

Financial Management for Microfinance Organizations

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1. What This Module Covers

This module will discuss the primary determinants of income and expenses for an MFO. In addition, this module provides an overview of measures of efficiency, productivity and profitability commonly used by Microfinance Organizations (MFOs). Techniques for measuring and monitoring delinquency are discussed, as well as benchmark levels of self-sufficiency.

Financial management theory for Microfinance Organizations (MFOs) applies financial concepts developed for traditional businesses to Microfinance Organizations. Many concepts pertaining to small business financial management theory are applicable to MFOs. However, though there are certainly significant similarities between financial management of MFOs and traditional businesses, there are also some significant differences from a financial perspective. The module will discuss some of these differences.

2. MFOs and Organizational Efficiency

When we think of financially viable institutions, we generally think of institutions with highly efficient operations. The following are some key factors that affect the efficiency of a lending institution:

- The size of the institution: Larger institutions may have economies of scale that reduce their cost per loan.
- The rotation of the loan portfolio: Higher administration costs associated with short-term loans make them more expensive than long-term loans in general.

- The size of the average loan: Making many small loans is generally more costly than making a few large loans.
- The maturity of the institution: A well-established branch should perform more efficiently than a new one.
- The growth rate of the institution: Organizations that are growing rapidly tend to be less efficient as they absorb the growth.¹

By definition, Microfinance Organizations provide small loans and other financial services to low-income, poor, and very poor self-employed people. Given the efficiency characteristics above, MFOs may appear inefficient compared to traditional lending institutions for the following reasons:

- MFOs are on average smaller than traditional banks
- In general, MFOs make shorter-term loans than traditional banks
- MFOs make smaller loans than traditional banks
- Many MFOs are relatively new organizations
- Many MFOs are growing rapidly

Although efficiency is an important concept that can be applied to MFOs, it is by no means the only goal of a Microfinance Organization. Indeed, MFOs can be thought to have a dual goal: **financial viability** (of which organizational efficiency is an important component) and **outreach to the poor**. A current debate in the microfinance literature centers on the question: Are the goals of financial viability and outreach complementary, or is there a trade-off involved?

Those who contend that there is a trade-off between sustainability and outreach argue that the push for MFOs to cover costs, become sustainable and wean themselves from donor financing moves MFOs away from providing services to the poor. The poorest clients, some argue, cannot afford to pay for the full cost of these services in the long run.... For proponents of sustainability, large-scale outreach is possible only through

¹ Interpreting Financial Ratios, 6

building permanent, viable institutions that respond to the demand for financial services by their customers.²

For an in-depth discussion of this topic, see Elisabeth Rhyne's article, "The Ying and Yang of Microfinance: Reaching the Poor and Sustainability" in *MicroBanking Bulletin*, No. 2 (July 1998), pp.6-9.

3. Key Financial Factors

3.1 Determinants of Income

The following are significant determinants of the level of income generated by an MFO's lending activities:

- 1) Portfolio size
- 2) Interest Rate
- 3) Commission Rate
- 4) Grants and Loans (subsidized or unsubsidized)

This section will discuss each of these factors.

3.1.1 Portfolio size

The loan portfolio generates the largest share of an MFO's operating income. The loan portfolio is an MFO's most important revenue earning asset. The factors that affect income generated by the loan portfolio are:

- o *Number of loans disbursed and number of active clients*: disbursing more loans increases the size of the portfolio
- o *Effective loan term* (the *actual* length of time that the average client takes to pay back a loan): loans with longer terms are more costly to the lending institution.

² UNCDF, *Microfinance Distance Learning Course*, 21

The longer the effective loan term, the more capital an MFO requires in order to finance the loan. Of course, designing loan products requires other considerations besides maximization of income. Setting loan terms to meet client needs is essential for successful operations and requires understanding cash patterns of borrowers in the local environment. Setting inappropriate loan terms will often lead to a higher default rate.

- o *Client retention*: an MFO's ability to retain clients maintains or increases the size of an institution's portfolio. Furthermore, because new clients' first loans are often limited by a lower initial loan size, retained clients generally have a higher average loan size. Larger loans are, on average, less costly to administer. If an MFO relies on new client outreach alone the average loan size will likely be lower than if the MFO tries to retain clients.
- o *Delinquency rate*: Every loan portfolio contains a certain degree of risk because loan repayment is uncertain. A high share of unrecoverable loans can significantly diminish the portfolio's income generating ability.

3.1.2 Interest Rate

A higher interest rate means more income for the MFO, but there are many other tradeoffs involved. For example, if an MFO charges a higher interest rate, the demand for loans might decrease. In addition, the default rate on loans might increase. For a full discussion of these and other issues, see the Pricing and Interest Rate Module.

3.1.3 Commission Rate

A higher commission rate increases the effective interest rate that the borrower pays and hence, increases the MFO's program income. For more information on fees (or commissions) and interest rates, see the Pricing and Interest Rate Module.

3.1.4 Grants and Loans (subsidized or unsubsidized)

These may be from multilateral lending institutions, government funds, or private charities.

3.2 *Determinants of expenses*

The following are significant determinants of expenses for an MFO:

- *Salaries and personnel expenses*

These typically include loan officers and field staff, administrative staff, and management.

- *Operational costs, including:*
 - Rent and utilities
 - Transportation
 - Printing
 - Office supplies
 - Professional services
 - Computer systems
 - Depreciation of fixed assets

- *Cost of capital:*

The cost of capital is the minimum acceptable rate of return on new investment made by the organization. It is calculated as the amount of borrowed funds multiplied by the annual interest rate on those funds. If an organization borrows funds from different sources with different interest rates, the cost of capital is a weighted average of the various costs of different sources. Consider an example where an MFO borrows a total of \$100,000 from 3 different sources of funding:

- \$30,000 from a source with interest rate 15%;
- \$50,000 from a source with interest rate 10%; and
- \$20,000 from a source with interest rate 0%.

In this case, the average cost of capital is $.30*15\% + .50*10\% + .20*0\% = 9.5\%$. If an investment is not expected to earn the cost of capital, 9.5% in this case, it will reduce the value of the MFO.

- *Bad debt reserve cost:*

A significant expense in any loan program is the expense of unrecoverable loans. In addition to decreasing the program's income-generating potential, portfolio decapitalization through loan defaults may be costly in other ways. For example, if an MFO is operating with borrowed funds, the MFO may be unable to repay the loan or it may be forced to repay the loan using other resources. Effective planning requires that MFOs set aside a bad debt reserve, equal to the expected future losses on the loan portfolio.

- *Devaluation of assets:*

The impact of inflation on an MFO's assets can be significant. In countries experiencing moderate to high inflation rates, asset devaluation can easily become an enormous cost and completely bankrupt the credit program.

4. Financial Analysis

This section outlines key financial analysis techniques used by microfinance practitioners. The primary source of information for financial analysis comes from accounting. The use of reliable and transparent accounting procedures is an essential foundation for performing financial analysis of any type.

4.1 Ratio Analysis

Financial ratios, which compare one piece of financial information with another, have an important place in financial analysis. Ratios are used to monitor business trends and point out problems. Ratios can be used for:

- Comparative analysis between financial periods within the same organization
- Comparative analysis between different organizations within the same industry (in industries that share common accounting standards)³

³ Bartel et al, "Financial Management Ratios I," 1995.

Because most Microfinance Organizations do not currently employ common accounting practices, comparing financial ratios between Microfinance Organizations may be problematic. The most useful financial ratio analysis for Microfinance Organizations compares ratio levels between periods within the same organization. Trend analysis using financial ratios (that is, the monitoring of changes in financial ratios within an organization over time) is one of the primary tools available to Microfinance Organizations to track financial performance.

We discuss some of the financial ratios most commonly used by Microfinance Organizations below. Following a definition and discussion of each ratio, an example is provided, using data from a hypothetical firm, “MicroLoan”.

4.2 Measuring Efficiency, Productivity, and Profitability

4.2.1 Adjustments

Many microfinance organizations receive subsidies in different forms. Donors may provide grants, in-kind donations (technical assistance, rent subsidies, etc.), and subsidized funds. Typically, when examining an MFO’s balance sheet, such subsidies may not be readily apparent. In order to perform meaningful financial analysis, it is necessary to adjust financial indicators so that what is being considered is the real, unsubsidized profit or loss of an institution. Standard adjustments include

- In-kind donation adjustments: financial statements are adjusted to eliminate the subsidy. This typically has the effect of lowering operating profits.
- Inflation adjustments: the value of fixed assets is adjusted upwards and the value of equity is adjusted downwards.

4.2.2 Adjusted Return on Assets (AROA)

The Adjusted Return on Assets measures the extent to which an MFO has used its asset base to generate income. This ratio measures financial return over a period of time and indicates the relative success of the institution's strategy for managing assets.

$$\text{AROA} = \frac{\text{Adjusted Operating Profits}}{\text{Average Total Assets}}$$

AROA sample calculation:

Item	Year 1	Year 2	Year 3
Adjusted operating profits	5,000	20,000	35,000
Average total assets	300,380	670,150	1,007,500
AROA	1.7%	3.0%	3.5%

4.2.3 Yield on Portfolio

The yield on portfolio measures how much income an MFO has generated through its lending operations.

$$\text{Yield on Portfolio} = \frac{\text{Credit Program Income}}{\text{Average Portfolio Outstanding}}$$

If an MFO has a highly productive portfolio, the portfolio yield is equal to the effective interest rate charged⁴. In practice, the yield on portfolio is generally lower, due to arrears and loan defaults.⁵

Yield on portfolio sample calculation:

Item	Year 1	Year 2	Year 3
Credit program income	70,000	225,000	400,000
Average portfolio outstanding	170,000	475,000	750,000
Yield on portfolio	41.2%	47.4%	53.3%

⁴ The effective interest rate is the rate that a client is "really" paying, based on the amount of loan proceeds actually in the client's hands during each period of the life of the loan. For more information on the effective interest rate, see the Pricing and Interest Rate module.

⁵ CGAP, "Business Planning and Financial Modeling for Microfinance Institutions," Chapter 8.

4.2.4 Break-Even Portfolio Size

The break-even portfolio size is the approximate portfolio volume required in order to cover all costs and “break even”, i.e. achieve zero losses. If a portfolio is smaller than the break-even size, the MFO will operate at a loss; if the portfolio is larger than the break-even size, the MFO will make a profit. Break-even analysis focuses on the relationship between fixed cost, variable cost, and profit.

To determine the break-even portfolio size, it is first necessary to calculate the Variable Cost Rate:

$$\text{Variable Cost Rate} = \frac{\text{Total Costs} - \text{Fixed Costs}}{\text{Average Portfolio Outstanding}}$$

Fixed costs are costs that remain the same regardless of number of loans disbursed. Fixed costs don't depend on the portfolio volume. Some examples of an MFO's fixed costs are rent, utilities, salaries, insurance, and depreciation.

The next step is to calculate the Contribution:

$$\text{Contribution} = (\text{Yield on Portfolio} - \text{Variable Cost Rate}) \times \text{Average Portfolio Outstanding}$$

Finally, calculate the Break-Even Point:

$$\text{Break-Even Point} = \frac{\text{Fixed Costs}}{\text{Contribution}}$$

The break-even point tells an MFO the portfolio volume required to break even.

4.2.5 Operating Cost Ratio

The operating cost ratio gives operating expenses as a percentage of the average portfolio outstanding:

$$\text{Operating Cost Ratio} = \frac{\text{Operating expenses}}{\text{Average portfolio outstanding}}$$

Typically, an operating cost ratio of 15-25 percent is considered reasonable.

Operating cost ratio sample calculation:

Item	Year 1	Year 2	Year 3
Operating expenses	129,620	210,230	267,650
Average portfolio outstanding	170,000	475,000	750,000
Operating cost ratio	76.2%	44.3%	35.7%

4.3 Measuring Delinquency

Portfolio quality, how well Microfinance Organizations recover the money that they lend, is easily one of the most important factors affecting the financial viability of an MFO. There are dozens of ways MFOs measure portfolio quality, and no single indicator is universally used or universally applicable.

A common way to measure portfolio quality is to measure the delinquency rate. A loan is delinquent when a payment is late. A delinquent loan is not the same thing as a lost loan; however, a delinquent loan indicates an increased risk of loan loss. It is important for an MFO to be able to accurately estimate loan losses in order to realistically estimate the real worth of the portfolio.

There is also no single standard way to measure delinquency. This makes interpreting delinquency ratios impossible without knowing exactly how they are calculated. Indeed, “depending on which [measure of delinquency] is being used, a ‘98 percent recovery rate’ could describe a safe portfolio or one on the brink of meltdown.”⁶ When interpreting delinquency ratios and portfolio quality measures, you should always ask to see the exact formula used in the ratio calculation.

⁶ CGAP, “Measuring Microcredit Delinquency,” 1999.

4.3.1 *Portfolio at Risk*

The most commonly used measure of delinquency is portfolio at risk (PAR). PAR tells the percentage of the portfolio at heightened risk of loss. PAR measures the unpaid balance of loans with late payments as a percentage of the unpaid balance on all loans. PAR measures portfolio risk at a given point in time, not over a period.

$$\text{PAR} = \frac{\text{Unpaid balance of loans with overdue payments}}{\text{Unpaid balance on all loans}}$$

There is some ambiguity about what constitutes a late payment. To eliminate this ambiguity, it is common for financial institutions to report the PAR ratio with a given degree of lateness. For example, PAR₃₀ captures the outstanding balance of all loans with a payment more than 30 days late.

4.3.2 *Arrears Rate*

Another commonly used measure of microfinance delinquency is the arrears rate. The arrears rate may be calculated in a number of different ways, so it is always necessary to see the exact formula used before performing any type of analysis. Commonly, the arrears rate gives the amount of late payments as a percentage of total loans.

$$\text{Arrears Rate} = \frac{\text{Total loan installments past due}}{\text{Total loans}}$$

Payments that have fallen due may be small relative to total loan amounts. Thus, the arrears rate, which is usually a small number, can create an overoptimistic impression of portfolio quality.⁷ To illustrate how exactly the arrears rate underestimates risk, consider

⁷ CGAP, "Measuring Microcredit Delinquency," 1999.

the case of a missed loan payment. The MFO's risk increases in two ways: first, there is increased risk that the payment in question will never be collected. Second, there is increased risk that all future payments made by that client (the outstanding loan balance) will never be collected. The arrears rate fails to account for this second risk, which is generally much larger than the first. The PAR ratio captures both risks.

4.4 Measuring Self-Sufficiency

Following Charles Waterfield⁸, we measure an organization's level of self-sufficiency by the type of expenses being covered by its earned income. We divide self-sufficiency into the following three levels:

- **Level 1: Short-Term Operational Self-Sufficiency:**

An organization that achieves short-term operational self-sufficiency is one that is able to cover direct operational costs and the costs of borrowed funds from its own earned income.

- **Level 2: Long-Term Operational Self-Sufficiency**

To achieve long-term operational self-sufficiency, an organization must be able to cover all direct operational costs, the cost of borrowed funds, *and* a loan loss reserve.

- **Level 3: Financial Self-Sufficiency**

In addition to covering all costs previously stated, an organization that achieves financial self-sufficiency shows a net income surplus large enough to compensate fully for the effect of inflation on the capital base. In many countries, the effect of inflation on the capital base is highly significant. For example, given an inflation rate of 15 percent per year, an organization could lose over 50% of the value of its capital base in only five years.

⁸ Waterfield, Charles, "Designing For Financial Viability of Microfinance Programs," 1993.

According to the United Nations Capital Development Fund, “covering financial costs is a necessary hurdle for access to capital markets.”⁹ Capital availability is a fundamental constraint to the growth of an MFO. Having access to capital markets gives an MFO greater financial freedom and makes an MFO less reliant on donor capital. However, some financially self-sufficient MFOs are still unable to access commercial capital because lending to microfinance organizations is still viewed as risky by many traditional banking establishments.

⁹ UNCDF, *Microfinance Distance Learning Course*, 21

Case Study: the Cooperative Rural Bank of Bulacan, Inc.

An interesting example of viable microfinance organization is the Cooperative Rural Bank of Bulacan, Inc. (CRBBI) in Philippines. Being one of the largest rural banks in the country in terms of assets, it has not too big number of clients. In US currency, the Bank's loan portfolio in 1997 increased in absolute amount by US\$1.37 million, or a growth rate of 70%. The number of its clients reported at 10,000 in 1996 and also in 1997 is clearly understated; but for some reason, the Bank continues to use this number although it excludes the individual clients not affiliated with the Bank's member organizations. The business generated from these individual clients must have grown much faster in recent years, leading the Bank to open two (2) new branches in 1997 and increase its staff from 59 in 1996 to 71 in 1997. This rapid expansion could not have been possible had the Bank not opened its services to non-cooperative members and the public in general.

Item	1996	1997
Years in operation	22	23
Number of clients	10000*	10000
Loan outstanding, US\$	1,933,046	3,307,627
Growth rate (%)		69.8
Repayment rate (%)	89.0	92.0
Total internal resources, US\$	2,224,386	3,160,419
Growth rate (%)		42.1
Internal resource ratio, %	115.1	95.5
Operational self-sufficiency ratio, %	88.5	100.6
Financial self-sufficiency ratio, %	NA	79.3

Notes: * Includes only the individual members of primary organizations affiliated with the bank. Data were not available on the number of individual clients of the bank who are not members of primary organizations.

Adopted from: Benjamin R. Quinones: Cooperative Banking: A viable Approach to Microfinance. A Case Study in Philippines. University of Cologne. Development Research Center. Working Paper 1999-8.

Financial Self-Sufficiency: A Case Study

One of the few cases of MFOs reaching high level of financial self-sufficiency during few years only is an example of the leading Microfinance Organization of Uganda "The Uganda Microfinance Union" (UMU). For five years of its existence its small equity loan of about US\$30,000 has grown to US\$1.5 million in total assets. UMU has five branches and 16,577 clients (70% women), all of whom savers and 63% are borrowers. As of July 2001, UMU's outstanding loan portfolio was US\$1 million and savings were over US\$400,000 (50% of its portfolio is in trade, 35% in agriculture, 12% in services, and 3% in manufacturing). Its repayment rate has remained at 98% or above. Its operational self-sufficiency is 111% and its financial self-sufficiency 92%. Three years after opening, UMU nearly reached financial self-sufficiency, which level was 92% at the end of 2000, and afterwards it has increased to 98%. Outstanding loans increased by 36% during the first semester of 2001. Key factors in this growth have been the ability of UMU to access both donor loan funds as well as additional grant funds for capacity building. Growth has been achieved in both the loan portfolio and the savings portfolio. Based on its capacity to mobilize savings and expand the loan portfolio with a high repayment rate, UMU has acquired a track record for borrowing from banks.

UMU's main operational expenses are 32% of total assets. Grants covered only 8% of the total expenses during 2000, reflecting a major decrease from 1999 when grants covered 40%. UMU benefits from economies of scope since it also mobilizes savings. Another factor which contributes to UMU's cheaper lending cost is its lending methodology that generates no social intermediation cost, as do methods used by other Ugandan MFOs.

<i>Item</i>	<i>Dec. 31, 2000</i>	<i>Dec. 31, 1999</i>
Self-sufficiency		
Operational Self-sufficiency	96%	62%
Financial Self-sufficiency	92%	59%
Return on Assets	0.01%	-0.36%
Return on Equity	0.02%	-0.67%
Operating expenses and portfolio management		
Operating Exp/Total Assets	32%	26.5%
Grants/Total Expenses	8.2%	40.1%
Grants/Adm. Expenses	8.2%	40.1%
Total Cost/Outstanding Loans	52.2%	63.3%
Interest Inc Loans/Outstanding Loans	24.2%	22.0%
Personnel Exp/Total Assets	18.3%	14.6%
Efficiency and Productivity		
Total Adm Exp/Loan Portfolio	49.8%	59.4%
Salary Exp/Loan Portfolio	29.9%	34.9%
Other Adm Exp/Loan Portfolio	17.1%	23.5%
Number of Active Borrowers	7,720	4,800
Number of Clients (savers)	13,802	Estimated 8,562
Total Staff	78	78
No Active Borrowers/Total Staff	99	62
Cost per borrower US\$	44\$	20\$
Financial Structure		
Total Capital/Total Assets	61%	54%
Total Savings/Total Assets	24%	22%
Borrowing Comml/Total Assets	12%	21%
Borrowing Comml/Loan Portfolio	20%	51%
Total Deposits/Total Assets	24%	22%
Total Loans/Total Deposits	251%	190%

Adopted from: Gloria Almeyda. Uganda Microfinance Union (UMU): A case Study. University of Cologne. Development Research Center. Working Paper 2002-5.

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