# Chapter III
# RESEARCH DESIGN AND METHODOLOGY

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## 3.1 Statement of the problem

The financial sustainability of a Microfinance Institutions (MFIs) is defined as its capacity to generate income from its operations to cover all its expenses and a margin to support its growth. The cost structure which includes the operating expense, financial expense and loan loss expense reflects the financial self-sufficiency of the institutions, which is a necessary condition for institutional sustainability. Ideally, the interest (the main source of income) of an MFI should be determined by the cost structure of it. However, in practice it is seen in Indian microfinance industry that the interest is fixed without taking the cost as the basis. The industry average generally becomes the basis of the interest. The emergence of MFIs leading competitions has now made the industry think about a proper cost analysis to reduce the interest to a competitive level, keeping financial sustainability in mind. The microfinance in Assam, India, is still at an early stage of development, facing severe constraints, including limited funding, lack of experience, inappropriate legal forms, and high operational costs. In addition, the new guidelines issued by the Reserve Bank of India (RBI), curtailed the profitability of the MFIs and forced them to reduce their costs at various fronts. Under such conditions in-depth studies on the issues of cost and factors which effect costs are important. Hence, identifying the cost factors and quantifying them will help the MFIs in reducing their cost. The study also provides insight into the cost borne by the borrowers in procurement of credit from MFIs in Assam.

### 3.2 Aim of the study

Several studies have been conducted to identify the factors that effect financial sustainability of the MFIs but without considering both supply and demand side of the MFIs together. Further, the amount of research on the microfinance sector in the NER is limited, especially in the context of financial performance and cost analysis of the MFIs, which reflects the long term sustainability of the sector. This thesis aims to fill up the gap in the microfinance literature on sustainability of microfinance institutions in Assam. Key contributions made by this study are: First, it reveals the relationship between financial sustainability and various factors. Second, it identifies the factors which effect the operating cost of the MFIs at branch level. Third, the study provides details about the cost of borrowing for the microfinance borrowers in Assam. Hence, the thesis provides detailed insight into the cost structure of the MFIs, the interest rate and the cost borne by the borrowers/clients of the MFIs in Assam. The information may help the MFIs in Assam to reduce their cost.

## 3.3 Objectives of the study

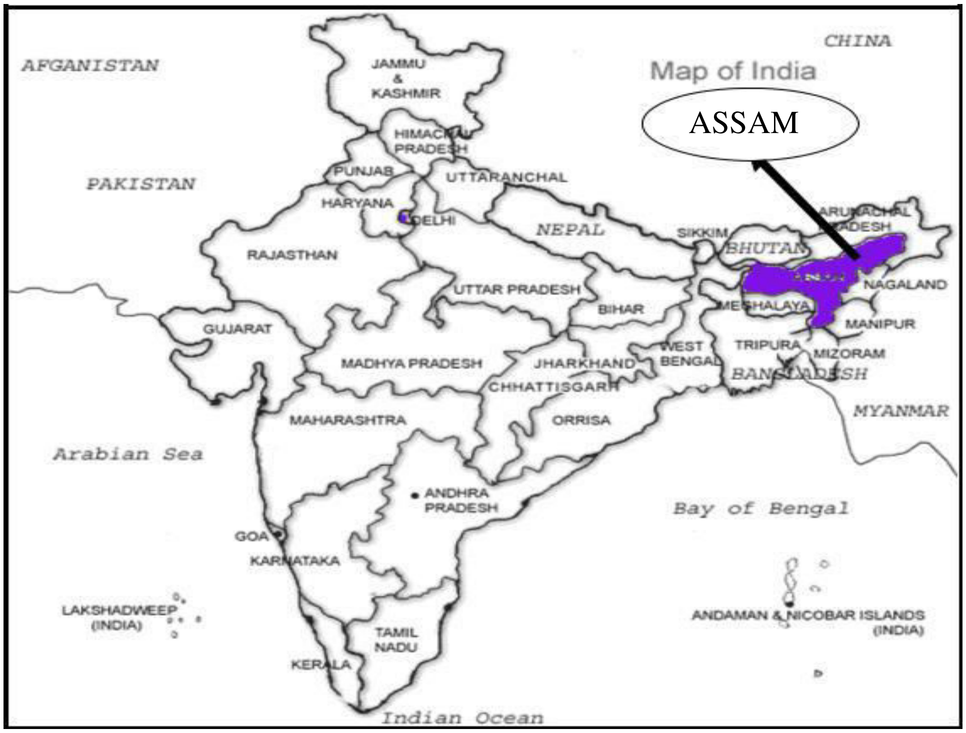
The objectives of the study are

I. To identify and analyze the cost structure of the selected MFIs operating in Assam.
II. To examine the effect of various factors on the cost of the MFIs.
III. To study the cost of borrowing from microfinance clients' perspective.
IV. To derive strategies for financial sustainability of MFIs through improving cost management practices.

## 3.4 Period of Study

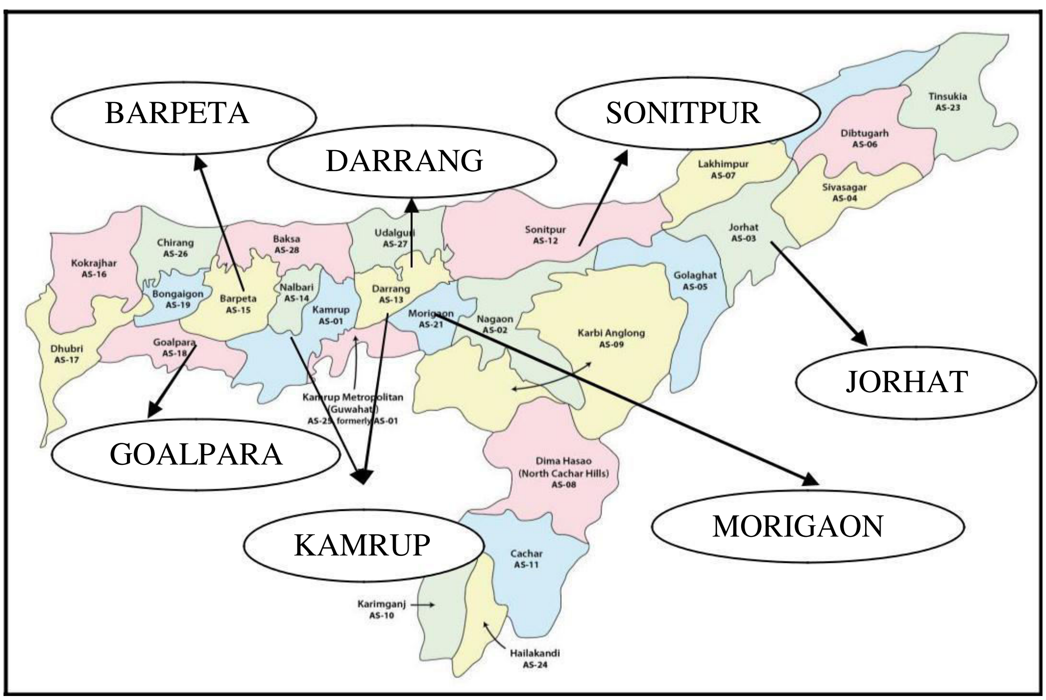
Financial data from the MFIs was collected for the period of five financial years (2009-10 to 2013-14). Field data were collected during 2013 to 2014. Financial year in India starts from April 1 ends on March 31$^{st}$ of the subsequent year.

**Figure 3.1 Location of Assam in India**




Source: http://www.mapsofindia.com/maps/india/india-political-map.htm

**Figure 3.2 Map of Assam showing study area**

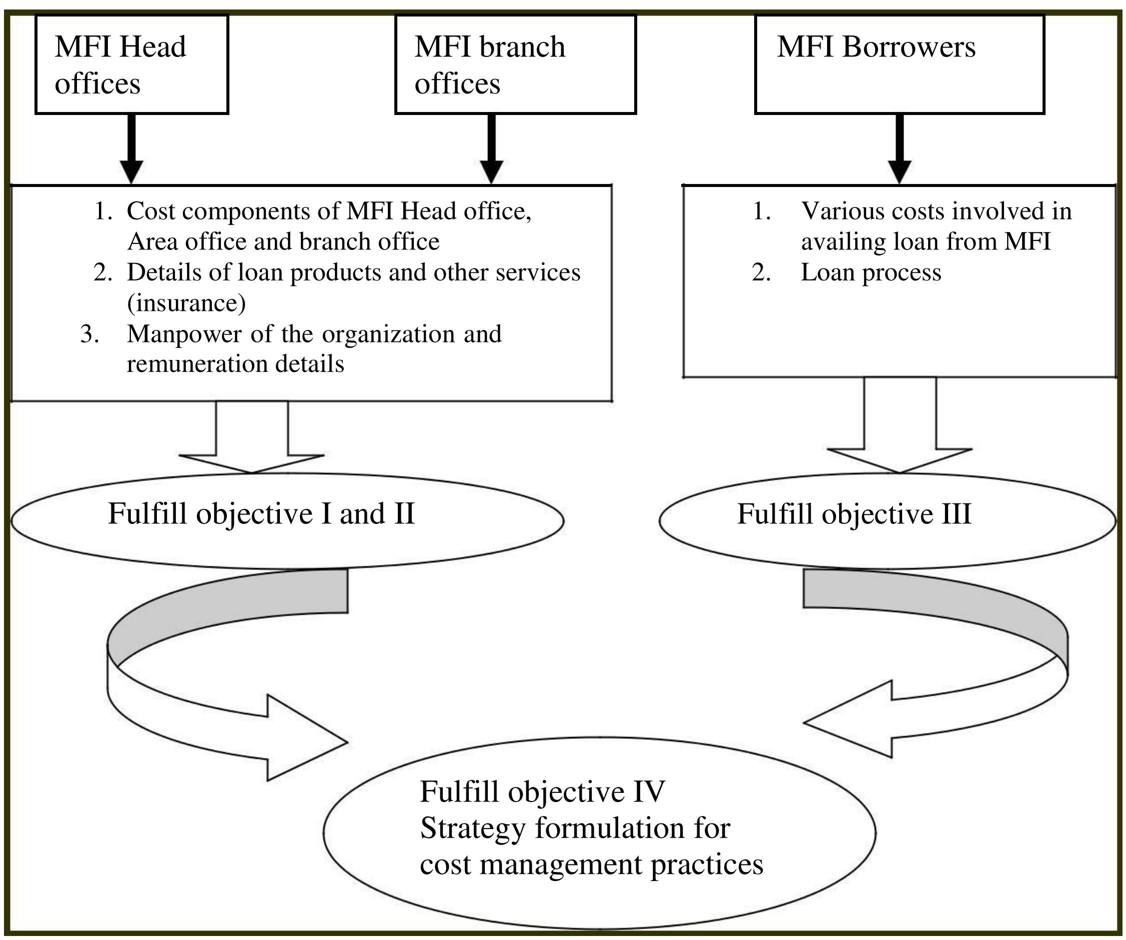



Source: http://online.assam.gov.in/assammaps

## 3.5 Research design

The nature of present research work is empirical. The study in this thesis covers both supply side and demand side of the leading MFIs in Assam. To collect data from supply side perspective, the eight selected MFI head offices and 64 branch managers, 81 field officers were interviewed. The demand side data were collected from 571 microfinance borrowers covering seven districts of Assam. The survey included two research instruments, viz a questionnaire and an interview schedule. The data from MFI branch offices were collected using a questionnaire (see Annexure I). Second, was an interview schedule (Annexure II) prepared for the borrowers of the respective MFI branch offices fulfilling objective III.

**Figure 3.3 Diagrammatic representation of the research design**



## 3.6 Source of data collection

Data for the study was collected from both primary and secondary source-

**3.6.1 Primary source**: Source of primary data consists of information collected from MFI staff and micro finance borrowers. Apart from this, data from audited balance sheets, which were published by the sample MFIs were collected.

**3.6.2 Secondary sources: S**econdary data were also collected and utilized in the study with an idea to understand the global and regional cost structure scenario of microfinance institutions. The details of secondary data are provided below:

1. Published reports of MFIs and MIX (Market Information Exchange), the Reserve Bank of India, Microfinance State of the Sector report, M-CRIL analytics reports, Sa-dhan reports on MFIs, CGAP papers and other research papers.
2. Case studies on best practices on cost structures, operations and management of MFIs.

## 3.7 Research instrument

Two research instruments were used to gather the primary data:

i. Data from MFI officers were collected through a questionnaire consists of 13 questions to understand the details of loan products and other services extended by the branch offices. In addition, information about the manpower of the organization and remuneration details, daily schedule of the branch officer and credit officer, cost and revenue components of the MFI branch office were also collected.

ii. An interview schedule was administered to the MFI borrowers to gather information about demographic profile and group details of the borrowers, their financial cost (which includes Interest, fees, commissions, insurance fund contributions etc) while availing loan from MFIs, cost of initial visit to MFI branch, transportation cost, cost of documents required to avail loan, cost of attendance at meetings and the corresponding absence from the business, group guarantees responsibilities etc.

## 3.8 Sampling design

The data for the study was collected from eight MFIs, 61 branch offices and 571 borrowers of the select MFIs. The MFIs were selected based on some predetermined criteria mentioned in Table 3.1.

**Table 3.1 Criteria for selection of sample MFIs**

| Sl.no. | Criteria | Conditions |
|---|---|---|
| 1. | Years of operation of the MFI | More than three years of microfinance operations |
| 2. | Lending model | JLG, SHG, Grameen, Individual |
| 3. | Legal Form of the institution | For-Profit-NBFCs and NGO-MFI |
| 4. | Client outreach (number of active clients as per data in 2010) | More than 10,000 borrowers for NBFCs and more than 2000 borrowers for NGO-MFIs in 2010 |

The eight MFIs selected for the study consist of three NBFCs and five NGO-MFIs (Table 3.2). Detailed information about the MFIs is given in Annexure III.

**Table 3.2: List of selected MFIs**

| Category | Name of the MFI |
|---|---|
| **NBFCs** | RGVN (NE) Microfinance Private limited |
| | ASOMI Finance Private Limited |
| | UNACCO Financial Services Private Limited |
| **NGO-MFIs** | Nightingle Charitable Society |
| | Prochesta Thrift and Credit cooperative Society |
| | Ajaghar Social Circle |
| | Morigaon Zila Gramya Puthibharal Santha |
| | SATRA (Social Action for Appropriate Transformation and Advancement in Rural Areas) |

***Selection of branch offices*:** The study covered 61 branch offices of the selected MFIs, except MZGPS which had no branch office (five collection centers were visited). The branch offices were selected based on their location-urban and rural location. Table 3.3 provides detailed list of branch offices visited in each district.

**Table 3.3: List of MFI branch offices visited for data collection**

| Sl.no. | Name of the MFI | District | Name of the Branch office |
|---|---|---|---|
| 1. | RGVN (NE) MFL | Kamrup | Beltola, Sixmile, Zoo Road, Ujan Bazar, Bamunimaidan, Lokhra, Birubari, Narengi, Borjhar, Dhupguri, Bijoynagar |
| | | Sonitpur | Tezpur, Balipara, Dhekiajuli and Jamugurihat |
| | | Jorhat | Jorhat, Teok, Titabor, Lichubari |
| | | Barpeta | Barpeta Road, Barpeta Town, Pathsala |
| 2. | AFPL | Kamrup | Dharapur, Dhupguri, Bijoynagar, Sonapur, Khetri |
| | | Sonitpur | Tezpur, Mission Chariali, Jamugurihat, Dhekiajuli |
| | | Jorhat | Jorhat, Teok, Titabor, Chariabahi |
| | | Barpeta | Barpeta Road, Sorbhog, Patacharkuchi, Baniakuchi |
| 3. | UFSPL | Kamrup | Beltola, Kalaphahar, Noonmati, Maligoan, Tezpur |
| | | Jorhat | Jorhat |
| 4. | NCS | Kamrup | Kalaphahar, Chandmari, Beltola, Maligaon |
| | | Barpeta | Howli |
| 5. | Prochesta | Kamrup | Guwahati, Rangia |
| | | Sonitpur | Goramari |
| 6. | SATRA | Darrang | Sipajhar, Dumunichowk, Buraha, Mongoldoi |
| 7. | ASC | Goalpara | Agia, Darrangiri, Goalpara |
| 8. | MZGPS | Morigaon | Morigoan (5 collection centers were visited) |

Note: For 1, 2, 3, 4, 5 branch offices in Kamrup, Jorhat, Barpeta and Sonitpur districts were visited. 6 and 7 is not having branch offices in Kamrup, Jorhat, Barpeta and Sonitpur districts.

***Selection of borrowers:*** As the population is significantly large, a sample size of 571 microfinance borrowers of the sample MFIs was selected on non-probalistic judgment sampling basis for interview. Judgment of selection was that one has to be in the current list of borrowers since last one year with regular repayment record. From each MFI branch offices eight borrowers were randomly selected subject to a minimum total of 40 respondents from a selected MFI. MFI wise list of number of borrowers' interviewed is given in Table 3.4.

**Table 3.4: Number of borrowers interviewed**

| Name of the MFI | No. of branch offices visited | Estimated borrowers to be interviewed | Total borrowers interviewed |
|---|---:|---:|---:|
| RGVN(NE) MFL | 22 | 176 | 185 |
| AFPL | 17 | 136 | 136 |
| UFSPL* | 6 | 48 | 42* |
| NCS | 5 | 40 | 42 |
| Prochesta | 3 | 24 | 40 |
| ASC | 4 | 32 | 46 |
| SATRA | 4 | 32 | 40 |
| MZGPS | 5 | 40 | 40 |
| **Total** | **66** | **528** | **571** |

Note: *Invalid responses were cancelled. Hence, the number of respondents interviewed is below the estimated size.

### 3.9 Statistical tool

Statistical tools like - Correlation and regression analysis was used to examine the effect of different variables on financial sustainability of the selected MFIs in Assam. Technique of Order Preference by Similarity to Ideal Solution (TOPSIS) is used, to build a sustainability score of the selected MFIs by aggregating the variables used in regression analysis.

### 3.10 Variables

The variables reflecting operational profile of the MFIs are included in Table 3.5.

**Table 3.5: Variables indicating operational profile of the MFIs**

| Sl.No. | List of variable | Details |
|---|---|---|
| 1. | Number of active clients | The numbers of individuals or entities who currently have an outstanding loan balance with the MFI or are primarily responsible for repaying any portion of the Loan Portfolio, Gross. (MIX) |
| 2 | Gross loan portfolio | The outstanding principal balance of all of the MFI's outstanding loans including current, delinquent and restructured loans, but not loans that have been written off. |
| 3 | Average loan size | The average gross loan portfolio divided by the number of active borrowers. |
| 4 | Number of employees | Number of personnel/staffs which is defined as the number of individuals actively employed by the MFI (Haq. et al., 2010). |
| 5 | Mode of delivery | Delivery models can be divided into two broad categories: group models and individual models. Group models include Self-Help Groups (SHG), the Grameen model and joint-liability groups (JLG) (Crombrugghe, et al.,2008) |
| 6 | Age of the organization | Operational age of the organisation |
| 7. | Source of fund | Source of fund includes liabilities and net own fund. Liabilities include current liabilities and long term liabilities. Net own fund or net worth of an MFI includes equity/corpus/capital and retained earnings. |
| 8. | Assets of the MFIs | Assets represent what is owned by the organisation or owed to it. Assets are divided into two categories, namely (1) Current, and (2) Long-Term. (Sa-dhan 39) |

The variables used indicating cost of the MFIs and cost the borrowers are included in Table 3.6.

**Table 3.6: Cost components of the MFIs**

| **Sl.no.** | **Category** | **Variables** |
|---|---|---|
| 1 | Cost components of MFIs * | 1. Operating expense<br>(a) Personnel cost<br>(b) Administrative costs such as rent, office materials and supplies, publications and publicity, transportation, travel and training for overhead staff, telephone bill, postage, insurance, utilities, repairs and maintenance, legal, audit and consultant fee, bank charges, taxes.<br><br>***Total Operating Expense=(a+b)*** |
| 2 | | 2. Financial expense<br>The cost incurred in borrowing or raising funds for on-lending to microfinance clients. this includes<br>(a) Interest on debts<br>(b) Interest paid on deposits<br><br>***Total Financial Expense=(a+b)*** |
| 3 | | 3. Loan loss provision<br>A provision set aside to cover potential losses. Microfinance organizations often establish a loan loss reserve equal to 2-5 percent of the value of their active portfolios (ACCION) |
| 4 | Total cost | Total cost is the summation of operating expense, financial expense and loan loss provision.<br><br>***Total cost = operating expense+ financial expense +loan loss provision*** |
| 5 | Income for the MFIs | Income from loan portfolio (which includes interest earned, fees and commission (including late fees and penalties) on the gross loan portfolio) and income from investments (which includes revenue from interest, dividends or other payments generated by financial assets other than the gross loan portfolio, such as interest-bearing deposits, certificates of |

<table>
<tr><td></td><td></td><td>deposits and treasury obligations). It is calculated as follows<br><br>INCOME<br>1. Income from loan Portfolio<br>(a) Interest on Current and Past Due Loans<br>(b) Loan Fees and Service Charges<br>(c) Late Fees on Loans<br>Total Income from Loan Portfolio (a+b+c)<br>2.Investment Income (Interest on Investment)<br><br>Total operating income (1+2)</td></tr>
<tr><td>6</td><td rowspan="2">Cost components consider for the borrowers**</td><td>Financial costs<br>i. Financial cost includes Interest, fees, commissions, insurance fund contributions, savings requirements, etc.</td></tr>
<tr><td>7</td><td>Transactions costs<br>ii. Cost of initial visit to bank branch which includes opportunity cost of one day wages, transportation cost of the visit,<br>iii. Cost of document collection,<br>iv. Cost of attendance at meetings and the corresponding absence from the business, group guarantees responsibilities etc.</td></tr>
</table>

Note: *Variables are adopted from SEEP Network Calmeadow (1995), Ledgerwood, Joanna (1998), Sa-Dhan (2004), Shankar (2006), SIDBI (2011), Khan and Astha (2012), Hosseini, et al. (2012).
** Variables are adopted from Karduck and Siebel (2004), Hosseni, et al., (2012); Swamy and Tulasimala (2011)

Variables having impact on the financial sustainability of the MFIs are identified and used in the current study as mentioned in Table 3.7.

**Table 3.7: Performance indicators of the MFIs**

| | **Indicator** | **Definition** |
|---|---|---|
| **Sustainability** | Operational Self-Sufficiency (OSS) $= \frac{\text{Operating revenue}}{\text{(Financial expense revenues + Loan-loss provision expense +operating expense)}}$ | Measures how well an MFI covers its costs through operating revenues |
| **Profitability** | Return on Equity $== \frac{\text{(Net operating income – Taxes)}}{\text{Average equity}}$ | Calculates the rate of return on the average equity for the period. It is the net income earned out of average equity of MFIs held by MFIs during the given period. |
| | Return on Assets $= \frac{\text{(Net operating income – Taxes)}}{\text{Average assets}}$ | Measures how well an MFI uses its total assets to generate returns. It is the percentage net income earned out of total average asset deployed by MFIs during a given period. |
| | Yield on portfolio $= \frac{\text{Cash financial revenue from loan portfolio}}{\text{Average gross loan portfolio}}$ | Yield represents total income from microcredit operation- Interest income, processing fee/ service charge – earned out of average loan portfolio outstanding. It does not, include investment income. It is a good proxy for loan interest rate. |
| **Efficiency** | Operating Expense Ratio | This ratio is the most commonly used efficiency indicator for MFIs. It includes all administrative and personnel expense. |

| | | |
|---|---|---|
| | $= \dfrac{\text{Operating expense during period}}{\text{Average Outstanding Loan Portfolio}}$ | |
| | Cost per borrower | Ratio of Operating expense/ Average number of active borrowers |
| **Productivity** | Number of borrowers per staff | It is the ratio of number of active borrowers to number of staff. |
| | Amount of loans per staff | It is the ratio of amount of loan to number of staff. |
| **Capital Structure** | Debt to equity ratio | Debt-Equity Ratio is the proportion of total debt borrowed to the total equity held in a given point of time |
| | Capital Adequacy ratio | Capital Adequacy is the means of measuring the solvency level of MFIs which is an important indicator of risk bearing ability of the entities. It is the proportion of the capital/own fund held by an MFI against its total asset. |
| **Various expense ratios** | Total expense | (Financial Expense + Net Loan Loss Provision Expense + Operating Expense) / Average Total Assets |
| | Financial expense Ratio | Financial Expense/ Average Total Assets |
| | Loan loss expense ratio | Impairment Losses on Loans/ Average Total Assets |
| | Operating expense ratio | Operating Expense/ Average Total Assets |
| **Portfolio quality** | Portfolio at Risk Greater than 30 days $== \dfrac{\text{Portfolio at risk (X days)}}{\text{Gross loan portfolio}}$ | Unpaid Principal Balance of all loans with payments > 30 Days past due |

**Source:** Microfinance Consensus Guidelines, CGAP, (2003), MIX 2013-14 (39)

**References:**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