denied access by more pwerful elements in the CMMFI. 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 utilisation. This is not necessarily a negative outcome, since savings for their own sake are usually an initial priority of the very poor, but low rates of utilisation lead inevitably to lower rates of return and this needs to be understood. The item-by item definitions that follow do not include definitions that have already been discussed.

1. *Number of active members.* Active members are those that participate regularly in CMMFI affairs and, most reliably, are considered to be members in good standing. They are *not* just the members who show up at the meetings in which the data is gathered. They may be absent by agreement or owing to unforeseen circumstances. This can be determined by examination of savings and loan records (either ledgers or passbooks), and enquiry amongst the members
2. *Total assets.* This refers to all of the CMMFI's assets: both current and long-term. It includes cash, loans outstanding, cash in other funds, goods, livestock, building etc. Total assets are all of the property, receivables and cash owned by the CMMFI that it is free to use as it sees fit.

3.5 Group 4: IO Operating Efficiency ratios - definitions

These 4 ratios consider efficiency and effectiveness of the IO in terms of organisational and financial efficiency. They do not measure effectiveness in terms of CMMFI quality, nor of impact on the livelihoods of members. They need, therefore to be interpreted in the light of the Financial Performance ratios and the Member Satisfaction ratios, backed up with periodic household level livelihood surveys. The following definitions apply.

1. *Total number of CMMFs being supervised*. This is the number of CMMFs being either trained or supervised by all of the Field Officers in an IO. It does not include CMMFs that the Field Officers may have already trained and that are operating independently.
2. *Number of Field Staff*. This includes not only Field Officers, but their supervisors. It does not include support staff such as drivers who may also be working in the field.

3. *Total number of all staff*. All staff includes everyone: not only Field Staff (Field Officers, Supervisors) but also senior managers and support staff (clerks, drivers, watchmen etc.). It does not normally include board members or board committees.
4. *Total programme costs to date*. This refers to all of the costs of implementing the programme, including fixed assets, office operating costs, .
5. *Total number of active members*. This refers to all of the members considered active in all CMMFIs being trained or supervised by Field Staff.
6. *Total number of graduated members*. This refers to all members of CMMFIs that are no longer being trained or supervised by Field Staff, or M&E staff

3.6 Group 5: CMMFI External Debt - definitions

For the most part, CMMFs do not borrow externally in their early life and performance ratios concentrate on the internal performance. But this is changing and, in India in particular, most SHGs have some form of external retaionship with a local bank or through an apex organisation to a line of credit, based usually on a ratio of equity to debt. In Africa linkage to external credit is in its infancy and presents special challenges, owing to the sparse distribuition of banking facilities. There are two main implications for programmes facilitating these linkages:

- The quality of the external portfolio. If a lending institution has a low level of its CMMFI portfolio at risk, it is more likely to continue and expand this relationship than if the ratio is high. CMMFIs tend to engage in activities that are linked to agriculture and may have highly variable income streams throughout the year and, while normally out-performing other types of portfolio in terms of repayment performance, may suffer periodic problems associated with cash-flow. This will, however, show up as delinquency and a programme needs to be alert to the risk
- Indebtedness. Experience has shown that CMMFIs are able to manage larger and larger amounts of external debt, but that they are often overwhelmed by an early injection of external capital, especially if it is at a level that is out of proportion to the sums of money that it has conventionally managed in its internal portfolio. Knowing what the ratio of debt to equity is becomes an important means of advising both lender and borrower about the special challenges presented in management of external debt.

The two ratios that deal with external debt become a part of Group 2: Financial Performance ratios, in the case of a programme that works with CMMFIs that assume external debt. The following definitions apply:

1. *Value of external borrowing past due:* This is the total of all outstanding principal sums remaining due for loans to CMMFIs that are past due

2. *Value of external borrowing outstanding:* This is the total of all outstanding sums rem,aing due for loans to CMMFIs, whether past due or on-time
3. *External borrowing liabilities.* These refer to all loans that are provided to the CMMFI from all sources

4 Explanation of Ratios

4.1 Purpose of the ratios

The ratios developed for this paper are intended principally for the managers of implementing organisations promoting CMMFIs. They are not intended to be used by CMMFIs themselves, although certain of them, such as understanding external debt ratios, may be helpful to them in decision-making.

The ratios are to be used by organisations that have a portfolio of CMMFIs that they are training and supervising towards independence, or towards substantial autonomy. *As such, most of the information gathered is either an aggregate or an average of the most current CMMFI information (or an aggregate of a sub-set of CMMFIs). It never pertains to single CMMFIs.*

There are many other ratios that organisations might develop for themselves, but the 16 basic ratios presented in this paper are intended to provide an organisation with the following insights:

- The extent to which members feel that services provided by CMMFIs are useful to them
- How well the CMMFIs perform in terms of direct financial benefit to a majority of members and at what scale
- The extent to which credit provided by MFIs is in demand and who benefits
- The efficiency of the implementing organisation in terms of caseloads, organisational structure and costs

4.2 Explanation: Group 1 – Member satisfaction ratios

R1 Attendance rate

Attendance rate = $\frac{\text{Number of members attending meeting}}{\text{Number of active members}}$

= $\frac{19{,}820}{22{,}300}$ = 88.9%

Trend: *A stable or increasing attendance rate is positive* and indicates short-term value of services and appropriateness of methodology.

Attendance rate is a sensitive measure that may be interpreted in different ways. It is normal for attendance rates to drop from their initial high levels, which traditionally approach 100%, to lower levels. But this will be influenced by a number of different factors:

- Frequency of meetings. When meetings are frequent and time-consuming, member participation tends to fall. People may still be considered active,

but they may start to send their contributions with another member and simply show up for loan meetings. Programmes that see a fall below 85% in attendance may need to consider if the frequency of meetings is greater than necessary. Where meetings are monthly and involve *both* savings and credit, attendance rates are higher.

- Length of meetings. When meetings take a long time, people may limit their attendance. This can be a function of CMMFI size and whether or not loans are being taken at every meeting. CMMFIs that meet frequently to save but disburse and receive loan repayments monthly tend to have higher attendance rates
- Time of the year. The seasonal demand for labour, especially in rural areas.
- Migration is search of seasonal work. This has a generally negative affect on attendance
- Civil disturbance

R2 Retention rate

Retention rate = $\frac{\text{(Number of active members - Number of dropouts}}{\text{Number of active members}}$

= $\frac{22{,}300 - 797}{22{,}300}$ = 96.4%

Trend: *A stable or increasing retention rate is positive* and indicates long-term value of services and appropriateness of the methodology

The retention rate is a measure of the ability of the CMMFI to keep hold of its members. It measures the total number of dropouts as a percentage of the current membership. This may be skewed by members who have joined the CMMFI but will, over time, be a reliable indicator of the CMMFI's ability to keep its members and limit turnover. The retention rate is less sensitive to member dissatisfaction than Attendance rates, because abandoning the CMMFI is a last resort. A decline over time indicates that the CMMFI may be losing its relevance

Factors that affect retention rate are:

- Long-term assessment of costs and benefits. Where members do not receive a return on their time invested, either in financial or social terms, they will leave the CMMFI.
- Elite capture. Where leaders dominate CMMFIs and capture the lion's share of the benefits (particularly access to credit), members may feel that they are required to underwrite too much risk for too little benefit.

- Flexibility of services. CMMFIs that stick to a fixed rate of savings or limit loan terms to too short a time-period may experience low retention. Those that do not allow members access to their savings throughout the operating cycle may also suffer membership losses
- Competition

R3 Membership growth rate

Membership growth rate = $\frac{\text{(No. of active members - No. of members at start}}{\text{Number of members at start}}$

$= \frac{22{,}300 - 20{,}200}{22{,}300} = 9.4\%$

Trend: *An increasing growth rate is positive* and indicates long-term value of services and appropriateness of the methodology. *It can be negative if it indicates inappropriate CMMFI scale*

The growth rate is the other side of the retention rate. This shows how many more members have been attracted to all of the CMMFIs than were present, in aggregate, at the first meeting. This is a fairly crude measure of success, because it masks dropout. A programme may be expected to achieve early growth, as people are attracted to a new initiative, but the long-term growth rate is an indicator of continuing attractiveness. Long-term growth rates are, however, never likely to be very high, since most CMMFIs have limits on the number of members and tend to attract their full complement of members at a very early stage. A programme with a very low growth rate is likely also to be one with a very low dropout rate. Where the growth rate is negative and the dropout rate is high a programme needs to take corrective action. Factors that need to be considered are:

- Where CMMFIs get to be so large that they divide into two, smaller groups. This will show up as a negative growth rate, but in fact is the result of strong growth. This will not affect the aggregate total, but will affect CMMFI by CMMFI comparison
- Where the growth rate is very positive and the average size of CMMFIs approaches or exceeds 30 members, this should be taken as a warning sign that group sizes may be getting too large
- Competition

4.3 Explanation: Group 2 – Financial performance ratios

R4 Average member savings mobilised to date

Average member savings Mobilised to date = Cumulative value of savings / Number of active members

= 32,450,000 / 22,300 = 1,455.15

Trend: *A stable or increasing savings mobilisation rate is positive* and

Most Implementing organisations will be implementing programmes with a large number of CMMFIs. Some of these will be new, or at the start of an annual cycle, some will be middle aged and some will be at the point of achieving independence from the programme. All things being equal, and with a relatively stable programme, of several years' duration, the amount of savings invested by each member will increase if there is an increased level of confidence in the system and will decline if there is not. This measure can be used in two ways:

- To infer a changed level of confidence in the system. The average level of savings in an individual CMMFI by the average individual is usually modest in the first year; tends to rise quite sharply for the following year or two and then remains more or less stable
- To compare the amount of savings mobilised per member with other types of savings instruments and thus to infer the relative utility/attractiveness of the CMMFI's services to its members.

Factors that will influence the reliability of this measure are:

- Competition.
- Choice of methodology. Where CMMFIs only allow a fixed savings contribution this will stifle optimal savings mobilisation
- Co-variant seasonal demand for capital. There are usually large numbers of people who want to withdraw money at the same time. This can apply at the time of important religious festivals; the time at which school fees may be needed, or during the planting or harvesting seasons when inputs and labour need to be financed. There is likely to be much less seasonal fluctuation in urban areas, except at the times of important religious or national holidays

R5 Annualised return on savings

Annualised return = (Aggregate Profit or loss / (cumulative value of savings / 2)) x (52 / Average age of all CMMFIs in weeks)

= (6,200,000 / (32,450,000 / 2)) x (52/30)

= 33.1%

Trend: *An increasing annualised return, programme wide, indicates averall increases in CMMFI profitability*

The formula makes a number of assumptions:

- That average savings is half the amount of current savings. This is likely to be truer for CMMFIs where members save the same amount at each meeting, but less so for CMMFIs where savings can be made in different amounts and where withdrawal is permitted. When the measure is applied across an entire portfolio it is more reliable than when applied to a single institution
- That savings are mobilised throughout the year/operating cycle. Some CMMFIs suspend their savings activities at times when cash is in short supply and this will render this ratio less useful

The annualised reurn on savings is a measure that is normally applied at the level of individual CMMFIs. Since many CMMFIs have started at different dates it is difficult to compare their relative profiotability. This ratio is a result that extrapolates current performance to performance that could be expected at 12 months (whether or not the CMMFI is older or younger than 12 months). In so doing, an IO is in a position to make an approximate comparison between CMMFIs to determine the relative efficiency with which CMMFIs are are capable of converting member assets into profits. The measure does not take account of the compounding effect of interest re-investment in the loan portfolio and is of little value for CMMFIs that are less than 3-4 months old, but as a practical way of segregating high performing CMMFIs from low performing CMMFIs it enables further analysis to be more effectively directed.

When looked at programme wide, over time, a rising trend should be expected, as CMMFIs manage their portfolios with greater efficiency.

R6 Average member investment

Average member investment = $\frac{\text{(Assets – Liabilities)}}{\text{Number of active members}}$

= $\frac{\text{(40,250,000 – 1,600,000)}}{\text{22,300}}$

= 1,733.18

Trend: *An increasing level of member investment is positive*

The formula looks at total member investment (essentially their equity) and divides it by the number of members. In this case the assumption is that CMMFI members are investing in the CMMFI and that the assets of the CMMFI (what they own) are comprised of their savings, plus income, minus expenses. Rather than calculate this it is easier to look at total assets, minus total liabilities to determine equity.

R7 Average outstanding loan size

Average outstanding loan size = $\frac{\text{Value of loans outstanding}}{\text{Number of loans outstanding}}$

= $\frac{\text{32,300,000}}{\text{13,150}}$

= 2,456.3

Trend: *An increasing average outstanding loan size is generally positive*

The average outstanding loan size is *not* the average loan size disbursed, but represents the average amount remaining to be reimbursed. MFIs usually require repayment on a regular schedule and thus it is usually the case that the average outstanding loan size is about half (or slightly more) than the value of the average loan disbursed. CMMFIs on the other hand, tend to offer end-of-term payments, so the average amount outstanding is usually substantially more than half the value of the average loan disbursed. It should normally be the case that this figure increases susbtantially at the level of the individual CMMFI, and more slowly programme wide. This is because the individual CMMFI will continue to save as it recycles short terms loans and interest to

increase portfolio size, but an IO facilitating the establishment and support of hundreds of CMMFIs will have a slower rate of average outstanding loan size increase, as its postfolio will be a representative cross-section of new, middle-aged and older CMMFIs. The figure may rise fairly steadily in line with increased confidence on the part of new entrants that the respective CMMF methodology has already proven its safety and usefulness.

R8 Portfolio at risk

Portfolio at risk = $\frac{\text{Value of loans past due}}{\text{Value of loans outstanding}}$

= $\frac{4,147,500}{32,300,000}$

= 12.8%

Trend: *An increasing portfolio at risk is negative*

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

- Many CMMF programmes allow flexible repayment. Usually this means that members are required to pay accrued interest on a regular basis, but are free to retire the principal sum at the end of the agreed-upon period of the loan. This may be because the activity does not provide income entil 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 CMMFIs require members to allow their savings (and accrued interest) to be forfeit in the event of non-repayment. This tends to encourage very high rates of loan recovery, since members are well aware of the double loss.

As yet no 'normal' standards exist for PAR in CMMF programmes, but there is a tendency for the percentage to rise throughout the cycle and to diminish towards its end. A PAR of 15%, shown here, is not untypical and, althogh not desirable, may not represent unacceptable portfolio quality.

The flexible loan repayment terms offered by CMMFIs makes it hard to know when a loan is, in the traditional sense, past due, especially for generalist Field Officers. A practical expedient is for CMMF loans to be considered past due only on due date for final reimbursement. In this case a PAR less than 10% should be achieved

R9 Loan losses

Loan losses = $\frac{\text{Value of loans written off}}{\text{Average value of loans outstanding}}$

= $\frac{640{,}000}{(16{,}800{,}000 + 32{,}300{,}000)/2}$

= $\frac{543{,}500}{32{,}000{,}000}$

= 2.6%

Trend: *An increasing ratio of loan losses is negative*

Loan losses are calculated over a given period. This means that losses are calculated on the average value of loans outstanding. In the example above, the starting balance of loans outstanding is 20,500,000 and the ending balance is 43,500,000. The average value is therefore 32,000,000, of which 543,500 is 1.7%

Calculating loan losses in a CMMFI is difficult because most CMMFIs do not have write-off policies, apart from asset attachment (including savings). In many cases these losses are not factored in until the end of an annual cycle, when dividends must be paid or the net worth of the CMMFI share out amongst the members. Calculating a programme-wide rate of CMMFI internal loan loss is then a complex affair, because most CMMFIs will have been operating for different lengths of time and will conduct write-offs at different times.

It is for this reason that most CMMFI programmes have concentrated on ratio R5 – annualised return on savings to date. This provides reassurance that despite loan losses that may be hidden, the overall result is positive.

R10 Risk-coverage ratio

Risk coverage = $\frac{\text{Net Profit}}{\text{Value of loans past due}}$

= $\frac{6{,}200{,}000}{4{,}147{,}500}$

= 1.49:1

Trend: *A risk coverage ratio more than 1 is desirable*

Risk coverage ratio takes the total value of loans past due and compares them to net profit to date. If the ratio exceeds 1.0, this ensures that no matter what happens, on the basis of present performance, members will receive a positive nominal return on their savings. It needs to be borne in mind that this ratio is only a predictor of a likely outcome, on the basis of historical performance. Spread over an entire portfolio it is a useful indicator that the average CMMFI is able to cover risks to member equity.

4.4 Explanation: Group 3 - CMMFI Operating efficiency ratios

R11 % of members with loans outstanding

$$\text{\% of members with loans outstanding} = \frac{\text{Number of borrowers}}{\text{Number of active members}}$$

$$= \frac{13{,}150}{22{,}300}$$

$$= 59\%$$

Trend: *The trend is value neutral*

The percentage of members with loans outstanding will vary from CMMFI to CMMFI and will also vary as the seasonal demand for loans also fluctuates. It is, however, a potential indicator of issues that may need to be addressed. If a programme notes that there is a trend towards only a few borrowers and, at the same time, a high percentage of funds in use, this may indicate elite capture. In most cases, where this is not evident, the Fund utilisation rate (R12) should approximately rise and fall as the number of borrowers rises and falls. The only exception to this is at the start of CMMF activities, when loan funds are small. This inevitably means that nearly all funds will be in use by a few people. This situation should ease after the first several months.

R12 Fund utilisation rate

$$\text{Fund utilisation rate} = \frac{\text{Value of loans outstanding}}{\text{(Total assets – (Fixed assets + other funds))}}$$

$$= \frac{32{,}300{,}000}{(40{,}250{,}000 - (6{,}350{,}000 + 0)}$$

$$= 95.3\%$$

Trend: *An upward trend is positive*

This ratio looks at the total current assets of the CMMFI and compares this with the amount that is utilised in loans. It needs to be borne in mind that current assets may also include other short-term investments, such as grain storage and animal fattening.

4.5 Explanation: Group 4 – IO Operating efficiency ratios

R13 Caseload: CMMFIs per Field Staff

Caseload No. of CMMFIs Field Staff = Total No. of CMMFIs being supervised / Number of Field Staff

= 1,145 / 78

= 14.7:1

Trend: *An increase in the number is positive*

This ratio measures the number of CMMFIs that are being trained and/or supervised by Field Staff. It includes not only Field Officers, but also Supervisors. It does not include support staff. It does not include independent CMMFs that Field Officers may be visiting on occasions in order to gather long-term follow-up data. This is, in any case, best done by specialised M&E staff). The factors that will influence this ratio are:

- The frequency of meetings. A Field Officer who visits a CMMFI that meets weeky will, theoretically, only be able to carry approximately half of the caseload of a Field Officer working in a programme where CMMFIs meet every two weeks.
- How CMMFIs are reached. Some programmes cluster CMMFIs for supervision purposes. This increases Field Officer efficiency
- Distance and road condition. When CMMFIs are scattered and the roads are bad, a Field Officer can support fewer.
- Collateral activities. Some programmes use CMMF as an entry point for other services, such as literacy training or HIV/AIDS awareness raising. All ofb these things take time and reduce the number of CMMFIs that a Field Officer can train and supervise.
- Portfolio maturity. A Field Officer will start by working intensively with all of his/her CMMFIs and will have a relatively small caseload. As the frequency of visits decreases this enables the Field Officer to take on new groups.

It is not the purpose of this paper to suggest what these numbers should look like, but experience shows that Field Officers can carry between 10 and 25 CMMFIs, depending on how favourable the conditions may be. A programme should use this ratio to compare itself with other, similar, programmes to compare the productivity of its labour force and to develop performance norms that can be used to set targets and benchmarks for Field Staff.

R14 Caseload: CMMFIs per Field Staff

Caseload No. of members per Field Staff = Total No. of active members / Number of Field Staff

= 22,300 / 78

= 285:1

Trend: *An increase in the number is positive*

Member caseload is the most critical performance variable, because it determines the total number of people that can be reached. The variables that affect this number include most of those in R13, but, in addition, the following may be taken into account.

- Size of CMMFI. A programme where CMMF's average 15 in size will have a lower rate of productivity than a programme where the average size of CMMFI is 25. It is commonly the case that where CMMFIs are very small they may need to be clustered for supervision and, wherever possible, meet less frequently than once every week. This is an important thing to bear in mind in urban areas, where CMMFI sizes tend to be small and people have very little time to attend meetings.

The normal range for Field Officer caseloads varies between 200 and 1,000 ± and may go well beyond that number when community-based trainers are recruited.

R15 Ratio of Field Staff to total staff

Field staff to total staff = No. of Field Staff / Total No. of all staff

= 67 / 93

=72%

Trend: *An increase in the number is positive*

Factors influencing the ratio of Field Staff to total staff are:

- Age of programme. A programme will start out with fixed costs in the form of managers and supervisors but possibly with relatively few Field Staff. It may do this deliberately in order to prepare itself for significant growth.

- Complexity of programme. When, for example, a programme 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 programmes are relatively simple to implement, management and administrative support structures can be expected to be light. Most programmes, even of small-scale, manage at least 50% of Field Staff to total staff. Highly efficient ones that work at significant scale increase this ratio to above 65%.

R16 Cost per member assisted

Field staff = $\frac{\text{Total programme costs to date}}{\text{(Total No. of active members + total number of graduated members)}}$

= $\frac{41,500,000}{(22,300 + 12,142)}$

= 1,204

= $17.20 @ $1= 70 local currency

Trend: *An decrease in the number is positive*

It is normal to express these costs in an international currency in order to make cross-programme comparisons.

Factors positively influencing the cost per member assisted will be:

- Large programme scale
- Large average CMMFI size
- Average meeting frequencies less than weekly
- Ease of access
- Flat organisational structure.
- Use of low-cost community-based trainers

When calculating costs, programmes need to take into account the type of project that is implementing CMMF. It is often the case that a CMMF activity is carried out by an organisation with multiple agendas, or as an adjunct to another major programme goal. This is especially the case with CMMF because experience has shown that the methodology is readily adopted by non-specialist organsiations. When this is the case it is important that the numerator reflects only those costs that are dierctly incurred by the CMMF programme, plus a negotiated share of overhead.

4.6 Explanation: Group 5 – External debt

External debt is defined as any liability assumed by the group as a whole to an external agency or individual. This debt is not confined to borrowing to expand the loan portfolio, but any debt for any purpose.

ER1 External portfolio at risk

External portfolio at risk = $\frac{\text{Value of external borrowing past due}}{\text{Value of external borrowing outstanding}}$

= $\frac{223,200}{3,500,000}$

= 6.37%

Trend: *An increasing external portfolio at risk is negative*

External portfolio at risk needs to be treated differently to internal portfolio at risk. As noted earlier internal portfolio at risk is not a reliable indicator of default, even when exceeding MFI norms by wide margins. It is a much more reliable indicator of risk when the CMMFI has taken out external loans, especially when highly leveraged and in an area where the majority of investment is in agriculture. It needs, then, to be observed closely and this data is best gathered at the CMMFI level rather than the MFI, coop or bank, which may well have trouble disaggregating CMMFI borrowing from other clients.

ER2 External borrowing

External borrowing = $\frac{\text{Value of external borrowing outstanding (all sources)}}{\text{(Total Asssets of CMMFIs borrowing externally – Liabilities)}}$

= $\frac{3,500,000}{(2,000,000 - 500,000)}$

= 2.33:1

Trend: *An increasing external borrowing ratio is positive if external PAR remains low*

CMMFIs in many countries borrow money from financial institutions under varying conditions, nearly all of which provide significant loan-fund leverage. A programme will normally set itself parameters to suggest the maximum amount of this ratio, at different points in a CMMFI's life. Keeping the external

borrowing ratio to prudent levels is an essential part of the process. Programme wide, the ratio is only derived from those CMMFIs that have taken loans from external sources. Since lending to CMMFIs by multiple MFIs is not uncommon, the numerator should include loans from all sources: not simple a designated lending agency.