

PARTICIPANT COURSE MATERIALS

Financial Analysis



CONSULTATIVE GROUP TO ASSIST THE POOREST

NOTE The participant course materials contain the main technical messages and concepts delivered in this course. It is not intended to serve as a substitute for the full information and skills delivered through the individual courses *Skills for Microfinance Managers* training series. During the actual courses, key concepts are presented with case studies, exchange of participant experiences and other activities to help transfer skills. Users interested in attending a training course should directly contact CGAP hubs and partners for course dates and venues or visit the CGAP Web site at www.cgap.org/html/mfis_skills_microfinance_manag.html. CGAP would like to thank those who were instrumental to the development and design of the original course that led to this participant summary: Michael Goldberg, Ruth Goodwin-Groen, Lorna Grace, Brigit Helms, Jennifer Isern, Joanna Ledgerwood, Patricia Mwangi, Bridge Octavio, Janis Sabetta and all CGAP training hubs and partners. Copyright 2001, The Consultative Group to Assist the Poorest (CGAP).

Contents

Overview and Goals	3
Overview	3
Goals of the Course	4
Chart of Accounts.....	5
Financial Statements.....	7
Balance Sheet.....	7
Income Statement.....	8
Cash Flow Statement	9
Portfolio Report.....	10
Formatting Financial Statements	12
Adjustments.....	19
Inflation.....	19
Subsidized Cost of Funds	20
In-Kind Donations	21
Indicators for Financial Analysis	23
Loan Portfolio Quality Analysis.....	25
Efficiency	29
Profitability Analysis.....	31



Overview

International best practice in microfinance around the world suggests good financial analysis is the basis for successful and sustainable microfinance operations. Some would even say that without financial analysis your MFI will never achieve sustainability.

What is Financial Analysis?

The computation of analytical ratios from financial statements and interpretation of these ratios to determine their trends as a basis for management decisions

Sustainability means relying on commercially priced and internally generated funds rather than on donors for growth.

Sustainability

*Coverage of administrative costs + Loan loss +
Costs of funds + Inflation + Capitalization for
growth from operating income*

Goals of the Course

- To master the tools needed for understanding the financial position and **sustainability** of your institution.
- To use financial analysis to improve your institution's **sustainability**, by
 1. Identifying the components, purpose, relationships, and importance of the main financial statement;
 2. Learning the formats of income statements and balance sheets to easily separate the effect of donor funds;
 3. Analyzing financial statements to monitor profitability, efficiency, and portfolio quality;
 4. Adjusting costs for inflation, subsidized cost of funds, and in-kind donations; and
 5. Identifying critical factors for moving toward financial sustainability.

Chart of Accounts



A chart of accounts

- Provides the structure for recording and reporting of all financial transactions for the institution.
- Classifies and determines what financial transactions can be tracked for managerial purposes and reported in the financial statements.
- Transactions are organized as either asset, liability, equity, revenue (income) or expense accounts.

Determinants

- The structure and level of detail of the chart of accounts will determine the type of information management will be able to access and analyze in the future.
- Management must design the chart of account and be clear about what it needs. In particular, it is fundamentally important to be able to differentiate between the grant income given by donors from the operational income earned from the MFI's products and services. Operational income is the basis for financial analysis, not grant income, and the importance of accurately tracking it cannot be overstated.
- Different end users of the information generated have different needs. Internal management and auditors, tax code, donors, and regulatory demands all influence how the chart of accounts is set up.
- Some charts of accounts and report formats may be legislated and therefore MFIs are obligated to follow the mandated requirements in these countries.

Sample Chart of Accounts

Assets		Liabilities		Equity	
101	Cash	201	Short-term borrowing	301	Paid in equity
102	Reserves	202	Client savings	302	Donated equity prior year
103	Short term investments	203	Long-term debt (commercial)	303	Donated equity current year
104	Loan portfolio	204	Long-term debt (concessional)	304	Prior year profit/loss
105	Loan loss reserve	205	Restricted/deferred revenue	305	Current year profit/loss
106	Other current assets			306	Other capital accounts
114	Long-term investments				
115	Property				
116	Fixed assets				
117	Accumulated depreciation				
118	Other assets				
Revenue			Expenses		
401	Interest on current and past due loans	501	Interest paid on short-term borrowing		
402	Interest on restructured loans	502	Interest paid on client savings		
403	Interest on investments	503	Interest paid on long-term debt		
404	Loan fees on loans	505	Provision for loan losses		
405	Late fees on loans	510	Salaries and benefits		
410	Donations—unrestricted	512	Communications		
		513	Courier/postage		
		514	Rent		
		515	Utilities		
		516	Equipment		
		517	Equipment leasing		
		518	Depreciation		
		519	Bank charges		
		520	Advertising and promotion		
		521	Insurance		
		522	Supplies		
		523	Maintenance		
		524	Travel and accommodation		
		525	Legal fees		
		526	Professional development (training)		
		527	Computer software		
		528	Printing		
		529	Fees/dues		
		530	Miscellaneous		



MFIs commonly use four types of financial statements:

- Balance sheet
- Income statement
- Cash flow statement
- Portfolio report

Balance Sheet

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

A **balance sheet** is a summary of the financial position at a specific point in time. It presents the economic resources of an organization and the claims against those resources.

Assets

- Represent what is *owned* by the organization or *owed* to it by others
- Are items in which an organization has invested its funds for the purpose of generating revenue.

Liabilities

- Represent what is *owed* by the organization to others.

Equity

- Represents the *capital* or *net worth* of the organization.
- Includes capital contributions of members, investors or donors, retained earnings, and the current year surplus.

Income Statement

An **income statement** reports the organization's financial performance over a specified period of time. It summarizes all revenue earned and expenses incurred during a specified accounting period. An institution prepares an income statement so that it can determine its net profit or loss (the difference between revenue and expenses).

Revenue

Refers to money earned by an organization for goods sold and services rendered during an accounting period, including

- Interest earned on loans to clients
- Fees earned on loans to clients
- Interest earned on deposits with a bank, etc.

Expenses

Represent costs incurred for goods and services used in the process of earning revenue. Direct expenses for an MFI include

- Financial costs,
- Administrative expenses, and
- Loan loss provisions.

An income statement

- Relates to a **balance sheet** through the transfer of cash donations and net profit (loss) as well as depreciation and in the relationship between the loan loss provision, and the reserve.
- Uses a **portfolio report's** historical default rates (and the current reserve) to establish the Loan Loss Provision.
- Relates to a **cash flow statement** through the net profit/loss as a starting point on the cash flow (indirect method).

Cash Flow Statement

A **cash flow statement** shows where an institution's cash is coming from and how it is being used over a period of time.

A cash flow statement

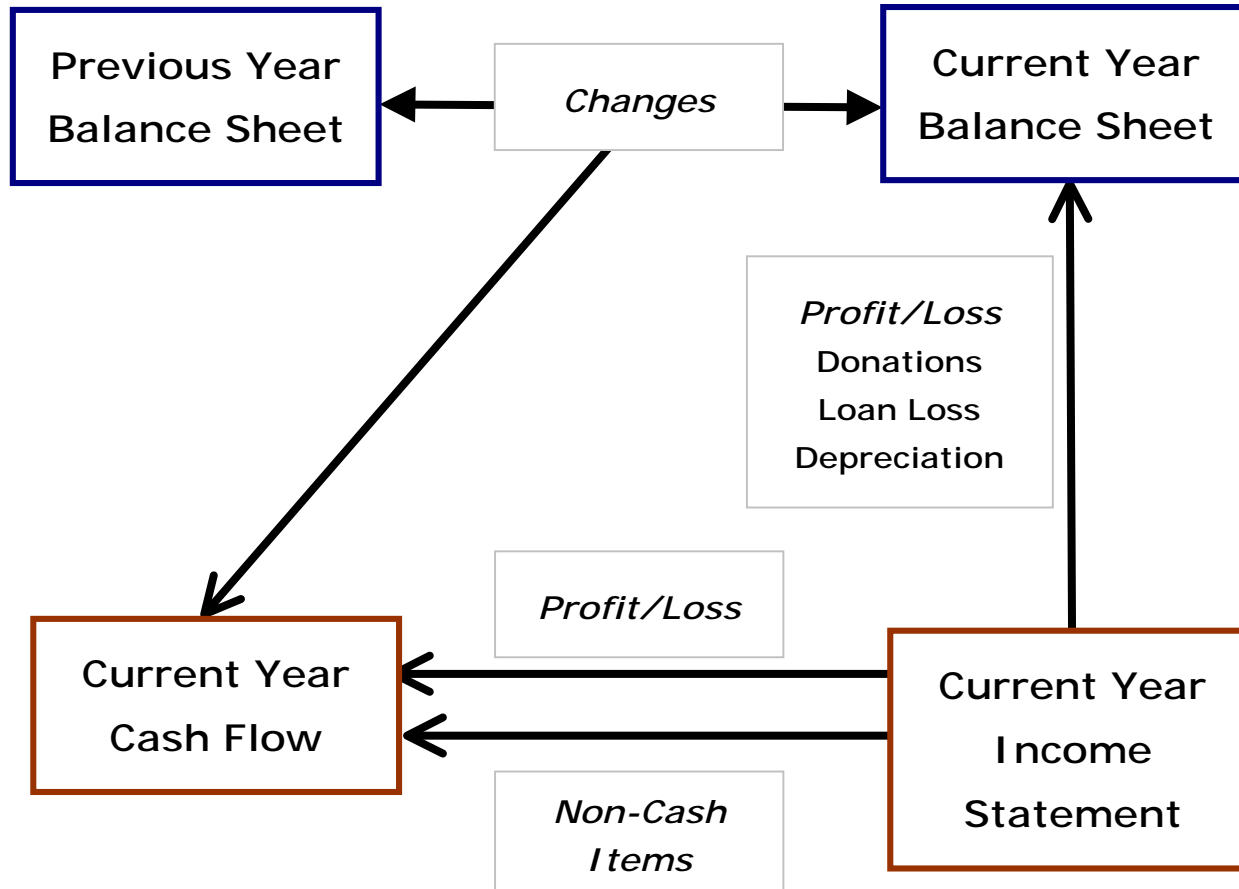
- Classifies the cash flows into operating, investing and financing activities.
 - ◆ Operating activities: services provided (income-earning activities).
 - ◆ Investing activities: expenditures that have been made for resources intended to generate future income and cash flows.
 - ◆ Financing activities: resources obtained from and resources returned to the owners, resources obtained through borrowings (short-term or long-term) as well as donor funds.
- Can use either
 - ◆ The direct method, by which major classes of gross cash receipts and gross cash payments are shown to arrive at net cash flow (recommended by IAS)
 - ◆ The indirect method, works back from net profit or loss, adding or deducting noncash transactions, deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows to arrive at net cash flow.

Portfolio Report

A **portfolio report** provides information about the lending and savings operations of an MFI. It provides timely and accurate data about the quality of the portfolio. It usually also includes other key portfolio performance indicators (e.g., outreach).

- Information usually includes
 - ◆ Number and value of loans outstanding end of period,
 - ◆ Total value and number of loans disbursed during the period,
 - ◆ Average outstanding balance of loans, value of payments in arrears,
 - ◆ Value of outstanding loan balances in arrears,
 - ◆ Value of loans written off during period,
 - ◆ Portfolio aging analysis,
 - ◆ Information on loan terms, loan officers, savings accounts and balances, etc.
- Portfolio quality ratios can be calculated from portfolio information. This information together with the aging analysis can give a picture of the health of the portfolio and can also give valuable insight into an MFI's sustainability.
- Relates to income statement in that it is the portfolio that generates the income for the MFI.
- Relates to the balance sheet in that it provides information on the value of outstanding loans portfolio and value of loans written off during the period
- Relates to the balance sheet and income statement in that the portfolio data is used as an input to calculate the loan loss reserve on the balance sheet, from which the amount of loan loss provision on the income statement is calculated.

Relationships Between Financial Statements



Formatting Financial Statements



Most MFIs depend on donor funds but do not realize to what extent and that donor money is not limitless. We want to create financial statements that will show the impact of donor funds on the MFI's financial position and its relationship to sustainability.

CGAP's recommended format:

- Income statement
 - ◆ Donor money is recorded after net operating profit.
- Balance sheet

Three separate sources of equity are derived from the income statement:

- ◆ Retained earnings or losses (minus cash donations)
- ◆ Donations
- ◆ Other capital accounts—including net non-operational income

Separating donor funds is important because it allows one to see over time the proportion of equity that is from the MFI itself versus the amounts contributed by donors.

Three Ways in Which MFIs Treat Cash Donations

- Goals:
1. Grants are separated from operating income
 2. Grants are fully disclosed in equity

<p>Most preferred because most transparent treatment of grants and equity</p>	<p>A. Current year's grants and donations are first recorded in the Income Statement, below the Operating Profit / Loss, but the restricted grants or donations for which the conditions had been met are divided according to purpose: e.g. Operations, Loan Fund or Fixed Assets. The grants and donations are then transferred according to their purposes on the Balance Sheet, separated from the Operating Profit / Loss.</p>
<p>Acceptable, less transparent than A</p>	<p>B. Current year's grants and donations are first recorded in the Income Statement below the Operating Profit / Loss. (This would include the total amount of unrestricted grants and the portion of restricted grants or donations for which the conditions had been met that year.) These grants and donations are then transferred as one amount on the Balance Sheet, separate from the Operating Profit / Loss.</p>
<p>Least preferred, not compliant with IAS 20</p>	<p>C. Current year's unrestricted grants and donations and the funds restricted for operations are recorded in the Income Statement below the Operating Profit / Loss. They are then transferred to the Balance Sheet, separated from the Operating Profit / Loss. That year's grants or donations restricted for Loan Fund or Fixed Assets are recorded directly into equity on the Balance Sheet.</p>

Sample Income Statement

	Accounting Period
Operating Income	
1.	Interest and fee income from loans
2.	Income from other finance-related services
3.	Income from investments
4.	Total operating income
Operating Expenses	
5.	Interest and fee expense
6.	Loan loss provision expense
7.	Administrative expense – personnel
8.	Other administrative expenses
9.	Total operating expenses
10.	NET OPERATING PROFIT (LOSS)
Nonoperational Income and Expenses	
11.	Cash donations
12.	Other non-operational income
13.	Total nonoperational expenses
14.	TOTAL CONSOLIDATED PROFIT/LOSS

Source: Format for Appraisal of Microfinance Institutions, CGAP Secretariat, July 1999.

Sample Income Statement

Account	Comments About Usage
Operating Income	
1. Interest and fee income from loans	All income on loans made to clients
2. Income from other finance-related services (indicate which)	For example, fees from savings accounts
3. Income from investments	Interest from bank accounts or investments in money market instruments used primarily for liquidity management
4. Total Operating Income	
Operating Expenses	
5. Interest and fee expense	Interest and fee expenses for all loans, deposits, or other liabilities funding the financial service operation
6. Loan loss provision expense	Cost of creating/maintaining the loan loss reserve.
7. Personnel expense	All staff and consultant costs, including payroll taxes and fringe benefits(preferably on an accrual basis, especially in the case of major future benefits like severance pay obligations)
8. Other administrative expenses	Broken out into no more than ten categories (e.g. rent, transportation, supplies, utilities, fees, depreciation, other)
9.Total Operating Expense	
10. NET OPERATING PROFIT (LOSS)	
Nonoperational Income* and Expenses	
11. Cash donations	All cash grants/donations. Do not include in-kind donations of goods and services.
12. Other nonoperational income (If any)	Income from investments which play no role in the delivery of financial services, income from non-financial services, sale of land, consultancies, etc.
13. Nonoperational expense (if any)	Any expenses not related to the MFI's financial services business, such as an evaluation or impact study mandated by a donor
14. TOTAL CONSOLIDATED PROFIT (LOSS)	Net operating profit (loss) plus non-operational income, minus non-operational expenses

*All income that does not come from financial service operations.

Sample Balance Sheet

	Accounting Period
Assets	
1.	Cash and due from banks
2.	Reserves in central bank
3.	Short-term investments in money market instruments
4.	Loan portfolio
5.	(Loan loss reserve)
6.	Other short-term assets
7.	Long-term investments
8.	Net fixed assets
9.	Total assets
Liabilities	
10.	Savings accounts: forced
11.	Savings accounts: voluntary
12.	Time deposits
13.	Loans: commercial banks
14.	Loans: Central Bank
15.	Loans: subsidized
16.	Other short-term liabilities
17.	Other long-term liabilities
18.	Total liabilities
Equity	
19.	Paid-in equity from shareholders plus members
20.	Donated equity—prior years, cumulative
21.	Donated equity—current year
22.	Prior years retained earnings/losses
23.	Current year retained earnings/loss
24.	Other capital accounts
25.	Total equity
26.	TOTAL LIABILITIES AND EQUITY

Source: Format for Appraisal of Microfinance Institutions, CGAP Secretariat, July 1999.

Sample Balance Sheet

Account	Comments About Usage
Assets	
1. Cash and due from banks	Cash on hand, sight deposits, checking accounts or other instruments paying little or no interest
2. Reserves in Central Bank	Relevant only for licensed financial intermediaries
3. Short-term investments in money market instruments	Interest-bearing deposits and investments in financial instruments, where the principal purpose is liquidity management
4. Loan portfolio	Total outstanding balances of loans to clients, including loans past due but not written off
5. (Loan loss reserve)	A negative asset account: set-aside for estimated future losses on problem loans that have not yet been written off.
6. Other short-term assets	Accounts receivable, accrued interest on loan portfolio, etc.
7. Long-term investments	Other long-term, illiquid assets that earn returns
8. Net fixed assets	Land, building, equipment, net of accumulated depreciation
9. Total assets	
Liabilities	
10. Savings accounts: compulsory	Compulsory savings required as part of the credit methodology
11. Savings accounts: voluntary	Liquid deposits from the general public
12. Time deposits	Certificates of deposit from the general public
13. Loan: commercial	Loans to the MFI at market rates from banks or other financial institutions
14. Loans: Central Bank	Rediscount or other special lines of credit from the Central Bank
15. Loans: subsidized	Concessional loans from donors, etc.
16. Other short-term liabilities	Accounts payable, accrued interest to be paid on loans and deposits, etc.
17. Other Long-term liabilities	Long term loans for property, etc.
18. Total liabilities	
Equity	
19. Paid-in equity from shareholders	Equity contribution of owners of stock
20. Donated equity--prior years, cumulative	Equity received through cash donations from sources that do not receive stock
21. Donated equity--current year	All Cash Grants/Donations (from Income Statement)
22. Prior years retained earnings/losses, not including cash donations	Accumulated earnings from prior periods only
23. Current year profit/loss.	Current year operating profit/(loss) (from Income Statement)
24. Other capital accounts	Any special reserves or other capital accounts
25. Total equity	
26. TOTAL LIABILITIES AND EQUITY	

Financial analysis is required for many financial management decisions:

- How to manage the finances to achieve the **strategic goals** of the institution
- How to increase **profitability**
- How to reach **self-sufficiency/breakeven point**
- How to increase **efficiency** especially reducing the cost per client
- What is the optimum level of each different **operational expense** including the **cost of funds**
- How to manage the costs of **human resources** as part of overall human resource management
- How to deal with the effect of **inflation**
- What is the **loan loss reserve** policy
- What is the **write-off and rescheduling** policy
- What **interest rate** should the MFI charge on products?
- How to manage **liquidity**—i.e., how to keep solvent at the same time as disbursing the maximum number of loans, setting a target level of liquidity
- What is the best **financing structure**, i.e., how much **debt** including from commercial sources and how much **capital** do you need?
- What should the **asset** structure be?
- How to manage the **fixed assets**, i.e., the depreciation policy, how to finance them, are they insured, are they safe?
- What are **currency risks** and can they be minimized?
- How to undertake **trend analysis** and to compare actual performance against planned performance

Note: These decisions were the result of a brainstorming by finance managers of MFIs in Bosnia and Herzegovina.



Adjustments are additional, or hidden, costs incurred by the MFI that we need to recognize for internal management purposes, for example, when calculating and analyzing efficiency and profitability ratios. They are not to be included in the audited financial statements; they are internal *adjustments*.

Which costs does an MFI incur that are not reflected in the expenses?

- Inflation
- Subsidized cost of funds
- In-kind donations

Inflation

What is affected by inflation?

Assets and liabilities that are contractual in nature carry prices that presumably include the cost of inflation or could adjust to include the cost of inflation. Inflation eats into the income earned (or expense incurred), but in general the asset or liability itself is not affected.

What is the net effect of inflation on the balance sheet?

- Although equity is eroded by inflation, some of the equity is invested in fixed assets, which appreciate with inflation, thus counterbalancing the impact on equity. In other words it is only that part of equity remaining after subtracting the value of the fixed assets that is affected by inflation.
- Alternatively, inflation affects the "the difference between financial assets and liabilities." That is, inflation will affect a portion of equity.

$$\text{Inflation Adjustment} = \frac{(\text{Average equity} - \text{Average fixed assets}) * \text{Inflation rate}}$$

Subsidized Cost of Funds

Why adjust for the subsidized cost of funds?

- To help managers recognize the cost of commercial sources of funds such as **bank loans or savings**, instead of concessional loans.
- To know how an MFI can be independent of donor funds in the long term, need to identify the subsidies

$$\text{Cost of Funds Adjustment} = \\ (\text{Average funding liabilities} \times \text{Shadow price of funds}) - \text{Interest and fee expense}$$

In-Kind Donations

In-kind donations add in the cost, or fair market value, of goods and services that the MFI does not pay for but that are important to the operation of its business.

May be

- Technical advice
- Training
- Rent
- Use of transport
- Other foreign consultants, and so on.

Substantial in-kind donations increase an MFI's adjusted costs and increase the time it takes to reach sustainability. The solution is for MFI managers to ask if **they** really want these in-kind donations. **If not, they should say no!**

Adjustments for Inflation and Subsidies

		Accounting Period
1.	Operating Income	
2.	Unadjusted Operating Expenses	
3.	Inflation Adjustment	
a.	Average Equity	
b.	Average Fixed Assets	
c.	Inflation	
Inflation Adjustment = $(a - b) \times c$		
4.	Subsidized Cost of Funds Adjustment	
a.	Average funding liabilities	
b.	Commercial rate for funds	
c.	Interest and Fee Expense	
Subsidized Cost of Funds Adjustment = $(a \times b) - c$		
5.	In-kind Donation Adjustment	
a.	Personnel	
b.	Other	
In-kind Donation Adjustment		
6.	Adjusted Operating Expenses	
7.	Adjusted Operating Profit (Loss)	

Loan Portfolio Quality Analysis

- Delinquency rate—portfolio at risk
- Portfolio aging
- Loan loss rate

Efficiency and Productivity

- Number of active loan clients per staff member
- Number of active loan clients per loan officer
- Outstanding portfolio per loan officer
- Number of clients per branch office
- Yield on portfolio
- Administrative efficiency
- Operating efficiency
- Personnel costs as a percentage of administrative costs

Profitability

- Adjusted return on assets
- Adjusted return on equity
- Operational self-sufficiency
- Financial self-sufficiency

Using Ratios

Ratio analysis is a financial management tool that enables managers of microfinance institutions to assess their progress in achieving sustainability.

They can help answer two primary questions that every institution involved in microfinance needs to ask:

- Is this institution either achieving or progressing towards profitability?
- How efficient is it in achieving its given objectives?

Taken together, the ratios in the framework provide a perspective on the financial health of the lending/savings, and other operations of the institution.

No one ratio tells it all. There are no values for any specific ratio that is necessarily correct. It is the trend in these ratios which is critically important.

Ratios must be analyzed together, and ratios tell you more when consistently tracked over a period of time. Frequent measurement can help identify problems which need to be solved before they fundamentally threaten the MFI, thus enabling correction. Trend analysis also helps moderate the influence of seasonality or exceptional factors.

Different levels of users will require a set of different indicators and analysis. They might be summarized as follows:

- Operations staff need portfolio quality, efficiency ratios, outreach, and branch level profitability.
- Senior management needs institution-level portfolio quality, efficiency profitability, liquidity, and leverage.
- Regulators need capital adequacy and liquidity.
- Donors/investors need institution-level portfolio quality, leverage and profitability.

In addition to analyzing past trends, ratios, in conjunction with policy decisions, are helpful when preparing financial projections.

Loan Portfolio Quality Analysis

The outstanding portfolio of an MFI is defined as the principal amount of loan balances outstanding. The major risk factor in the portfolio is *not* the payments that are past due, but rather the outstanding balance of loans with payments past due. Payments past due can be seen as a warning sign that a particular borrower is in difficulty and that the borrower may be unable to repay the remaining balance of the loan. The entire outstanding balance is thus at risk.

Common:

$$\text{Amount Past Due} = \frac{\text{Amount past due}}{\text{Outstanding portfolio}}$$

Better:

$$\text{Portfolio At Risk (PAR)} = \frac{\text{Unpaid principal balance of all loans with late payments}}{\text{Outstanding portfolio}}$$

Portfolio Quality and Loan Collection Ratios

Ratios will allow you to examine financial relationships to diagnose the well-being of your institution. Key portfolio ratios should be monitored regularly to measure performance. The chart which follows describes the purpose of each indicator and gives a range of acceptable ratios.

Indicator	Ratio	Measurement answers the questions:
Portfolio at Risk (PAR) by Age*	$\frac{\text{Unpaid principal balance of all loans with } \underline{\text{payments at least (1, 31, 61 days) past due}}}{\text{Outstanding portfolio}}$	How much could you lose if all late borrowers default? Aging separates more risky loans from less risky. (The longer a loan goes unpaid, the higher the risk it will never be paid.)
Arrears Rate Past Due Rate	$\frac{\text{Amount past due}}{\text{Outstanding portfolio}}$	How commonplace is nonpayment? Measures amount of loan principal that is due but not paid.
Repayment Rate	$\frac{\text{Amount received (current and past due) - } \underline{\text{prepayments}}}{\text{Total amount due this period + } \text{Amounts past due from previous periods}}$	Shows amount paid compared to amount due/expected during a specific period. Does not provide useful information about the performance of the outstanding portfolio.
Current Recovery Rate	$\frac{\underline{\text{Amount received this period (P or P+I)**}}}{\text{Amount due this period (P or P+I) under original loan terms}}$	Fluctuates from month to month. Is meaningful only for longer periods. Can be processed algebraically to predict eventual loan loss rates.
Annual Loan Loss Rate*	$\frac{\underline{\text{Amount of loans written off as unrecoverable}}}{\text{Average outstanding portfolio}}$	Useful in interest rate setting. Costs of default, must be balanced by higher interest income.

Note: Portfolio at Risk (PAR) and Annual Loan Loss Rate are the preferred ratios for analyzing portfolio quality. The other ratios are more limited as noted in the Measurement column.

*See CGAP Occasional Paper No. 3, Measuring Microcredit Delinquency: Ratios Can Be Harmful to Your Health.

** P = principal, I = interest.

Rationale for Loan Loss Provisions and Reserves

Maintaining loans on the books that are unlikely to be repaid overstates the value of the portfolio.

“A well-defined policy that establishes a loan loss reserve and periodically declares loans non-recoverable saves a program from declaring a large amount unrecoverable all at once and thereby drastically reducing assets.”

Katherine Stearns. *The Hidden Beast: Delinquency in Microenterprise Programmes*, Accion International, 1991.

Loan Loss Reserve	Loan Loss Provision	Loan Losses or Write-Offs
<ul style="list-style-type: none"> • An account that represents the amount of outstanding principal that is not expected to be recovered by a micro-finance organization • Negative asset on the balance sheet that reduces the outstanding portfolio. (An alternative presentation is to show it as a liability.) 	<ul style="list-style-type: none"> • Amount expensed on the income and expenses statement. • Increases the loan loss reserve 	<ul style="list-style-type: none"> • Occur only as an accounting entry. • Do not mean that loan recovery should not continue to be pursued. • Decrease the reserve and the outstanding portfolio.

Source: Joanna Ledgerwood. *Financial Management Training for Microfinance Organizations*, CALMEADOW, 1996.

Accounting for Loan Loss Provisions and Write-Offs

A provision records the possibility that an asset in the balance sheet is not 100% realizable. The loss of value of assets may arise through wear and tear such as the depreciation of physical assets, loss of stocks, or unrecoverable debts.

Provisions expense this anticipated loss of value in the portfolio gradually over the appropriate periods in which that asset generates income, instead of waiting until the actual loss of the asset is realized.

Provisions are only accounting estimates and entries, and they do not involve a movement of cash, like saving for a rainy day.

Loan loss provisions charged to a period are expensed in the income and expense statement. The corresponding credit accumulates over time in the balance sheet as reserves shown as a negative asset:

The accounting transaction is:

Debit	Loan loss provision
Credit	Loan loss reserve

Loan losses or write-offs occur when it is determined that loans are unrecoverable. Because the possibility that some loans would be unrecoverable has been provided for in the accounting books through reserves, loan losses are written off against loan loss reserves and are also removed from the outstanding portfolio.

The accounting transaction is:

Debit	Loan loss reserve
Credit	Outstanding loans

Write-offs do not affect the net portfolio outstanding unless an increase in the loan reserve is made.

When write-offs are recovered, they are booked in the income and expense statement as miscellaneous income.

Management Ratios

Efficiency measures whether an institution is serving as many people as possible or at the lowest possible cost.

Management Ratios:

- Address efficiency in terms of average outstanding portfolio of the loans, which generate the income for the institution;
- Look at the staff productivity and staff costs, usually the biggest cost in an MFI; and
- Cover key aspects of both institutional and staff efficiency.

The three types of management ratios are staff productivity ratios, financial productivity ratios and cost efficiency ratios.

Staff Productivity Ratios

- Number of active loan clients per staff member
- Number of active loan clients per loan officer
- Number of active loan clients per branch
- Gross portfolio outstanding per loan officer

Financial Productivity Ratio

$$\text{Yield on Portfolio} = \frac{\text{Interest and fee income from loans}}{\text{Average net portfolio outstanding}}$$

Cost-Efficiency Ratios

$$\text{Operating Efficiency} = \frac{\text{Total operating expenses} + \text{In-kind donations}^*}{\text{Average net portfolio outstanding}}$$

$$\text{Administrative Efficiency} = \frac{\text{Personnel} + \text{Other administrative expenses} + \text{In-kind donations}}{\text{Average net portfolio outstanding}}$$

$$\text{Personnel Expense Ratio} = \frac{\text{Personnel expenses} + \text{In-kind personnel donations}}{\text{Total administrative expenses} + \text{Total in-kind donations}}$$

Profitability Performance Indicators

Term	Formula	Definition
Adjusted Operating Profit	Operating income – Adjusted operating expenses	MFI's profit
Adjusted Return on Assets	$\frac{\text{Adjusted operating profit}}{\text{Average total assets}}$	How productively the MFI has employed its assets
Adjusted Return on Equity	$\frac{\text{Adjusted operating profit}}{\text{Average equity}}$	Return on the capital of the MFI
Operational Self-Sufficiency	$\frac{\text{Operating income}}{\text{Operating expenses}}$	Degree to which operating income covers operating expenses
Financial Self-Sufficiency	$\frac{\text{Operating income}}{\text{Adjusted operating expenses}}$	Degree to which operating income covers the adjusted operating expenses

Profitability Analysis

- ◆ CGAP Occasional Paper 1, Microcredit Interest Rates
- ◆ CGAP Technical Tool Series 4, Format for Appraisal of Microfinance Institutions: A Handbook

http://www.cgap.org/html/p_occasional_papers01.html

http://www.cgap.org/html/p_technical_guides04.html

Sustainability

<p>Sustainability =</p> <p>Coverage of administrative cost + Loan loss + Cost of funds + Inflation + Capitalization for growth from operating income</p>
