

# Microfinance Consensus Guidelines

DEFINITIONS OF SELECTED  
FINANCIAL TERMS, RATIOS, AND  
ADJUSTMENTS FOR MICROFINANCE

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Published by CGAP/The World Bank Group, September 2003  
1818 H Street, NW, Washington, DC 20433 USA

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This publication was collectively authored by the individuals and organizations listed in the Acknowledgments, all of whom have the right to publish it.

*Definitions of Selected Financial Terms, Ratios, and Adjustments  
for Microfinance*

First edition: July 2002

Second edition: November 2002

Third edition: September 2003

The current edition of this document (September 2003) can be downloaded from the web sites of CGAP and the SEEP Network:

CGAP [www.cgap.org](http://www.cgap.org)

SEEP [www.seepnetwork.org](http://www.seepnetwork.org)

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## ACKNOWLEDGMENTS

**NOTE:** *This set of definitions is not intended to be a template for financial reporting by microfinance institutions and should not be used for that purpose.* For the most part, indicators were included in this document because they presented definitional issues, not because they were necessarily preferred indicators for financial reporting.

The Small Enterprise Education and Promotion (SEEP) Network will be publishing a guide to microfinance institution financial reporting and analysis in 2003.

This project was initiated by Damian von Stauffenberg of MicroRate. Contributors include Frank Abate of MicroRate, Tillman Bruett of Alternative Credit Technologies and the SEEP Network, Isabelle Barrès of the *MicroBanking Bulletin*, Robert Christen and Richard Rosenberg of the Consultative Group to Assist the Poor (CGAP), Dana de Kanter of the SEEP Network, Tor Jansson of the Inter-American Development Bank (IDB), Barry Lennon of the U.S. Agency for International Development (USAID), Alice Negre of PlaNet Finance, Sanjay Singha of M-CRIL, and the Financial Services Working Group of the SEEP Network, which includes the following private voluntary organizations: ACCIÓN, ACDI/VOCA, CARE, Catholic Relief Services (CRS), FINCA International, Freedom from Hunger (FFH), Opportunity International (OI), Pro Mujer, World Council of Credit Unions (WOCCU), Volunteers in Technical Assistance (VITA), Women's World Banking (WWB), and World Vision.

# DEFINITIONS OF SELECTED FINANCIAL TERMS, RATIOS, AND ADJUSTMENTS FOR MICROFINANCE

## INTRODUCTION

The evolution of the microfinance industry has led to a greater focus on the financial viability of microfinance institutions (MFIs). A variety of measurements have been used to measure MFI performance, many of which have been recognized as standard indicators. On closer examination, it is evident that these standard indicators are being calculated and applied in different ways. This has led to confusion among practitioners and analysts, as well as to considerable distortions when comparing MFIs.

The industry recognizes this deficiency and agrees that developing standard definitions of financial terms and common indicators is an important next step in its development. The definitions established in this document will make comparisons between MFIs more meaningful and promote more transparency in MFI reporting. Transparency is increasingly important in the industry as mature MFIs look to commercial funding sources and investors to support their growth. It is anticipated that this paper will contribute to a standard understanding of several financial terms and ratios within the international microfinance industry.

The terms and ratios presented here include mainly those that the authors believed were not only commonly used, but were also the subject of some confusion. **This document is intended for an audience that has some basic familiarity with accounting terms, financial statements, and microfinance institutions.** The primary objective of this document is to put forward standard definitions for selected financial terms and to suggest a standard method of calculating certain financial ratios. The document is divided into three sections: (i) a list of financial terms and definitions, (ii) a description of financial ratios, and (iii) a brief discussion and description of financial adjustments.

The contributors to this effort recognize that it is not possible for all microcredit providers to use the same accounting standards and chart of accounts, which are frequently dictated by local practices and internal needs. To be clear, this document should not be used as a substitute for a chart of accounts or accounting policies. It is also not intended to be a financial analysis guide, as analysts will normally use other financial indicators and information beyond that which is contained in this document. There are many reference materials for MFIs and analysts, several of which are listed at the end of this document.

MFIs may reference this document when reporting to external sources to indicate whether the MFI follows the standards established here. If an MFI does not wish to use a definition or formula suggested herein, it can use the document as a point of reference to explain how its definition or formula differs from the standard. In the coming year, the SEEP Network intends to develop a more comprehensive guide for financial terms, ratios, and adjustments that will guide MFI managers on how to categorize accounts and calculate key ratios and adjustments.

## I. FINANCIAL TERMS

This section defines certain key financial accounts used by MFIs. The definitions are provided in two main sections: (i) those found on an income statement and (ii) those found on a balance sheet. Additional definitions are included for terms used in the formulas for financial ratios. Most are presented in the order in which they would appear on the financial statement of an MFI.

### **Income Statement**

The income statement is also known as the profit-and-loss statement. It is a flow statement that summarizes all financial activity during a stated period of time, usually a month, quarter, or year. It displays all revenues and expenses for a stated period of time. The bottom line of an income statement is the net income (or net profit or surplus) for the period.

The terms *revenue* and *income* are frequently used interchangeably, as are the terms *income* and *profit*. For the sake of consistency, this document refers to all gross proceeds as revenue, such as *interest and fee revenue*. All net proceeds are referred to as income, such as *net operating income*. MFIs which choose to use the terms *interest and fee income* and *net operating profit* are free to do so, but should recognize that these accounts are defined under different names in this document. An asterisk (\*) is used to indicate those terms that may also be referred to as *income*.

**Code    Term and Definition**

<b>I1</b>	<b>Financial revenue* from loan portfolio.</b> Revenue from interest earned, fees, and commissions (including late fees and penalties) on the gross loan portfolio only. This item includes not only interest paid in cash, but also interest accrued but not yet paid.
<b>I2</b>	<b>Financial revenue* from investments.</b> Revenue from interest, dividends, or other payments generated by financial assets other than the gross loan portfolio, such as interest-bearing deposits, certificates of deposit, and treasury obligations. This includes not only interest paid in cash, but also interest accrued but not yet paid.
<b>I3</b>	<b>(Total) Financial revenue.*</b> Includes I1 and I2—revenue generated from both the gross loan portfolio and investments.
<b>I4</b>	<b>Interest and fee expense on funding liabilities.</b> All interest, fees, and commissions incurred on deposit accounts of clients held by an MFI, as well as commercial or concessionary borrowings by an MFI that are used to fund all financial assets. It generally does not include interest expense on liabilities that fund fixed assets, such as mortgage or leasing interest. It includes accruals as well as cash payments.
<b>I5</b>	<b>Financial expense.</b> All interest, fees, and commissions incurred on all liabilities (B14), including deposit accounts of clients held by an MFI (B11), commercial and concessional borrowings (B12, B13), mortgages, and other liabilities. It may also include facility fees for credit lines. It includes accrued interest as well as cash payment of interest.
<b>I6</b>	<b>Loan-loss provision expense.</b> A non-cash expense that is used to create or increase the loan-loss allowance (B5) on the balance sheet. The expense is calculated as a percentage of the value of the gross loan portfolio that is at risk of default. Usage of the terms “provision,” “allowance,” and “reserve” can be inconsistent and confusing. “Provision” and “allowance” are sometimes used to refer to the negative asset account on the balance sheet that is deducted from gross loan portfolio to calculate net loan portfolio; however, these same terms are sometimes used to refer to the associated expense on the income statement. To minimize confusion, it is suggested that the word “expense” always be included when referring to a charge for doubtful loans on the income statement. “Reserve” is sometimes used to refer to a negative asset account on the balance sheet that is offset against loan portfolio, but International Accounting Standards uses this term exclusively for equity-account items, such as appropriations of retained earnings or capital maintenance adjustments.

\* May also be referred to as income.

**Code      Term and Definition**

<p><b>I7</b></p>	<p><b>(Total) Operating revenue.*</b> Includes all financial revenue (I3) and other operating revenue. Other operating revenue is that which is generated from other financial services, such as fees and commissions for non-credit financial services that are not considered financial revenue. This item may include revenues linked with lending, such as membership fees, ATM card fees, transfer fees, or other financial services, such as payment services or insurance. Operating revenue may include net foreign currency gains/losses. (See section III for more information on recording this revenue.)</p> <p>Operating revenue does not include donations or any revenue that is not generated from an MFI's core business of making loans and providing financial services, such as merchandise sales (see I12). However, if an MFI views training as an integral element of the financial service it provides, then training revenue would be included in operating revenue.</p>
<p><b>I8</b></p>	<p><b>Personnel expense.</b> Includes staff salaries, bonuses, and benefits, as well as employment taxes incurred by an MFI. It is also referred to as <i>salaries and benefits</i> or <i>staff expense</i>. It may also include the costs of recruitment and/or initial orientation. It does not include ongoing or specialized training for existing employees, which is an administrative expense.</p>
<p><b>I9</b></p>	<p><b>Administrative expense.</b> Non-financial expenses directly related to the provision of financial services or other services that form an integral part of an MFI's financial services relationship with its clients. Examples include depreciation, rent, utilities, supplies, advertising, transportation, communications, and consulting fees. It does not include taxes on employees, revenues, or profits, but may include taxes on transactions and purchases, such as value-added taxes.</p>
<p><b>I10</b></p>	<p><b>(Total) Operating expense.</b> Includes personnel expense (I8) and administrative expense (I9), but excludes financial expense (I5) and loan-loss provision expense (I6). It does not include expense linked to non-financial services (see I13). The authors recognize that it is common to refer to the sum of all expenses from operations (i.e., financial and loan-loss provision expenses) in the definition of this term, just as operating revenue includes all revenue from operations. However, the definition proposed here corresponds with the most common usage in banking.</p>
<p><b>I11</b></p>	<p><b>Net operating income.</b> Total operating revenue (I7) less all expenses related to the MFI's core financial service operations, including total operating expense (I10), financial expense (I5), and loan-loss provision expense (I6). It does not include donations or revenue expenses from non-financial services. Many MFIs choose not to deduct taxes on revenues or profits from net operating income; rather, the latter are included as a separate category (I14). MFIs are encouraged to indicate if taxes are included in this account.</p>

\* May also be referred to as *income*.

**Code      Term and Definition**

<b>I12</b>	<p><b>Non-operating revenue.*</b> All revenue not directly related to core microfinance operations, such as revenue from business development services, training, or the sale of merchandise. Donations and revenues from grants may also be considered non-operating revenue, but it is recommended that they be included in their own account.</p> <p>It is strongly recommended that MFIs with significant non-operating revenue or expenses produce a segmented income statement, organized to show net operating income (I11), net non-operating income (I12-I13), and consolidated net income. At a minimum, MFIs should provide a footnote detailing non-operating revenue if it is significant.</p>
<b>I13</b>	<p><b>Non-operating expense.</b> All expenses not directly related to the core microfinance operation, such as the cost of providing business development services or training (unless an MFI includes training as a requirement for receiving loans). This may also include extraordinary expenses, which are one-time expenses incurred by an MFI that are not likely to be repeated in coming years. When MFIs have significant non-financial programs, it is common to use segment reporting (if possible) or, at a minimum, to provide a footnote detailing non-operating expenses if they are significant.</p>
<b>I14</b>	<p><b>Taxes.</b> Includes all taxes paid on net income or other measure of profits as defined by local tax authorities. This item may also include any revenue tax. It excludes taxes related to employment of personnel, financial transactions, fixed-asset purchases, or other value-added taxes (which should be included in operating expense [I10]).</p>
<b>I15</b>	<p><b>Net income.</b> Total revenue less total expenses, operating and non-operating, including all donations and taxes, if any. Some MFIs prefer to present net income before donations and taxes. If so, the MFI should label it as such (e.g., <i>net income before donations</i>).</p>

\* May also be referred to as income.

**Balance Sheet**

The balance sheet is a stock statement, which is a snapshot of the MFI at a moment in time. The statement reflects what the MFI owns and what is owed to it (assets), what it owes others (liabilities), and the difference between the two (equity or net assets). The balance sheet shows the net worth of an institution at that moment.

When referring to balance sheet accounts, *short term* refers to any account or portion of an account that is due or matures within 12 months. *Long term* refers to an account or portion of an account that is due or matures after 12 months.

**Code Term and Definition**

<p><b>B1</b></p>	<p><b>Gross loan portfolio.</b> The outstanding principal balance of all of an MFI's outstanding loans, including current, delinquent, and restructured loans, but not loans that have been written off. It does not include interest receivable. Although some regulated MFIs may be required to include the balance of interest accrued and receivable, the MFI should provide a note that gives a breakdown between the sum of all principal payments outstanding and the sum of all interest accrued. Some MFIs choose to break down the components of the gross loan portfolio (see B2, B3, B4).</p> <p>The gross loan portfolio is frequently referred to as the <i>loan portfolio</i> or <i>loans outstanding</i>, both of which create confusion as to whether they refer to a gross or a net figure. The gross loan portfolio should not be confused with the value of loans disbursed (see P1 below).</p>
<p><b>B2</b></p>	<p><b>Performing portfolio.</b> The part of the gross loan portfolio which includes the value of all loans outstanding that do not have an installment of principal past due beyond a certain number of days and that have not been rescheduled or restructured (see B4). It does not include accrued interest. A standard of <math>\leq 30</math> days is common, but regulations may require MFIs to use a different standard. The MFI should clearly state the definition of the performing portfolio.</p>
<p><b>B3</b></p>	<p><b>Portfolio at risk.</b> The value of all loans outstanding that have one or more installments of principal past due more than a certain number of days. This item includes the entire unpaid principal balance, including both past-due and future installments, but not accrued interest. It also does not include loans that have been restructured or rescheduled.</p> <p>Portfolio at risk (PAR) is usually divided into categories according to the amount of time passed since the first missing principal installment. (See PAR ratio [R11] in section II.)</p>
<p><b>B4</b></p>	<p><b>Restructured portfolio.</b> The principal balance of all loans outstanding that have been renegotiated or modified to either lengthen or postpone the originally scheduled installments of principal, or to substantially alter the original terms of the loans. This item also includes <i>refinanced loans</i>, which are loans that have been disbursed to enable repayment of prior loans by clients who otherwise would have been unable to pay the originally scheduled installments.</p>
<p><b>B5</b></p>	<p><b>Loan-loss allowance.</b> The portion of the gross loan portfolio that has been expensed (provisioned for) in anticipation of losses due to default. This item represents the cumulative value of the loan-loss provision expense (I6) less the cumulative value of loans written off (P5). This is also referred to as an <i>allowance for doubtful accounts</i>, or a <i>loan-loss reserve</i>. Note that International Accounting Standards avoids the use of "reserve" for this account.</p> <p>It should be noted that the loan-loss allowance is usually not a cash reserve, but rather an accounting device to provide the reader information about the size of anticipated loan losses. This allowance is built up from specific provision expenses related to the portfolio at risk (B3) or, in some cases, from general provision expenses against the entire gross loan portfolio (B1).</p>

**Code Term and Definition**

<b>B6</b>	<b>Net loan portfolio.</b> The gross loan portfolio (B1) less the loan-loss allowance (B5).
<b>B7</b>	<b>Net fixed assets.</b> The cost or value of all physical property and property improvements, furniture, and equipment that are currently used by an MFI (including all donated equipment), less accumulated depreciation expenses. Fixed assets may also include <i>intangible assets</i> , such as goodwill, or up-front investments in product or MIS development which have no physical properties but represent a future economic benefit to an MFI.
<b>B8</b>	<b>Total assets.</b> Includes all asset accounts net of all contra-asset accounts, such as the loan-loss allowance and accumulated depreciation.
<b>B9</b>	<b>Financial assets.</b> Non-physical assets whose value is denominated in currency. It includes cash, bank accounts, investments, the net loan portfolio (B6), and other receivables. It does not include net fixed assets.
<b>B10</b>	<b>Earning assets.</b> All financial assets that generate financial revenue. Examples include investments and the gross loan portfolio (B1). Cash and current bank accounts are not considered earning assets unless a current bank account, such as a demand deposit account, is interest bearing.
<b>B11</b>	<b>Deposits.</b> The total value of funds placed in an account with an MFI that are payable on demand to a depositor. This item includes any current, checking, or savings accounts that are payable on demand. It also includes time deposits which have a fixed maturity date.
<b>B12</b>	<b>Commercial borrowings.</b> Funds received by an MFI through a loan agreement or other contractual arrangement that carry a market rate of interest. Commercial borrowings include loans, lines of credit, and overdraft facilities with outstanding balances, but do not include deposits. While definitions of market rate vary, a common benchmark is the rate that local commercial banks pay on time deposits of 90 days or more. The MFI should note what benchmark it uses to determine whether a borrowing is at a market rate, and therefore commercial.
<b>B13</b>	<b>Concessional borrowings.</b> Funds received by an MFI through a loan agreement or other contractual arrangement that carry a below-market rate of interest. (See B12 for definition of market rate.) The MFI should note what benchmark it uses to determine whether a borrowing is at a below-market rate, and therefore concessional.
<b>B14</b>	<b>(Total) Funding liabilities.</b> All liabilities used to finance an MFI's financial assets. Funding liabilities include deposits (B11) and borrowings (B12, B13), but do not include accounts payable or borrowings (or any portion thereof) that are used to finance fixed assets (such as equipment financing or mortgages).
<b>B15</b>	<b>Total liabilities.</b> All liability accounts, representing everything that an MFI owes to others, including all deposits, borrowings, accounts payable, and other liability accounts.

**Code Term and Definition**

<b>B16</b>	<b>Donated equity.</b> Accumulated donations to an MFI. MFIs use different methods for calculating donated equity. For most, donated equity includes all donations, regardless of their use. For others, donated equity includes only in-kind donations and donations for financing the gross loan portfolio or fixed assets. All donations for operating and non-operating expenses are included in retained earnings. MFIs should indicate what donations are included in donated equity and are encouraged to break out donations restricted to a specific use from those which are unrestricted.
<b>B17</b>	<b>Total equity.</b> Total assets less total liabilities. It is also the sum of all equity accounts net of any equity distributions such as dividends, stock repurchases, or other cash payments made to shareholders.

**Additional Terms**

There are a number of additional terms that are frequently used by MFIs and are necessary to calculate financial ratios. Many of these terms would appear in the quarterly, annual, or portfolio reports of an MFI.

**Code Term and Definition**

<b>P1</b>	<b>Value of loans disbursed.</b> The value of all loans disbursed during the period, regardless of whether they are performing, non-performing, or written off. This value should not be confused with the gross loan portfolio (B1), which can be several times less than the value disbursed.
<b>P2</b>	<b>Number of loans disbursed.</b> The number of loans disbursed during the period. For MFIs using a group-lending methodology, the number of loans should refer to the number of individuals receiving part of a group loan, unless the MFI specifies a different definition.
<b>P3</b>	<b>Number of loans outstanding.</b> The number of loans that have been neither fully repaid nor written off, and thus comprise part of the gross loan portfolio (B1). As noted above, for MFIs using a group-lending methodology, this term includes every individual who is responsible for repaying a portion of a group loan, unless another definition is specified.
<b>P4</b>	<b>Value of payments in arrears.</b> The sum of all principal payments that are past due. It does not include past due interest. This item is also referred to as <i>total arrears</i> and should not be confused with portfolio at risk (B3).

**Code Term and Definition**

<p><b>P5</b></p>	<p><b>Value of loans written off.</b> The value of loans that have been recognized for accounting purposes as uncollectible. The process of recognizing an uncollectible loan is called a <i>write-off</i> or a <i>charge-off</i>. A write-off is an accounting procedure that removes the outstanding balance of the loan from the gross loan portfolio (B1) and from the loan-loss allowance (B5). Thus the write-off does not affect the balance of the net loan portfolio (B6), total assets (B8), or any equity account, unless the loan-loss reserve was insufficient to cover the amount written off.</p> <p>Most MFIs have policies requiring a write-off of all loans past due more than a certain number of days. It should be noted that a write-off does not have any bearing on an MFI's efforts to collect the delinquent loan or the client's obligation to pay. It is not uncommon for an MFI to recover loans after they have been charged off.</p>
<p><b>P6</b></p>	<p><b>Current portfolio.</b> The outstanding value of all loans that do not have any installment of principal past due. It does not include accrued interest.</p>
<p><b>P7</b></p>	<p><b>Number of active borrowers.</b> The number of individuals who currently have an outstanding loan balance with the MFI or are primarily responsible for repaying any portion of the gross loan portfolio. This number should be based on the number of individual borrowers rather than the number of groups.</p>
<p><b>P8</b></p>	<p><b>Number of depositors or savers.</b> The total number of individuals who currently have funds on deposit with an MFI whom the MFI is liable to repay. This number applies only to deposits that are held by an MFI, not to those deposits held in other institutions by the MFI's clients. The number should be based on individuals rather than the number of groups. It is possible that a single deposit account may represent multiple depositors.</p>
<p><b>P9</b></p>	<p><b>Number of savers facilitated.</b> The total number of individuals with savings accounts in other institutions that an MFI has facilitated, but is not itself liable to repay. Many MFIs work with third parties, usually a commercial bank or the borrowing group itself, to enable their borrowing clients to maintain savings accounts which may or may not be used as collateral by the MFI. In this document, these accounts are referred to as <i>facilitated savings</i>. When presenting the number of savers, the MFI should be clear not to include facilitated savers as depositors (P8).</p>
<p><b>P10</b></p>	<p><b>Obligatory savings.</b> The value of savings that an MFI's clients are required to maintain as a condition of an existing or future loan. Obligatory savings may be either a deposit held by an MFI or a facilitated savings account maintained outside of the MFI.</p>
<p><b>P11</b></p>	<p><b>Voluntary savings.</b> The value of savings maintained by MFI clients that is not required as a condition of an existing or future loan. Voluntary savings may be deposits held by an MFI or facilitated savings maintained outside the MFI as part of the MFI's overall financial services.</p>
<p><b>P12</b></p>	<p><b>Number of active clients.</b> The number of individuals who are active borrowers, depositors, or both. Individuals who have multiple loans or accounts with an MFI should be counted as a single client. Individuals who are not currently receiving any service directly from the MFI are not included, such as those with facilitated savings.</p>

## Code Term and Definition

<b>P13</b>	<b>Number of clients.</b> The total number of active clients plus the number of individuals who are neither active borrowers nor depositors, but who remain members or are otherwise using the services of an MFI. These are often referred to as <i>members</i> . This could include clients with only facilitated savings.
<b>P14</b>	<b>Number of loan officers.</b> The number of personnel whose main activity is to directly manage a portion of the gross loan portfolio. A loan officer is a staff member of record who is directly responsible for arranging and monitoring client loans. The term "loan officer" refers to <i>field personnel</i> or <i>line officers</i> who interact with the client, not to administrative staff or analysts who process loans without direct client contact. Loan officers include contract employees who may not be part of permanent staff, but are contracted on a regular basis in the capacity of loan officers.  The number of loan officers is reported on a full-time-equivalent (FTE) basis. In cases where a staff member manages some loans, but also has other duties (for instance, a supervisor), this indicator should include a fraction < 1 that represents the amount of time spent doing loan officer duties. For instance, an MFI that has five loan officers and one supervisor who manages some loans may report 5 1/2 as the number of loan officers.
<b>P15</b>	<b>Number of personnel.</b> The number of individuals who are actively employed by an MFI. This number includes contract employees or advisors who dedicate the majority of their time to the MFI, even if they are not on the MFI's roster of employees. This number should be expressed as a full-time equivalent, so that any advisors who spend 2/3 of their time at the MFI would be considered 2/3 of a full-time employee.

## II. FINANCIAL RATIOS

This section includes a list of some commonly used ratios in the microfinance industry. The purpose of this section is to define the formulas and purposes of key ratios and to highlight some of the principal issues related to each ratio, including some general calculation issues. The ratios are divided into four categories:

- sustainability/profitability
- asset/liability management
- portfolio quality
- efficiency/productivity

This list of ratios is by no means exhaustive. Some ratios are included here because they are very common; others are included because of ambiguity in their use. MFIs and analysts are encouraged to use whatever ratios they feel are appropriate and relevant to measuring performance. **This set of ratios is not meant to be used as a reporting template.**

The contributors to this section are aware that MFIs use definitions that differ from those provided here. It is hoped that the definitions below can serve as a reference point for the industry, allowing institutions that use alternative formulas or definitions to explain the differences by comparing them to the definitions below. A reference code, formula, and explanation of purpose is provided for each ratio.

## Calculation Issues

### *Annualizing*

Unless otherwise indicated, it is assumed that all revenue and expense accounts used in indicators are stated on an annual or annualized basis. When calculating financial ratios in section III, it is assumed that the income statement represents one year. If not, then income statement figures must first be annualized before they can be compared with previous years or against other MFIs.

To annualize a number, the formula is:  $AA = [A \times (12/M)]$

Where

AA = annualized amount

A = amount for the period

M = number of months in the period

### *Averaging*

Many financial ratios require an average for a balance sheet account, such as the net loan portfolio outstanding. Averages for a period (such as a year) can be calculated simply by adding a beginning amount and an end amount and dividing the result by two.

$$P^{avg} = [(P^0 + P^1)/2]$$

Unfortunately, such simple average calculations often provide a distorted number. This distortion is particularly true for institutions whose loan portfolios are growing quickly or that experience significant seasonal fluctuations in lending activities. Period averages are much more meaningful when they are computed on a monthly, or at least quarterly, basis. When using such sub-period averages, the numerator is the opening balance plus the sum of the balance at the end of each sub-period, while the denominator is the number of sub-periods plus one. As an example, a quarterly average would be calculated as:

$$P^{avg} = \frac{(P^0 + P^1 + P^2 + P^3 + P^4)}{(4+1)}$$

## Ratio Categories

### *Sustainability/Profitability*

Code	Ratio Name	Formula
R1	Return on equity (ROE)	$\frac{(\text{Net operating income} - \text{Taxes})}{\text{Average equity}}$
	Adjusted return on equity (AROE)	$\frac{(\text{Adjusted net operating income} - \text{Taxes})}{\text{Average equity}}$
R2	Return on assets (ROA)	$\frac{(\text{Net operating income} - \text{Taxes})}{\text{Average assets}}$
	Adjusted return on assets (AROA)	$\frac{(\text{Net adjusted operating income} - \text{Taxes})}{\text{Average assets}}$
R3	Operational self-sufficiency	$\frac{\text{Operating revenue}}{(\text{Financial expense} + \text{Loan-loss provision expense} + \text{Operating expense})}$
R4	Profit margin	$\frac{\text{Net operating income}}{\text{Operating revenue}}$
R5	Financial self-sufficiency	$\frac{\text{Adjusted operating revenue}}{(\text{Financial expense} + \text{Loan-loss provision expense} + \text{Operating expense} + \text{Expense adjustments})}$

### *Assets/Liability Management*

Code	Ratio Name	Formula
R6	Yield on gross loan portfolio	$\frac{\text{Cash financial revenue from loan portfolio}}{\text{Average gross loan portfolio}}$
R7	Current ratio	$\frac{\text{Short-term assets}}{\text{Short-term liabilities}}$
R8	Yield gap	100% minus $\frac{\text{Cash revenue from loan portfolio}}{(\text{Net loan portfolio} \times \text{Expected annual yield})}$

**Explanation**

Calculates the rate of return on the average equity for the period. Because the numerator does not include non-operating items such as donations, the ratio is a frequently used proxy for commercial viability. Usually, ROE calculations are net of profit or revenue taxes. MFIs that are not using average equity as the denominator should specify the alternative denominator they are using.

This ratio may be calculated on an adjusted basis to address the effects of subsidies, inflation, loan-loss provisioning, and other items that are not in an MFI's net operating income. Adjustments are addressed in section III.

Measures how well an MFI uses its total assets to generate returns.

This ratio may also be calculated on an adjusted basis to address the effects of subsidies, inflation, loan-loss provisioning, and other items that are not included in an MFI's net operating income. Adjustments are addressed in section III.

Measures how well an MFI covers its costs through operating revenues. In addition to operating expense, it is recommended that financial expense and loan-loss provision expense be included in this calculation, as they are a normal (and significant) cost of operating.

Measures what percentage of operating revenue remains after all financial, loan-loss provision, and operating expenses are paid.

Measures how well an MFI can cover its costs, taking into account a number of adjustments to operating revenues and expenses. The purpose of most of these adjustments is to model how well the MFI could cover its costs if its operations were unsubsidized and it were funding its expansion with commercial-cost liabilities. Adjustments are discussed in section III.

**Explanation**

Indicates the gross loan portfolio's ability to generate cash financial revenue from interest, fees, and commissions. It does not include any revenues that have been accrued but not paid in cash, or any non-cash revenues in the form of post-dated checks, seized but unsold collateral, etc.

Measures how well an MFI matches the maturities of its assets and liabilities. *Short term* means assets or liabilities or any portion thereof that have a due date, maturity date, or may be readily converted into cash within 12 months.

Compares revenue actually received in cash with revenue expected from loan contracts. While a small gap is common, a substantial yield gap (> 10%) may indicate significant past-due payments (arrearages), fraud, inefficiency, or accounting error.

In this formula, "expected annual yield" means the effective interest rate of the loan contracts (the declining-balance equivalent rate) for a single payment period, multiplied by the number of periods in a year.<sup>1</sup>

<sup>1</sup> Compounding is not used. Thus, if the effective monthly rate is 3%, then the expected annual yield is  $3\% \times 12 \text{ months} = 36\%$ , not  $1.03^{12} - 1 = 42.58\%$ .

*Assets/Liability Management, continued*

<b>Code</b>	<b>Ratio Name</b>	<b>Formula</b>
<b>R9</b>	Funding expense ratio	$\frac{\text{Interest and fee expenses on funding liabilities}}{\text{Average gross loan portfolio}}$
<b>R10</b>	Cost-of-funds ratio	$\frac{\text{Interest and fee expenses on funding liabilities}}{\text{Average funding liabilities}}$

*Portfolio Quality*

<b>Code</b>	<b>Ratio Name</b>	<b>Formula</b>
<b>R11</b>	Portfolio-at-risk (PAR) ratio	$\frac{\text{Portfolio at risk (X days)}}{\text{Gross loan portfolio}}$
<b>R12</b>	Write-off ratio	$\frac{\text{Value of loans written off}}{\text{Average gross loan portfolio}}$
	Adjusted write-off ratio	$\frac{\text{Adjusted value of loans written off}}{\text{Average gross loan portfolio}}$
<b>R13</b>	Risk coverage ratio	$\frac{\text{Loan-loss reserve}}{\text{Portfolio at risk > X days}}$

**Explanation**

Shows the blended interest rate an MFI is paying to fund its financial assets. This ratio can be compared with yield on the gross portfolio to determine the interest margin.

This ratio gives a blended interest rate for all of an MFI's funding liabilities. Funding liabilities do not include interest payable or interest on loans to finance fixed assets.

**Explanation**

The most accepted measure of portfolio quality. Portfolio at risk is the outstanding amount of all loans that have one or more installments of principal past due by a certain number of days. When referring to PAR, an MFI should always specify the number of days.

MFI's should indicate whether restructured loans are included in their calculation. Some MFI's automatically include restructured loans in their portfolio at risk. This practice reflects the belief that restructured loans carry higher risk than do current loans.

Represents the percentage of an MFI's loans that have been removed from the balance of the gross loan portfolio because they are unlikely to be repaid. A high ratio may indicate a problem in the MFI's collection efforts. However, write-off policies vary, which makes comparisons among MFI's difficult. As a result, analysts may present this ratio on an adjusted basis to provide for uniform treatment of write-offs (see section III).

The adjustments to the write-off ratio may increase or decrease the value of loans written off by removing or adding back delinquent loans to the gross loan portfolio in accordance with an international or national standard for writing off loans.

Shows how much of the portfolio at risk is covered by an MFI's loan-loss allowance. It is a rough indicator of how prepared an institution is to absorb loan losses in the worst case scenario. MFI's should provision according to the age of their portfolio at risk: the older the delinquent loan, the higher the loan-loss allowance. For example, a ratio for PAR > 180 days may be close to 100%, whereas the ratio for PAR > 30 days is likely to be significantly less. Thus, a risk coverage ratio of 100% is not necessarily optimal.

### *Efficiency/Productivity*

These indicators reflect how efficiently an MFI is using its resources, particularly its assets and personnel. MFIs use different efficiency and productivity indicators, tailoring them to reflect their own organizational structure, product lines, and monitoring priorities. In calculating these indicators, MFIs need to select which denominator they will use. The most common denominators related to assets are (i) average gross loan portfolio, (ii) average total assets, and (iii) average performing assets—loans, investments, and other assets expected to produce income.

Most MFIs choose to use the average gross loan portfolio because they calculate other ratios using this same denominator. However, there are strong arguments for using average performing assets, which is the standard for the commercial banking industry, or average total assets, which is the most easily measured of the three. Using average total assets as the

<b>Code</b>	<b>Ratio Name</b>	<b>Formula</b>
<b>R14</b>	Loan officer productivity	$\frac{\text{Number of active borrowers}}{\text{Number of loan officers}}$
<b>R15</b>	Personnel productivity	$\frac{\text{Number of active borrowers}}{\text{Number of personnel}}$ $\frac{\text{Number of active clients}}{\text{Number of personnel}}$
<b>R16</b>	Average disbursed loan size	$\frac{\text{Value of loans disbursed}}{\text{Total number of loans disbursed during period}}$
<b>R17</b>	Average outstanding loan size	$\frac{\text{Gross loan portfolio}}{\text{Number of loans outstanding}}$
<b>R18</b>	Operating expense ratio	$\frac{\text{Operating expense}}{\text{Average gross loan portfolio}^*}$

\* Average total assets could be used as an alternative denominator.

denominator for efficiency/productivity ratios is more relevant for MFIs that manage deposit and/or share accounts in addition to loans. Regardless of the denominator selected, the MFI should be consistent in its use. For the sake of simplifying presentation, the gross loan portfolio is used below; however, the asterisk (\*) in the denominator of several ratios indicates that either average total or average performing assets could be used.

MFIs must also decide if they wish to use the number of personnel or number of loan officers as their benchmark for human resources. The reason for considering loan officers a separate category is that, in contrast to other personnel, they are usually directly involved in revenue-generating tasks that result in income (i.e., they make and collect loans). However, there is a trend toward using total personnel in productivity calculations, in recognition of the fact that loan-officer tasks may overlap with the tasks of administrative staff.

### Explanation

Measures the average caseload of each loan officer, as defined in P14. This is a common ratio, but is difficult to compare among MFIs when their definitions of loan officer vary. MFIs may also substitute the number of loans outstanding as a surrogate for number of active borrowers and the number of financial services officers for loan officers. Regardless of the ratio used, MFIs should explain their definition of the numerator and denominator.

Measures the overall productivity of total MFI human resources in managing clients who have an outstanding loan balance and are thereby contributing to the financial revenue of the MFI.

Alternatively, the MFI may wish to measure the overall productivity of MFI personnel in terms of managing clients, including borrowers, savers, and other clients. This ratio is the most useful ratio for comparing MFIs.

Measures the average loan size that is disbursed to clients. MFIs should be careful to distinguish between disbursed loan size and outstanding loan size (see R17).

Measures the average outstanding loan balance by client, which may be significantly less than the average disbursed loan size. It is frequently compared to per capita GDP as a rough proxy for the income level of an MFI's clientele.

This ratio is the most commonly used efficiency indicator for MFIs. It includes all administrative and personnel expense. Care must be taken when using this ratio to compare MFIs. MFIs that provide smaller loans will compare unfavorably to others, even though they may be serving their target market efficiently.

Likewise, MFIs that offer savings and other services will also compare unfavorably to those that do not offer these services, if gross loan portfolio is used as the denominator. Therefore, average total assets is the more appropriate denominator for financial intermediaries when calculating the operating expense ratio.

Code	Ratio Name	Formula
R19	Cost per borrower	$\frac{\text{Operating expense}}{\text{Average number of active borrowers}}$
	Cost per client	$\frac{\text{Operating expense}}{\text{Average number of clients}}$
R20	Other expense ratios	$\frac{\text{Any expense}}{\text{Average gross loan portfolio}^*}$

\*Average total assets could be used as an alternative denominator.

### III. ADJUSTMENTS

Financial analysts often calculate a number of adjustments, most of which comprise analytical additions to the reported expenses of the MFI. Four groups of adjustments are common:

- subsidy adjustments, including
  - subsidized cost-of-funds adjustments
  - in-kind subsidy adjustments
- inflation adjustments
- adjustments for non-performing loans, including
  - adjustment of loan-loss reserves and provision expense
  - write-off adjustments
  - reversal of interest accrued on non-performing loans
- adjustments for foreign exchange gains/losses

Any attempt to standardize adjustment definitions must deal with two levels: (i) how each individual adjustment is calculated and (ii) which combination of individual adjustments are implied in the use of a term such as *adjusted return on assets* (AROA).

(i) There is no attempt in this document to provide a precise standard calculation method for each individual adjustment; rather, a general approach is described for each adjustment. If an analyst uses the name of one of these adjustments, then it should be calculated along the lines described here. **Any report that refers to individual adjustments should describe the calculation method actually used. The description should be especially precise when the method used differs substantially from the one described in this document.**

(ii) Adjusted returns on equity or assets (R1, R2) usually incorporate the effects of several adjustments. It is not

## Explanation

Provides a meaningful measure of efficiency for an MFI, by determining the average cost of maintaining an active borrower or client. MFIs may choose to substitute the number of active loans as the denominator to see cost per active loan outstanding. It is also useful to compare to per capita GDP to assess an MFI's efficiency in the local context. Because they count clients rather than amounts, these indicators have the advantage of not prejudicing MFIs which offer smaller loans and savings accounts.

Expense ratios can be created for nearly any expense account on the income statement. The purpose is to allow an MFI or analyst to track the growth or decline of a particular expense over time or across a group.

practical to define a standard package of adjustments that will be implied any time these general indicators are used. Different analysts will use different adjustments for their own equally valid purposes in arriving at AROA and AROE.<sup>2</sup> In view of this, **whenever a report refers to AROA or AROE, there should be a precise indication of which individual adjustments are included in the analysis underlying that indicator.**

## Subsidy Adjustments

Subsidy adjustments serve two purposes. First, MFIs vary widely in the amount of subsidy they receive. Some MFIs get no subsidy at all. Thus, adjustments that offset subsidies will allow for a more meaningful comparison of performance among MFIs with differing amounts of subsidy. Second, the industry has accepted that, in the long term, MFIs should be able to operate without subsidies, relying instead on commercial sources and private investment at market rates. An adjustment that cancels out the effects of present subsidies will reveal how close the MFI is to having a business that could expand viably in a subsidy-free commercial environment.

Subsidy adjustments are not included in an MFI's normal financial statements; rather, they are hypothetical revenues or expenses that managers and analysts use when calculating certain indicators and ratios. Two types of subsidy adjustments are common among MFIs.

Note that no subsidiary adjustment is needed with respect to donation revenue. Such revenue is excluded from the definition of net operating income (III), which is the variable used in calculating measures of sustainability/profitability (R1–R5).

<sup>2</sup> For instance, a database like the *MicroBanking Bulletin*, whose purpose is comparison and benchmarking, might wish to adjust the loan-loss reserves of all MFIs in line with a standard policy. On the other hand, an analyst of an individual MFI might feel that its reserve policy, while “non-standard,” is perfectly appropriate, and thus that no adjustment of its reserve is necessary.

Code	Name	Explanation
A1	Subsidized cost-of-funds adjustment	<p>This adjustment looks at the difference between an MFI's financial expense and the financial expense it would pay if all of its funding liabilities were priced at market rates. One common way of doing this is to multiply the MFI's average funding liabilities by some shadow price—a market interest rate—and then subtract the actual financial expense. The difference is the amount of the adjustment and is treated as an expense.<sup>3</sup></p> <p>No single shadow rate is appropriate in all circumstances. Many analysts use as a shadow price the rate that local banks are paying on 90-day time deposits.<sup>4</sup></p> <p>In theory, the cost of attracting commercial equity capital should also be factored in, as private investors are motivated by retained earnings growth and dividends. In practice, however, analysts do not shadow price equity in this way; rather, they subject the MFI's equity to an inflation adjustment (A3).</p>
A2	In-kind subsidy adjustment	<p>Donors often give MFIs not only funds, but also goods and services at no cost or at below-market cost. Common examples of these in-kind subsidies are computers, consulting services, free office space, and free services of a manager. The in-kind subsidy adjustment is the difference between what an MFI is actually paying for the good or service and what it would have to pay for the same good or service on the open market.</p> <p>If a donor agreement requires an MFI to accept a good or service that it would not have purchased otherwise, the item is generally not treated as an in-kind subsidy in calculating this adjustment. Some young MFIs receive free services of a highly paid manager, often a foreign national. If the analyst believes that the MFI will soon be able to use a less expensive manager, then they might make an adjustment, not for the cost of the donated manager, but rather for the expected cost of a local manager.</p>

<sup>3</sup> Some analysts apply a cost-of-funds adjustment only to loans whose interest rate is more than some fixed percentage (e.g., 2–5%) below the commercial shadow rate.

<sup>4</sup> International Monetary Fund, *International Financial Statistics*, line 160.

## Inflation Adjustment

In the private sector, equity is generally considered to be the most expensive form of financing; investors require a greater return than lenders because they are taking a greater risk. In contrast, many MFIs do not have to pay out anything for their equity funding. (Exceptions include financial cooperatives and corporations with commercially motivated investors.) The rationale behind the inflation adjustment is that an MFI should, at a minimum, preserve the value of its equity against erosion due to inflation. Inflation produces a loss in the real value (purchasing power) of equity. The inflation adjustment recognizes and quantifies that loss.

Unlike subsidy adjustments, recording the inflation adjustment in the MFI's normal financial statement is common in many parts of the world. Section 29 of the *International Accounting Standards*<sup>5</sup> mandates the use of inflation-adjusted accounting in high-inflation countries. In low-inflation countries, an inflation adjustment is seldom incorporated in the financial statements of businesses.

Code	Name	Explanation
A3	Inflation adjustment	<p>There are many different methods of inflation adjustment. All methods involve some version of the same core approach: net fixed assets (B7) are subtracted from equity (B17), and the result is multiplied by the inflation rate for the period. The same result is produced by subtracting liabilities (denominated in currency) from assets (denominated in currency), producing net financial assets, which is then multiplied by the inflation rate. The amount of a period's inflation adjustment is treated as if it were an increase in the MFI's financial expense. If inflation adjustments are incorporated in the MFI's financial statements and carried forward from year to year, then in addition to creating an expense on the income statement, it will also generate a reserve in the balance-sheet equity account. This reserve will reflect the amount of the MFI's cumulative retained earnings that have been consumed by the effects of inflation.</p> <p>Whenever any indicator is used that is supposed to incorporate an "inflation adjustment," the adjustment should either (a) be based on a nationally approved inflation-based accounting system, or (b) use an analytical adjustment of equity similar to that described above. The loss in real equity value due to inflation is not adequately captured by restating financial statements in terms of a constant local currency or low-inflation hard currency.</p>

<sup>5</sup> *International Accounting Standards 2002* (London: International Accounting Standards Board, 2002).

## Adjustments for Non-performing Loans

An MFI's treatment of non-performing (that is, delinquent) loans can have a large impact on how sound its financial results appear. MFIs differ widely in their accounting policies with respect to loan-loss provision expense, write-offs, and accrual of interest income. Analysts adjust these accounts in order to compare MFIs on a consistent basis and/or to eliminate a material distortion in financial statements resulting from unrealistic accounting treatment of the non-performing portfolio. There are three main types of portfolio adjustment.

Code	Name	Explanation
A4	Adjustment to loan-loss expense	<p>An analyst will often adjust an MFI's loan-loss allowance (B5) to bring it into line with standard allowance and provision accounting policies, or to a level that is appropriate for the risk of the individual MFI. In order to adjust the reserve on the balance sheet, the analyst will have to make an adjustment of the loan-loss provision expense (I6) that flows into that reserve.</p> <p>The practice of some analysts (mentioned here only as an example) is to adjust reserves so that they cover 50% of the outstanding balance for loans 91–180 days late, and 100 percent for loans over 180 days late. However, there is no standard "best-practice" provision policy.</p>
A5	Write-off adjustment	<p>Analysts will often adjust an MFI's write-offs to bring them into line with a standardized accounting policy. One practice (mentioned here only as an example) is to treat the portfolio at risk &gt; 180 days as if it had been written off. On the balance sheet, both the gross loan portfolio and the loan-loss allowance are reduced by the amount written off.</p>
A6	Reversal of interest accruals	<p>MFIs that recognize interest and fee revenue from the loan portfolio on an accrual basis record interest when it is earned, rather than when a cash payment is received from the borrower. If a loan falls delinquent, it is appropriate at some point to stop accruing more interest income on the loan and to reverse previously accrued income.</p> <p>Many analysts will reverse all revenue that has been accrued on loans that are presently more than 30 days late, including revenue that has been accrued for loans that have been written off, if an MFI has not already done so.<sup>6</sup></p>

<sup>6</sup> Some analysts use beginning-of-period values for equity and fixed assets, while others argue for the use of period averages.

## Foreign Exchange Adjustments

A final category of adjustments relates to MFIs which have assets or liabilities denominated in a foreign (hard) currency, but do their accounting in local currency. When the exchange rate between the two currencies changes, the local-currency value of the asset or liability changes and results in a gain or loss. Treatment of such gains or losses is normally dictated by local accounting standards.

There is still debate as to how net foreign currency gains or losses should be recorded. Some argue that (i) such a gain or loss should only be recorded on the income statement when the asset is sold or the liability is liquidated, or that (ii) such gains and losses should be considered extraordinary and, therefore, non-operating. Some regulations require that foreign exchange gains and losses only be recorded on the balance sheet as an increase/decrease to the relevant asset and liability accounts, offset by an equal increase/decrease to equity. If an MFI's financial statements have not treated foreign exchange gains/losses appropriately, an analyst may need to make an adjustment.

**TABLE Financial Statement Adjustments and Their Effects**

Adjustment	Effect on Financial Statements
Subsidized cost-of-funds adjustment (A1)	Increases financial expense to the extent that an MFI's liabilities carry a below-market rate of interest; decreases net income
In-kind subsidy adjustment (A2)	Increases administrative expense to the extent that an MFI is receiving subsidized goods or services; decreases net income
Inflation adjustment (A3)	Increases financial expense; may generate a reserve in the balance-sheet equity account, reflecting that portion of an MFI's retained earnings that has been consumed by the effects of inflation; decreases profitability and "real" retained earnings
Loan-loss allowance and provision expense adjustment (A4)	Usually increases loan-loss provision expense on income statement and loan-loss allowance on balance sheet
Write-off adjustment (A5)	On the balance sheet, reduces gross loan portfolio and loan-loss allowance by an equal
Reversal of interest income accrued on non-performing (A6)	Reduces interest income and net profit on the income statement, and equity on the balance sheet

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### Type of Institution Most Affected by Adjustment

MFIs with heavily subsidized loans

MFIs using goods or services for which they are not paying market-based costs

MFIs funded more by equity than by liabilities will be hardest hit, especially in high-inflation countries

MFIs that have unrealistic loan-loss provisioning policies

MFIs that do not write off non-performing loans aggressively enough amount, so that neither net loan portfolio nor the income statement is affected; improves (lowers) portfolio-at-risk ratio

MFIs that continue accruing income on delinquent loans past the point where collection loans becomes unlikely, or that fail to reverse previously accrued income on such loans

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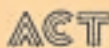
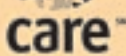
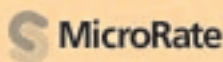








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