

# DUE DILIGENCE GUIDELINES FOR THE REVIEW OF MICROCREDIT LOAN PORTFOLIOS

## *A Tiered Approach*

Robert Peck Christen

This document is a draft that is being made available for field testing by anyone who wishes to use it. Users are encouraged to adjust it or add to it as they see fit, and to share their experiences and recommendations with the author at [r.christen@bouldermicrofinance.org](mailto:r.christen@bouldermicrofinance.org) with "Portfolio Review Tool" in the subject line.

The loan portfolio review here was developed by Robert Christen, with assistance from Patricia Mwangi, both of CGAP. Lynn Curran and Deborah Drake, ACCIÓN; Todd Farrington, MicroRate; and Mark Schreiner, Washington University, contributed to earlier versions of a related document.

### ABSTRACT

MFI's, as presently constituted, can be quite risky propositions for investors. And, external audits, ratings, and evaluations generally fail to accurately quantify the primary risk facing those investors—that of misrepresentation of microcredit portfolio quality. The Loan Portfolio Review Tool has been designed to evaluate the accuracy of reported levels of repayment and the extent to which the MFI employs sound loan management practices. The tool has been designed around three, gradually deepening, levels of review that provide the user with ever-increasing degrees of certainty about the underlying quality of loan portfolios, regardless of how they are being reported. As such, it is flexible enough for a variety of uses and different requirements for confidence levels about reported loan portfolio quality. **The portfolio review is a unique, powerful, and relevant tool designed for use by the lay-person, and does not require specialized audit or financial analysis skills.** Portfolio reviews are not only critical for management, but also for regulators and the growing number of commercial investors in microfinance.

- **Tier I** is a two-day field review by one analyst who meets with senior management at the head office of an MFI to assess credit policies and general documentation. This level is recommended for donor agency staff who are considering making a small grant.
- **Tier II** is a two to five-day field review by one or two analysts, conducted at the branch level. It entails a qualitative assessment of credit policies, procedures, and practices, and a verification of management information system (MIS) reports. This level is recommended for appraisals, audits, and ratings related to sizeable grants or investments in an MFI.
- **Tier III** is a two to four-week review by a team of local auditors to evaluate, measure, and quantify asset quality through statistical sampling and detailed analysis. This level is recommended for equity investors and regulators concerned with the soundness of an institution.

Tiers I and II can be undertaken by staff of donor agencies, microfinance promoters, and investment funds, while Tier III is sufficiently technical that those commissioning such a review might want to contract an audit firm or other organization offering the sampling skills necessary to achieve the degree of statistical representation required. Tier III

can be undertaken by generalists, without a high level of statistical skills. It is not difficult, but the commissioner would risk the analysis not being statistically significant to the highest degree (although, in many cases, this level of sophistication may not actually be required). The appendix includes terms of reference for an audit firm that would guide them in the completion of a due-diligence exercise (all three tiers) and details the nature of the expected reports and opinions.

## INTRODUCTION

MFIs, as presently constituted, can be risky propositions for investors. And, external audits, ratings, and evaluations generally fail to identify the primary risk facing those investors—misrepresentation of microcredit portfolio quality. Microfinance networks have repeatedly discovered, too late, that one of their most important institutions has a far more serious problem with loan delinquency than previously stated. Before the crisis is brought under control, the loan-loss levels are almost universally revealed to be far greater, and go back farther, than initially presented. These incidents have cost affected institutions many millions of dollars, and in many cases, have forced donor agencies to recapitalize or shut down operations in which they have invested for many years.

Take, for example, the case of Finansol, a Colombian MFI that was widely considered to be one of the top two or three institutions in Latin America during the early 1990s. In November 1997, Finansol management received a letter from the Colombian bank superintendent's office requiring that it recapitalize a value of several million dollars. Based on the findings of a routine inspection visit, the superintendent's office reclassified as "doubtful" a far larger percent of the microfinance institution's loan portfolio than it had previously. This created a technical bankruptcy, which occurs when a bank loses enough of its capital through increased loan-loss provisioning that the ratio of its total assets to its capital deteriorates below banking standards. The only way a bank can become solvent again is for its owners to contribute more capital.

Finansol's case was highly public, but certainly not unique. Because it was a fully regulated financial institution, its problems were a matter of public record, and ACCIÓN International (its primary international donor) decided to be unusually forthcoming about Finansol's situation as it sought recapitalization funds. Ultimately, ACCIÓN produced a monograph about the Finansol crisis that offered an

unusual look into the anatomy of a management failure.

In fact, one of the best-kept secrets in the world of microcredit is that many well-known institutions have suffered a major loan portfolio crisis. This can be attested to in country after country by industry insiders with personal knowledge of leading MFIs that at times have had far greater loan delinquency and default rates than they reported publicly. This happens because almost no MFIs are subject to real oversight, such as what Finansol faced, and because virtually no MFIs are constituted as heavily leveraged financial intermediaries. Had they operated as regulated, leveraged financial intermediaries, the public probably would have seen a rash of embarrassing failures in the microcredit industry, and the industry might well not enjoy the reputation it has today.

To date, MFIs suffer from three potentially fatal weaknesses:

- **Basic governance of MFIs is weak.** Most MFIs have both social and sustainability objectives. Given that the profit motive is not predominant in most cases, boards of directors may often misinterpret or not understand the significance of early indications of poor performance and may fail to act aggressively to rein in their managers. Ultimately they probably do not have the will or the capacity to bail out a failed institution.
- **Potential exists for rapid deterioration of portfolio quality.** Although loan delinquency at well-run MFIs may be lower than at commercial banks, it can increase rapidly when management deteriorates. Management risk, as with banks, lies at the heart of deterioration in portfolio quality. In MFIs, this management risk is complicated by weak governance structures that often fail to correct missteps.
- **Most microloans are unsecured.** Most MFIs do not require formal collateral, and instead base loan decisions on character, group solidarity, and past repayment history. Collateral, when pledged, may not be legally registered or may have little liquidation value. Thus, when loan portfolio quality suffers substantially, MFIs face far greater loan losses relative to the amounts outstanding than intermediaries that operate other types of portfolios secured with collateral.

But, the purpose of this document is not to be an *exposé* of loan portfolio crises. After all, microfinance is an infant industry and, as such, is certainly entitled to make mistakes. Rather, the aim is to provide

banking superintendents, donor agencies, and other potential investors with a tool that facilitates a more accurate and far deeper understanding of the underlying quality of an MFI's loan portfolio than current methods offer. This seems particularly important today given the rush to incorporate microcredit institutions into the regulated financial sectors of many countries so they can eventually access a variety of commercial funds and become highly leveraged.

Do these tools already exist? The microfinance industry has placed great emphasis on generating appraisal and evaluation tools, audit and financial disclosure guidelines, and performance standards. There are assessment tools, such as ACCIÓN International's CAMEL, World Council of Credit Union's PEARLS, and CGAP's Technical Tool for appraising MFIs; assessments by ratings agencies (MicroRate, M-CRIL, Microfinanza, CRISIL, and PlaNet Finance); credit ratings by credit-rating agencies (Standard and Poor's, Fitch, Apoyo, Class, Pacific Credit Rating, and Equilibrium); and guides for analysts including the Technical Guide by Inter-American Development Bank, CGAP's external audit manual, and the *Disclosure Guidelines for Financial Reporting of MFIs*. There are also benchmarking projects, such as the *MicroBanking Bulletin* and MIX Market. In addition, there are a whole host of local or national efforts to develop many of the same tools and capacities to support network reporting requirements, apex investment decisions, and banking superintendents' inspection visits.

These information-gathering tools are quite effective at assessing an MFI's overall financial performance. Yet, portfolio quality underlies MFI financial results. Investors should be most certain of loan portfolio quality. Bad loans potentially produce the highest risk to expected returns. Although both audit and appraisal methods address the issue of reported portfolio quality, neither **effectively** test the veracity of the underlying information. Appraisal work plans focus on loan portfolio administration, without delving much into a detailed reconciliation of loan file documentation, accounting records, and loan tracking system reports. Most often, appraisals assume that the information that is reported is correct. Even when they know it is not fully accurate, they rely on the fact that the external audit has apparently "passed" these differences and not considered them material.

External audits are supposed to verify that the balances of key portfolio accounts are accurate, but the due diligence methods they employ are so flawed that they actually can be dangerous and counterproductive. In a typical audit, letters are sent out to a random sample of loan clients asking them to verify

the loan they received, their out-standing balance, their latest payment, and any other pertinent information. Clients are asked to send the letter back to the auditor if they disagree with any of the information provided in the letter. The auditor assumes that if no letters come back, there are no disagreements.

However, many letters probably do not reach the intended clients given the unpredictability of mail delivery in most developing countries. Second, many clients may not be fully literate or know exactly what their outstanding balance is (even if they know how many payments they have left and the value of these payments). Third, they do not have much incentive for sending the letter back even if they have a disagreement. They may need the credit and do not want to make trouble. Fourth, even if letters are mailed back, they may not actually arrive. In all, it is a process that proves wholly inadequate in a microfinance setting. While an occasional audit firm may do a more complete testing of the loan accounts balances, the majority may not even be doing the minimal and inadequate testing suggested above.

More importantly, neither of these classes of external review effectively address the key questions posed by the **due diligence** process.

1. Does the portfolio, as it is reported by the financial institution, reflect its true value?
2. Have adequate provisions been made for possible losses?
3. Do management and staff have the proper skills to originate, monitor, and collect loans?

While external audits should speak to these questions, their work-plans seldom include the types of techniques that would provide effective answers. Appraisers, on the other hand, tend to rely on the auditors for the verification work involved in questions 1 and 2, and focus their own attention on question 3. Everyone depends on the assumed veracity of an MFI's management information system. This is not good enough for those donors, investors, and bank supervisors who have to know that an MFI's **stated** portfolio quality can reasonably be assumed to be its **actual** loan portfolio quality.

## **THE DUE DILIGENCE PROCESS**

By definition, "due diligence" is the process of investigation, performed by or on behalf of investors, into the details of a potential investment, including an examination of operations and management and the verification of material facts. The information sought and the depth of the investigation will depend upon

the type of transaction involved. For example, an investor considering the takeover of a large, well-established and profitable company will search out different information than the investor considering a significant but relatively small investment in a start-up company.

In the commercial world, a loan portfolio due diligence typically consists of the verification of the portfolio information provided by management. It typically implies the review of the credit policies and procedures, specific-ally credit risk analysis and management, the credit approval process, management's approach to past-due portfolio and restructurings, loan-loss reserves, write-offs, and guarantees. In addition, portfolio trends are analyzed by loan type (commercial, consumer, mortgage), currency, guarantee, days past-due, restructured or refinanced portfolio, losses (including any trends related to when losses might occur in the life of the loan), and the composition of loan-loss reserves. Last, traditional due diligence of a loan portfolio takes the portfolio concentration into consideration, with a detailed review of: the institution's largest loans, largest related-party loans, largest delinquent loans, largest restructured loans, with their risk classifications, as well as concentrations by geographic area, industry, sector, and other characteristics.

When conducting the due diligence of a microloan portfolio, it is important to recognize that microlending carries unique characteristics which make the portfolio risk distinct from that of a traditional financial institution. Given the unique features and risks of microlending, it is not (yet) possible or recommended that traditional due-diligence guidelines be strictly followed. There are unique conditions that affect the design of due-diligence procedures in microlending:

- Most MFIs do not design and maintain highly effective and accurate portfolio information and management information systems. Frequently information on specific transactions cannot be verified subsequent to a loan being paid off, as these are often erased from the systems.
- Inappropriate management practices—such as refinancing, re-aging, giving multiple loans to the same borrower, accepting payments in kind, and other techniques that are used to artificially reduce loan delinquency levels—can be quite common and are rarely tracked in the MIS.
- Due to the desire to minimize the processing costs of microloans and the nature of the clients themselves, most MFIs have little back-up documentation on loan disbursements.

- Decentralization, which is a necessary feature of good microlending, may increase the risk of error or fraud in transferring information between branches and headquarters. But more importantly, relatively few staff members, often just the loan officers and their immediate supervisors, are involved in approving, disbursing, monitoring, and collecting each loan.

While many of these issues could be addressed through an MIS audit and tightening up the procedures employed in a normal year-end external financial statements audit, better audit procedures will not generally identify inappropriate loan administration practices especially where loan administration procedures are not documented. In given situations, and depending on the interests of the parties involved, it may simply be easier to undertake a separate loan portfolio due diligence exercise. To address these issues, a specialized due diligence tool for microloan portfolios should be able to do the following:

1. Verify that the stated information relating to repayment is consistently reported in the accounting and loan tracking systems, and that they are accurate.
2. Verify that techniques that artificially reduce loan delinquency levels are not being used or, if they are being used, that they are being adequately recorded.
3. Verify that an adequate policy exists for loan provisioning and that it is being correctly applied.
4. Verify that adequate measures for writing off of bad loans are in place, as well as efforts to continue to recover them within reasonable limits.
5. Verify that adequate measures are in place to prevent wholesale fraud from taking root, particularly in terms of practices, such as generating phantom loans, bribes and kick-backs, and stealing cash payments.
6. Verify that the MFI is not engaging in loan management practices that, no matter what technology it employs, will lead in the relatively short term to dramatic increases in loan delinquency. These include such things as:
  - rapidly increasing loan and payment amounts on renewals;
  - lax follow-up procedures on late payments;
  - changing key loan policy criteria without due consideration (numbers of group

members, relatedness of group members, type of client, size of client); and

- failure to implement **post disbursement** controls on operations.

The process of the due diligence of the loan portfolio and the degree of the due diligence to be undertaken depend on the answer to one overall question: **What do you absolutely need to learn through the due diligence and how certain do you need to be about your findings?** Important in the consideration of this question is the degree of information that the institution is capable of producing, as well as the amount of resources the investor or banking superintendent is able to devote to the due diligence process.

The following lays out a three-tiered approach for discovering, with varying degrees of precision and certainty, how well an MFI's loan portfolio is performing. The procedures and levels of staffing vary per tier, and the tiers build on each other (i.e., the due diligence process followed in Tier I is also the beginning stages of the due diligence process followed in Tier II, and so on). A due diligence process, which incorporates all tiers, offers the greatest precision and highest degree of certainty on the actual performance of the loan portfolio.

The three-tier due diligence process is a gradually deepening review of lending policies, loan administration, and credit risk control procedures. These policies and procedures can be broadly grouped as issues related to accounting and issues related credit policy:

**Tier I:** A two-day review of self-reported portfolio and financial information at the head office of an MFI, discussions with key managers, and review of credit policies and general documentation

**Tier II:** A multiple-day field visit by one or two analysts to a number of MFI branches to carry out a qualitative assessment of the extent to which MIS reports mirror the reality of repayment in the field office; the appropriate-ness of credit policy and procedures and the extent to which loan officers abide by these policies; the existence of practices that tend to generate increased and unmeasured credit risk, such as re-aging, refinancing, and granting parallel loans; and overall impressions about the quality of credit management at the MFI

**Tier III:** A two or three-week review by a team of local auditors who will evaluate asset quality on the basis of a review of information from loan files, accounting files, and the loan tracking MIS, selected through a process of statistical sampling, that will allow them to make inferences, within acceptable levels of confidence and variance, about the risks

related to accounting practices and credit policy. The third tier will apply a new level of rigor to the analysis of total microfinance portfolio quality. It is grounded in statistical analysis to allow inferences to be made about the overall quality of the portfolio within a known confidence level and variance (upper bound).

A Tier I review should be required as a part of any credible external assessment, appraisal, or ratings exercise. It should be carried out by any donor wishing to support an MFI for its lending operations, and should be the absolute minimum review done by networks evaluating MFIs for potential membership. A Tier I review should give the analyst a basic level of comfort about the quality of a program's portfolio management and performance. The evaluation incorporates enough discussion, cross referencing of key performance indicators, and MIS review to provide a sense whether or not the MIS reports reasonably reflect loan transactions, basic portfolio indicators of delinquency, loan-loss levels, and reserves for uncollectible loans, and whether or not accrued interest reasonably reflects income from performing loans. Additionally the evaluation looks at whether internal controls are adequate to detect massive fraud in the program's portfolio management. The degree of confidence one gets from this exercise will depend greatly on the depth of prior experience in microfinance brought to the table by the analyst.

A Tier II review should be required for donors, investors, and ratings agencies that carry out assessments related to potential investment in an MFI. Tier II provides the analyst with a sense that the head-office presentation of portfolio performance squares with the reality as seen and managed by loan officers in the branches. It is generally in these branch office visits that an analyst can reliably determine:

1. that MIS reports capture with a high degree of accuracy the true status of the loan portfolio;
2. that substantial unreported loan refinancing and re-aging do not exist;
3. that there is basic adherence to stated credit policy;
4. that the basic indicators of delinquency, loss levels, reserves for bad debt, and accrued interest are based on actual practice; and
5. that the program is not subject to systemic fraud.

A Tier III due diligence is recommended only for those investors wishing to achieve the certainty required to access capital-markets funding mechanisms, such as securitization, or to make an important investment in the equity of an MFI. In the foreseeable future, Tier III will mostly be used by banking

superintendents in prudential supervision of regulated MFIs. Tier III, in its least comprehensive form, will allow an analyst to determine with a high degree of certainty that systemic fraud does not exist in the MFI's operations. The analyst will also have a high degree of certainty about the level at which certain unhealthy credit practices exist in an MFI as they are reflected in quantitative indicators, such as frequency of re-financing. This most comprehensive Tier III will also reveal the extent to which the three information systems in an MFI (accounting, loan tracking, and loan files) are consistent with each other.

Except for regulated MFIs, the costs of a full-blown portfolio due diligence will usually not be merited; insofar as the industry is not sufficiently mature to require the kind of portfolio valuation that a securitization, for example, would demand. By taking an approach that proceeds in stages, or tiers, the analysis can be halted when there is sufficient basis for the specific judgment the interested party needs to make, thereby avoiding unnecessary time and expense. If, for example, a close look at the head office and branches does not reveal a coherent and consistently applied accounting and credit policy, there may well be no call for the expense of a strict statistical analysis of the full portfolio. In most cases, once significant portfolio problems are uncovered, there is no further need to extend the due diligence. Should it be necessary to quantify more precisely the extent of the arrears, refinancing, or fraud, it will always remain an option to push forward to the next level of analysis.

In this sense, the due-diligence process presented here proceeds in an incremental fashion. Each tier is more involved than the previous one, although each seeks to answer similar questions about portfolio accounting and credit policy (see below). This incremental approach is modeled on statistical sampling techniques which allow conclusions about portfolio quality or the incidence of fraud within strict degrees of confidence and upper-bound. What the auditor may have an inkling of, after the two days of a Tier I exercise with management, can be quantified by applying sampling methods and mathematical analysis during a Tier III exercise. Specifically, Tier III allows the auditors to express their confidence—as other types of questions require other approaches to sampling, especially when dealing with expected proportions that are small. In the case of some types of portfolio fraud, rates of incidence that may well be very low. If one wished to draw inferences about the presence of systematic fraud in an MFI, it would take an incremental approach to sampling. First, a relatively small sample of loan cases would be drawn.

If no incidences are revealed, then the audit would stop there. If one or more incidences of potential fraud (or any other issue one want to look at) crops up, then another batch of loan files is looked at. This kind of approach will allow the statement that the auditor is 99 percent confident that the incidence of fraud (specifically defined) is less than 0.5 percent of all loans, with a maximum level of 1 percent.

With the descriptions of the three tiers are tables detailing topics or issues the evaluator will want to review. The issue is provided, along with the concern that issue addresses. As in the example below, the table suggests that evaluators will want to “check the consistency in reporting the total portfolio amount in the loan tracking system with the amount in the accounting system.” They should do this because “reconciliation differences frequently represent opportunity for fraud.” The “yellow card” suggests a finding that should raise some level of concern on the part of the analyst, suggesting more in-depth investigation. A “red card” finding suggests a critical problem area that the evaluator should take heavily into final consideration, depending on the purpose that the due diligence is being done. The process does not suggest a specific number of “red” or “yellow” findings that should lead the evaluator to “disqualify” an MFI. Red-card findings are quite problematic, however, as experience has shown that MFIs with these areas of concern generally face serious arrears problems sooner or later. An accumulation of some red cards indicates that the MFI has fundamental problems with its loan portfolio management, although a number of yellow cards may also indicate similar issues that are more incipient, or are somewhat better managed.

## TIER I DUE DILIGENCE

The initial level of portfolio due diligence is the first pass at answering basic questions about the MFI's accounting practices and credit policy. On the basis of a preliminary review of financial and portfolio information, and on interviews with head-office staff, the analyst will look for coherence in the accounting and financial information, a clear credit policy, and rational provisioning. To make this basic determination should take one analyst no more than two days in the head office, plus preparation time.

Potential investors and donors must be aware that when Tier I is the only due diligence performed on a microloan portfolio, there is a strong possibility that not all of the risks underlying that portfolio will be uncovered and understood. However, it is assumed

**Example: Table 1**

<b>KEY ISSUES</b> <i>(Concerns)</i>	<b>YELLOW CARDS</b>	<b>RED CARDS</b>
Consistency in reporting the total portfolio amount in the loan tracking system's portfolio report, with the amount on the accounting system's balance sheet account as of the same date  <i>(Reconciliation differences frequently represent opportunity for, or actual, fraud.)</i>	Substantial difference (over 5%) between two systems	Unauditable difference above 10%

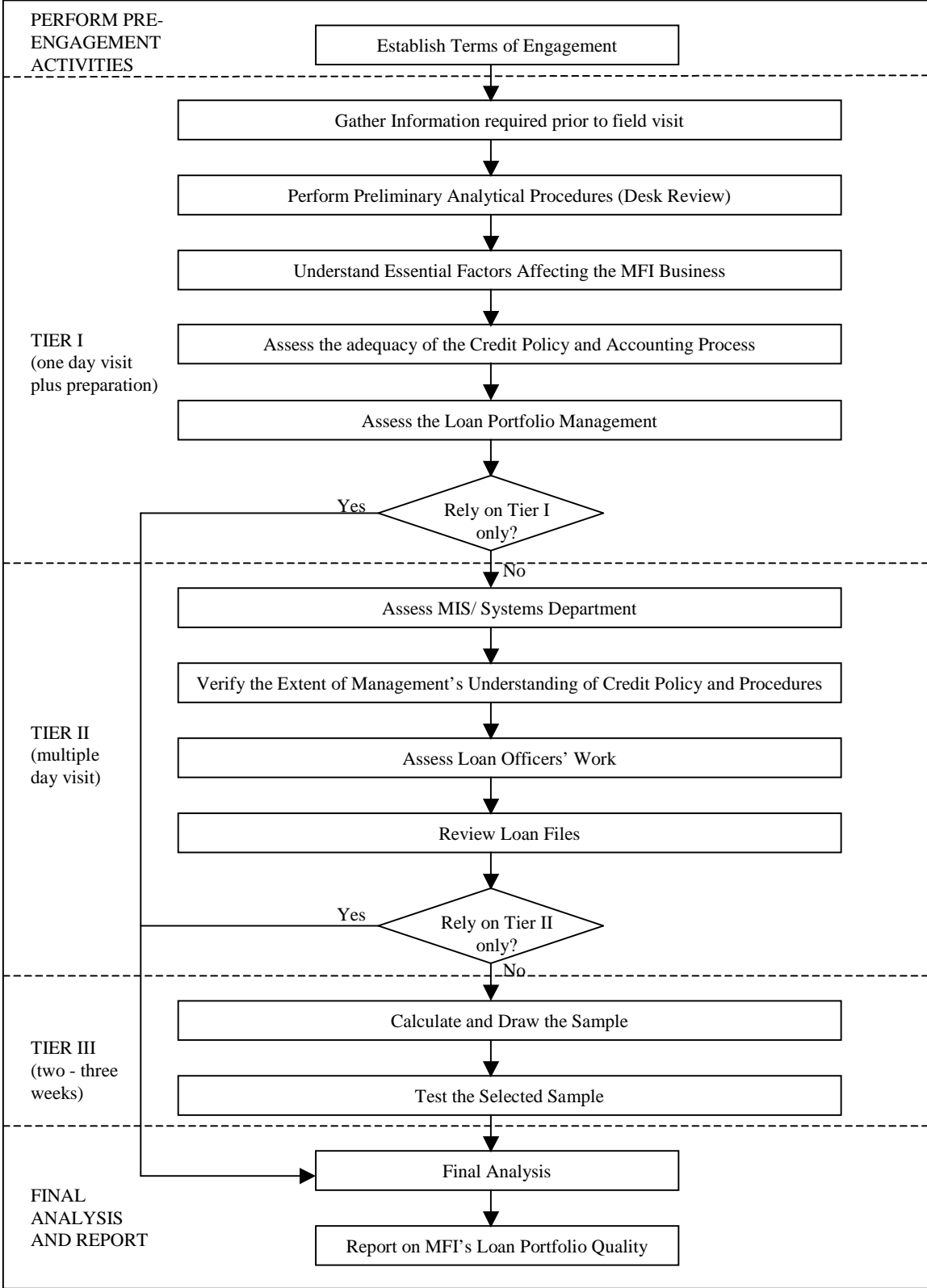
that a degree of “information risk” is acceptable in Tier I. Tier I due diligence is performed in situations where the MFI is unable to provide complete, reliable, and verifiable reports and information, and/or the investing institution does not have the level of need or necessary resources to devote a great deal of time or staff to the exercise. **Tier I is still preferable to doing no due diligence at all, carefully done, it will still provide a basic understanding of portfolio quality that is considerably better than that achieved solely through a desk review of reports and documents.**

Although Tier I due diligence is minimal, the analyst cannot simply accept what the MFI management claims as its portfolio quality. Self-generated portfolio quality reports may be unreliable, not necessarily due to deliberate manipulation on the part of MFI management, but more often due to deficiencies in reporting capabilities and accounting and portfolio tracking systems. As such, the Tier I

analyst needs to perform some limited research and reach a level of comfort with the numbers and reported portfolio-quality indicators. As the Tier I due-diligence process is rather short and narrow in scope, the analyst needs to recognize that a full understanding of what is behind the indicators will not be achieved, and needs to determine at which point the level of information available is satisfactory.

The process for Tier I portfolio due diligence will typically consist of the following steps:

1. Gather information prior to field visit
2. Perform a desk review
3. Make a field visit
4. Prepare the final analysis



## 1. Gather Information Prior to Field Visit

The process of gathering information is the lengthiest step in Tier I due diligence. For the desk review, the analyst should gather as much information as possible from various sources both inside and outside of the MFI. The information and reports will probably all be prepared in local currency.

Ideally, the analyst will obtain the following information in order to conduct Tier I due diligence:

- Credit policies and procedures manuals, instructions, and descriptions
- Audited financial statements (and management letters) for the past two fiscal years
- A year-to-date financial statement for the current fiscal year if more than one quarter has elapsed since the last audited financial statement
- One complete set of summary reports from the loan tracking system
- Report of any external assessment, appraisal, or evaluation that has been done over the prior two years

**Credit policies and procedures, manuals, instructions, and descriptions.** The analyst performing the due diligence should be provided with documents that provide a clear understanding of the institution's standard operating procedures in terms of the portfolio and delinquency management. These documents should include any credit manuals, memos to staff laying out key changes in credit policy, and descriptions of credit policy that the MFI has developed for purposes of explaining how it works. It is important that the analyst have some understanding of the policies and procedures, in order to fully analyze and understand the reports and other information provided.

**Audited financial statements.** The audited financials are one of the most useful sources of information in the desk review, as they represent an outside validation of the information provided by MFI management. The audited financial statements report should consist of a letter from the director, auditor's opinion, financial statements, and notes to the financial statements. The analyst should ask for the auditors' letter to management and management's response to that letter.<sup>1</sup>

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<sup>1</sup> For further detail on the audit of MFIs, see *External Audits of Microfinance Institutions: A Handbook*, CGAP Technical Tool No. 3 (Washington, D.C.: CGAP, December 1998), especially pages 22-23.

**A year-to-date financial statement.** The interim financial statements should consist of the balance sheet, income statement, and cash flows for the most recent period. Usually, interim financial statements are not audited, although in some countries a regulated financial intermediary may be required to produce interim (usually semi-annual) financial statements.

**Summary portfolio reports.** The summary loan portfolio reports are reports produced by the MFI's management information system<sup>2</sup> that provide detailed information not only on the quality of the loan portfolio, but on the distribution of the portfolio, size of lending activities, and other information pertinent to the lending operations and portfolio quality. Although analysts may expect that the loan portfolio reports will be produced from a computerized MIS, in a young and/or small MFI, the portfolio reports may be produced manually.

Ideally, the systems department of the MFI will be able to produce a variety of reports for the analyst. The reports should be for the same periods as the audited and interim financial statements, and should include:

- portfolio aging schedules (classification of delinquent loans by days past due);
- breakdown of portfolio by loan size and loan product (methodology), including number of active loans, total portfolio, and portfolio quality for each category;
- portfolio reports by branch and/or loan officer (including portfolio size, details on products, portfolio quality);
- detailed reports on restructured and refinanced loans; and
- reports reflecting the manner for calculating provisions for non-performing loans, write-offs of non-performing loans, and recoveries of written-off loans.

**Assessments, appraisals, and external evaluations.** The MFI should send the analyst the report generated by any assessment, appraisal, or external evaluation they have had done over the prior two years. This information is generally confidential and should be treated as such by the analyst. Increasing numbers of these reports are being prepared by the ratings

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<sup>2</sup> For further information on the development of quality management information systems for MFIs, see *Management Information Systems for Microfinance Institutions*, CGAP Technical Tool No. 1 (Washington, D.C.: CGAP, February 1998).

agencies for affiliate networks, donors, and investors. And, analysts should be aware of their existence.

## 2. Perform a Desk Review

Before visiting the institution, the analyst should conduct a desk review of the financial performance of the MFI for the three prior years, in addition to becoming familiar with its basic portfolio management policies and procedures. That this information is available is an early signal of the preparedness and professionalism of the institution. Incompleteness demands explanation and should indicate to the auditor areas that will require further exploration during the field visit. The desk review should include an evaluation of the overall financial performance of the MFI, the quality of underlying financial information (as revealed by the completeness of the notes to the financial statements, and the coherence and completeness of the portfolio report), and the degree to which important credit policies, procedures, and performance have been documented.

Emphasis should be placed on analytical analysis by comparing ratios from year to year and questioning significant discrepancies:

- **Assets:** Loan portfolio growth, annual disbursements, provisioning as a percentage of average loan portfolio, write-offs as a percentage of average portfolio
- **Income:** Yield gap—i.e., comparison of actual income with estimated income that loans should be producing according to the terms of the contracts—based on total loan portfolio and on current loan portfolio (or net loan portfolio as a substitute). Obtain aged listing of accounts with past due balances. Compare percentages with prior period. Be alert to unusually high or low activity, concentration in few customers or sectors, and unusually high levels of long overdue accounts.

In order to fully verify portfolio data, the analyst will need to follow-up with the MFI's management in order to sort through any discrepancies in the reports, such as different gross portfolio amounts reported on the loan tracking system and an interim balance sheet. It is not uncommon to come across such discrepancies, as input data derives from different sources, and data flow and posting discrepancies as well as different staff members may be responsible for producing different reports. Discussions with management should allow the analyst to reach a satisfactory conclusion and explanation

regarding the discrepancies and/or identify areas that should be emphasized during the field visit.<sup>3</sup>

The analyst will want to generate several key financial performance indicators in order to form a broad opinion about the MFI and its place in the industry. Common indicators of financial performance can be found in any number of industry publications.<sup>4</sup> In addition to a variety of indicators for overall financial performance, an MFI's capital adequacy, operating efficiency, and liquidity management, the analyst will definitely wish to focus on those indicators that reveal portfolio quality. Industry groups have built a consensus around the nomenclature and method of calculation for a number of basis financial ratios that would serve this purpose admirably.<sup>5</sup>

Here it is also important to highlight the fact that performance indicators are not "stand-alone" determinants of the MFI's performance. They need to be compared with the results of institutions that are considered peers. To date, it has been difficult to conduct peer-group comparisons. MFIs may differ in a number of dimensions: the clients they serve; methods of managing portfolio risk and delinquency; methods for calculating past-due portfolio and default rates; policies for rescheduling and refinancing loans; and other factors, such as the type of MFI (NGO vs. regulated institution), and the legal and regulatory environments in which they operate. Quality peer-group comparisons have been limited by availability of data, poor quality of data, and the diversity of MFIs in the world. Contextual factors, such as geographic location, age of the institution (mature institutions may have realized certain economies of scale), and varying lending methodologies used throughout the world, can influence performance indicators.

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<sup>3</sup> It is important that the analyst performing the Tier I due diligence be aware of any seasonality experienced by the particular MFI when evaluating the interim financials. The analyst should request details on seasonality/cyclicality from the management when the interim financials are requested.

<sup>4</sup> See CGAP, *Selected Definitions of Financial Terms, Ratios and Adjustments for Microfinance*, Microfinance Consensus Guidelines (Washington, DC: CGAP, 2003); Joanna Ledgerwood, "Sustainable Banking with the Poor" in *Microfinance Handbook: An Institutional and Financial Perspective* (Washington, DC: IBRD/The World Bank, 1998); Tillman Bruett, ed., *Measuring Performance of Micro-finance Institutions: A Framework for Reporting, Analysis, and Monitoring*, SEEP and ACT (Washington, DC: USAID/Accelerated Microfinance Advancement Project, forthcoming); and the *MicroBanking Bulletin*.

<sup>5</sup> These standard performance indicators and their definitions can be found in *Definitions of Selected financial Terms, Ratios, and Adjustments for Microfinance*, Microfinance Consensus Guidelines (Washington, D.C.: CGAP, August 2003).

## Due Diligence Guidelines for the Review of a Microcredit Loan Portfolio

However, in recent years, the *MicroBanking Bulletin (MBB)* has begun to address the problems of peer-group analysis. The *MBB* tracks the financial performance of 200 top microfinance institutions from around the world. Although the individual program results are kept confidential, the *MBB* displays results for peer groups of similar institutions, which the analyst can utilize as a guide to determine where the performance of given institutions fall. Analysts should refer to the tables from latest edition of the *MicroBanking Bulletin*. In addition, affiliate networks,

such as ACCIÓN International, FINCA, CASHPOR, MicroFinance Network, and SEEP, may have internal databases on which to draw peer comparisons.

Additionally, analysts will want to perform some limited trend analysis (analyzing the indicators over time) to see how current performance compares to past performance. Here, we cannot provide what may be appropriate ranges for any indicators, as these will need to be determined over time and taking into consideration the unique operating environment of each country in which MFIs are operating.

**Table 1 Tier I Loan Portfolio Due Diligence Desk Review**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
Consistency in reporting the total portfolio amount in the loan-tracking system's portfolio report, with the amount on the accounting system's balance sheet account as of the same date <i>(Reconciliation differences frequently represent an opportunity for or actual fraud.)</i>	Substantial difference (over 5%) between two systems	Unauditable difference above 10%
Portfolio quality, as measured by any number of indicators <i>(Use of simple rates hides reality, intentionally or not, and does not permit tight loan administration.)</i>	Use of simple arrears rates, rather than recovery rates or portfolio at risk	No portfolio quality reports, only a summary figure
Effective portfolio yield and gap analysis <i>(Probable cause of yield gap is arrears—the larger the gap, the higher the probable amount of non-performing portfolio.)</i>	Difference (over 5%) between expected revenues and actual revenues	Substantial difference (over 20%) between expected revenues and actual revenues that can not be explained by arrears report
Transparent treatment of loan-loss provisions, provision expense, write-offs, and interest accrual on non-performing loans <i>(If managers manipulate write-offs, there is much more room for fraud or self-serving decision-making.)</i>	Lack of clarity about policy in this area, too much leeway by managers to manipulate treatment of individual cases	Existence of large number of unexplained write-offs, especially of large sums
Transparent treatment of refinanced or rescheduled versus normal loans <i>(If institutions do not track or can not produce lists, incidence will certainly be higher than they think.)</i>	Inability to show loans that have been refinanced or rescheduled in MIS reports	
Overall financial performance, clear separation of operating income from subsidies on income statement, comparison to industry benchmarks <i>(This is usually a sign that something is fundamentally wrong, either with interest rates or loan administration.)</i>	Weak performance (OSS < 75%) in MFIs over 3 years old	

### 3. Make a Field Visit

The on-site visit should begin with the analyst meeting the senior management team, including the general manager of the institution. The meeting should include discussions of the economy, regulatory environment, the state of the microfinance market in the country, and the institution's clients. Through these discussions, the analysts should gain an understanding of the context in which the MFI operates and disburses credit, which is imperative to the evaluation of the microloan portfolio.

Subsequently, the analyst needs to discuss the MFI's loan portfolio performance, methodology, and management. These face-to-face meetings should produce an understanding of the institution's accounting and credit policy, and how they relate to successful disbursement and recovery of small loans. Starting with the general manager, the conversation should seek to reveal the policy and practice of the institution. This process is iterative, in that the analyst will ask similar questions of the general manager, the credit manager, accountant, and credit officers of the head office. The answers to these questions should be consistent among all members of the team, and ideally should correspond to the stated credit policies of the institution.

Although credit policy may evolve in the first years of a new microcredit program, over the long run, a clearly stated, written credit policy is a necessary condition of prudent lending. The MFI's lending policy should establish the necessary authority, rules, and framework to operate and administer its loan portfolio effectively, while managing risk. For example, an MFI may have a decentralized loan approval process (for efficiency purposes), except for larger loans that require the approval of a credit committee or the head office. The policies should be appropriate to the size of the institution and the nature of its activities, and should be consistent with prudent banking practices and relevant regulatory requirements. The policies should also be broad and not overly restrictive in setting guidelines to maintain sound credit underwriting standards and control, manage risk, and deal with problem loans.<sup>6</sup> Nonetheless, although the credit policy manual may well present sound policies, there is frequently a

disconnection between the printed page and practice. For this reason, what management and staff say and do is always more important than what is printed in the manual.

Analysis of credit policy should be grounded in both discussions with management and credit officers, and in reference to credit approval manuals, instructions, and descriptions. The analyst must look at underlying principles behind an MFI's credit methodology in an attempt to answer the essential question: Are there clearly defined and consistently applied credit policies? The analyst must also spend substantial time with junior staff to understand exactly how key ratios relating to loan portfolio performance are generated and what is the basis for their calculation. There are many different ratios used to measure delinquency in a microloan portfolio.<sup>7</sup> The first step in analyzing the indicators during due diligence is to determine exactly what is behind the portfolio quality indicators as reported by the MFI. There are three broad types of delinquency indicators:

- Collection rates measure amounts actually paid against amounts that have fallen due.
- Arrears rates measure overdue payments against total loan amounts.
- Portfolio at risk rates measure the outstanding balance of loans that are not being paid on time against the outstanding balance of total loans.

Depending on the indicator being used, the MFI may be overstating or understating the true portfolio quality. It cannot be stressed enough how necessary it is to dig deeply into the bowels of the MFI to get an accurate description of these indicators and how they are produced. Managers rarely understand the exact manner of their calculations, even if they think they have given clear orders as to the way these should be calculated. The analyst should actually follow the paper trail from the point of payment to the point of recording a transaction to the end point of the summary report on repayment. This may take a couple of hours, but frequently is the only way an analyst can know with some degree of certainty just what the portfolio quality indicators are measuring.

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<sup>6</sup> Board of Governors of the Federal Reserve System, *Commercial Bank Examination Manual*, Division of Supervision and Regulation (Washington, DC: March 1994).

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<sup>7</sup> For further information on use of these indicators, the various methods of measuring delinquency, and the pros and cons of each indicator, see Richard Rosenberg, *Measuring Microcredit Delinquency: Ratios Can Be Harmful to Your Health*, CGAP Occasional Paper No. 3 (Washington, DC: CGAP, 1999). Most of this section is adapted from that paper.

**Table 2 Tier I Loan Portfolio Due Diligence Field Visit: Contextual Variables**

<p align="center"><b>KEY ISSUES</b> <i>(Concerns)</i></p>	<p align="center"><b>YELLOW CARDS</b></p>	<p align="center"><b>RED CARDS</b></p>
<p>Target markets (size, type and sub-sector, gender, geographic coverage) What is the MFI's growth potential? <i>(Low lending potential in depressed economic areas leads to over-indebtedness.)</i></p>	<p>Economic growth indicators close to zero, or even negative in target areas</p>	<p>Target areas subject to civil strife, epidemic, or severe economic depression</p>
<p>Profile of current borrowers (common sectors, proportion of new vs. repeat borrowers, proportion of female borrowers) <i>(Key elements of lending methods might be flawed, many borrowers having trouble paying might be leaving, or the MFI might be facing heavy competition.)</i></p>	<p>Annual drop out rates exceeding 25%; new client growth at less than 10 per loan officer per month</p>	<p>Annual drop out rates exceeding 50%; new client growth at less than 5 per loan officer per month</p>
<p>Competition in similar markets facing the institution (from other MFIs, commercial banks, other financial intermediaries). Are they managing it, or in denial? <i>(Heavy competition among microlenders inevitably leads to poorer port-folio quality.)</i></p>	<p>Reports of borrowers with multiple loans from multiple MFIs</p>	
<p>Local culture of repayment among clients of all MFIs <i>(Behaviors are contagious.)</i></p>	<p>High reported arrears (&lt; 8%) among most other leading MFIs in target areas</p>	<p>High reported arrears (&lt; 15%) among most other leading MFIs in target areas</p>
<p>Is the MFI facing liquidity constrictions that affect its ability to disburse loans according to its implicit contract with borrowers (i.e., incremental increases in the loan amounts upon timely repayment of prior loans)? <i>(Significant restriction in credit disbursements breaks implicit contracts and is usually associated with deterioration of credit discipline.)</i></p>	<p>Existence of any indication that value or timing of loans is ever affected by liquidity considerations</p>	<p>General policy that restricts value or timing of loans in relation to borrower/ methodology expectations that have been in place for more than 1 month and do not have credible end in short term</p>
<p>Is senior management pressuring the institution to grow quickly to meet sustainability, political, or strategic goals? <i>(Strong growth pressure inevitably leads to deterioration of portfolio quality.)</i></p>	<p>Annual growth targets that exceed 100% in years 2 and 3, and 50% thereafter</p>	<p>Annual growth targets that exceed 100% after 3 years</p>

**Table 3** Tier I Loan Portfolio Due Diligence **Field Visit: General Credit Policy**

<p align="center"><b>KEY ISSUES</b> <i>(Concerns)</i></p>	<p align="center"><b>YELLOW CARDS</b></p>	<p align="center"><b>RED CARDS</b></p>
<p>What are the analytical elements (key indicators) used for making credit decisions? <i>(Lack of guiding indicators will eventually prejudice methodological consistency.)</i></p>	<p>No written guidelines supporting credit decisions</p>	
<p>Approval criteria and approval process, existence of credit committees—composition, frequency, levels. What approval signatures are necessary (number and type), and are they appropriate to loan the amounts? <i>(Strong credit committees can take basic accountability away from loan officers.)</i></p>	<p>Perception that credit committees making the final decision, not the loan officer</p>	<p>Credit decisions made without participation of loan officer, except in submission of application</p>
<p>Can a new loan be given to a client whose prior delinquent loans have not yet been paid off? How are restructured loans defined and treated? The definition should be narrow, including all loans that have had their original terms altered either in amount, interest rate, or amortization period. <i>(Restructuring and refinancing lead to hidden arrears and should only be done when it concretely improves repayment prospects.)</i></p>	<p>Documentation supporting restructuring or refinancing not specifically indicating how this measure credibly improves prospects for repayment—tied to circumstances that led to arrears</p>	<p>No documentation supporting refinancing or restructuring of loans, no reason given for measure</p>
<p>What is the rate of increase in loan amounts, average size of payments, or loan terms? (Look at scheduled increases, especially in relation to accumulated obligatory savings balances, if any.) <i>(Strongly decreasing spread between loan amounts and accumulated obligatory savings balances leads to high levels of dropouts.)</i></p>	<p>Borrowers' saving represent more than 25% of initial loan values</p>	<p>Borrowers' savings represent more than 50% of initial loan values</p>
<p>What is the institution's policy related to multiple, concurrent loans to an individual client? <i>(Multiple lending that is not clearly reflected in a way that shows the total borrowing by an individual client is a recipe for high default rates.)</i></p>	<p>No provision of lists of clients with multiple loans by MIS No identification in MIS that a borrower already has a loan when applying for a concurrent loan</p>	<p>Appearance of substantial number of multiple loans to individuals, and an absence of any MIS reporting of the prevalence of the phenomenon</p>

**Due Diligence Guidelines for the Review of a Microcredit Loan Portfolio**

**Table 4 Tier I Loan Portfolio Due Diligence Field Visit: Accounting and Loan Tracking Procedures**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
<p>Can the analyst follow a transaction from cashier to final report?            What are the accounting entries relating to an individual loan?            How is cash relating to loans paid out, received, and recorded?  <i>(Tracking transactions through each step can reveal, even to the inexperienced, problems that the accountants are facing with veracity of information, timeliness, and the extent of internal control mechanisms.)</i></p>	<p>Absence of internal controls that double check entries            Existence of substantial difficulty checking veracity of information</p>	<p>Chaotic situation in the provision of data to accounting department; extreme difficulty double-checking data on transactions</p>
<p>Can loans be paid off through “in-kind” payments, receipt of collateral guarantees, post-dated checks, rescheduled loans, or any other non-cash means?            How is this payment recorded both in the accounting and loan tracking MIS?            Are loans paid off by these means separated in the MIS?  <i>(Non-cash transactions are frequently overvalued and subject to abuse in terms of the probability of recovery for their full amount.)</i></p>	<p>Non-cash payments not clearly indicated in either the accounting system or the loan tracking system or both</p>	<p>Significant unreported, or under-reported, levels of non-cash payments, possibly equal to more than 10% of the value of the portfolio</p>
<p>What is the treatment of accruals?            Is interest accrued on non-performing loans? If yes, for how long?  <i>(Frequently MFIs overstate income by failing to back out accrued interest on loans in arrears until written off.)</i></p>	<p>Failure to stop accrual and back-out of income statements on non-performing loans</p>	
<p>What is the accounting policy with respect to loan loss provisions, provision expense, and write-offs?  <i>(Unclear basis for these accounting entries usually leads to abuse.)</i></p>	<p>Lack of clear and written policy providing reasonable grounds for provisioning and write-offs</p>	<p>Provisions, created through the income statement, equal to less than 50% of the value of loans that are over 90 days late</p>
<p>Do the balance sheet totals for the loan portfolio square with those of the loan tracking system?  <i>(Some difference is common, up to 5%. Greater difference indicates core MIS problems. Look for effective administration of these differences— there should be a satisfactory explanation that mathematically accounts for the difference.)</i></p>	<p>Some difference, especially greater than that resulting from a lag in clearing unidentified payments received by banks on behalf of NGOs</p>	<p>General confusion about a substantial number of borrower account balances (&lt;10%); real disagreement between accounting and operations to correct information</p>
<p>Is unrecorded cash in the hands of loan officers for any amount of time between the point of payment and recording in the loan tracking system?  <i>(Cash in the hands of loan officers will be misused! What controls exist to ensure that cash is accounted for immediately and accurately?)</i></p>	<p>Any cash that sits in loan officer’s hands, whose exact amount is not generally known to others in the field office on any given day</p>	<p>More than 10% of the value of a day’s payments in the hands of loan officers, without tight internal control mechanisms</p>
<p>How are key performance indicators actually generated, and on what basis of information?  <i>(Poor basis for performance indicators usually leads to their discredit and poor portfolio quality.)</i></p>	<p>Inaccurate performance indicators</p>	<p>Substantial disagreement between accounting and credit department about values of key performance indicators</p>

**Table 5a Tier I Loan Portfolio Due Diligence Field Visit: Loan Portfolio Management**

<p><b>KEY ISSUES</b> <i>(Concerns)</i></p>	<p><b>YELLOW CARDS</b></p>	<p><b>RED CARDS</b></p>
<p>What is the attitude of the senior management, credit manager, and other head office staff with respect to acceptable levels of loan delinquency? How aggressively is loan portfolio quality monitored and collections actions pursued? <i>(Senior managers who are uninformed or uninvolved in loan portfolio management can not impose adequate collections culture—and performance —will fail: Their attitude is critical!)</i></p>	<p>Senior managers who appear uninformed and/or uninvolved in day to day guidance of collections efforts</p>	<p>CEO or credit manager who can not tell analyst immediately what the relevant portfolio quality indicators are for the MFI—or demonstrate that this information is processed at this level on a weekly basis</p>
<p>Is the portfolio quality maintained at a low level? Can the institution track late payments in a number of ways that assist it in understanding client behavior? Does the institution have a clear idea of its portfolio at risk? <i>(Weak MIS and portfolio management will necessarily lead to poor performance when external shocks hit the MFI.)</i></p>	<p>Reliance on a single indicator of repayment performance, especially if this indicator is anything other than the PAR <i>(Remember, the number of loans that are in and out of trouble are double or triple the number that are late at any one time.)</i></p>	<p>More than 20% of an MFI's clients are currently late (and all loans over 360 days late have been written off) <i>(The MFI will face huge losses.)</i></p>
<p>Do staff incentives include loan portfolio quality as a basic, if not predominant, performance marker (both monetary and non-monetary)? <i>(Staff who are not held accountable will not produce optimal results over the medium term.)</i></p>	<p>Incentive systems that swing from rewarding one behavior to another: <i>(These are confusing, and are not powerful enough to motivate correct results.)</i></p>	<p>No strong mechanism for demanding accountability for results</p>
<p>What are the <i>ex post</i> internal controls employed by the institution, independent of the operations department, that objectively grade granted loans, scrutinize problem credits, evaluate provision coverage, look at trends, and cite documentation exceptions? <i>(Failure to provide environment of operationally based internal controls will inevitably lead to portfolio quality deterioration.)</i></p>	<p>Internal controls environment depending heavily on <i>ex ante</i> layers of approval, paper trail review, or direct supervisors for fraud prevention, with no operationally based review of some sort.</p>	<p>Lack of any <i>ex post</i> or <i>ex-ante</i> instance of operational or audit control in process of making or following through on loans</p>

**Due Diligence Guidelines for the Review of a Microcredit Loan Portfolio**

**Table 5b Tier I Loan Portfolio Due Diligence Field Visit: Loan Portfolio Management**

<b>KEY ISSUES (Concerns)</b>	<b>YELLOW CARDS</b>	<b>RED CARDS</b>
<p>Do the actual loan portfolio results conform with the institution's policies and procedures, as laid out in key indicators found in the credit policy manuals (i.e., clients per loan officer, portfolio per loan officer)?</p> <p><i>(Overly aggressive lending is a certain path into an arrears crisis. It also occurs frequently, especially in the early days of an MFI's growth curve.)</i></p>	<p>Loan officer(s) carrying loads above those stipulated in the lending methodology guides, without compensating support</p>	
<p>Has the portfolio quality been improving or worsening?*</p> <p>Is there a certain time of year when the portfolio quality is consistently better or worse than other times?</p> <p>Have there been any sudden changes, such as increases in numbers of clients, staff turnover, changes in management which could result to a sharp increase in delinquency?</p> <p><i>(Deteriorating trends can be far more dangerous than relatively high yet stable levels of late payments.)</i></p>	<p>Steady deterioration over a space of 3 months on basic PAR indicators (or any other used by MFI), that is not readily accounted for by seasonality and within known patterns</p>	<p>Doubling of number of late payments as a percent of on-time payments, sustained over a 2-month period, from the preceding 12-month average, whatever the initial starting point (unless that final point is less than 2%)</p>
<p>Who handles collection of late payments: loan officers or specialists?</p> <p>Are these specialists in-house or outsourced?</p> <p>If by loan officers, at what point is a loan sent for collection through the legal system (often called legal recovery)? **</p> <p>How effective is this remedy and how long does it usually take to collect?</p> <p><i>(Losing loan officer accountability for loan collections, especially in short term, generally leads to higher default rates.)</i></p>	<p>External collections efforts beginning before 30 days on late loan payments</p>	<p>Entire collections function outsourced or given to staff who are not also loan officers who have made those same delinquent loans</p>

\* When reviewing portfolio quality trends, it is important that the analyst pay close attention to both the absolute amounts of portfolio past-due and indicators of past-due portfolio relative to the total portfolio. Reviewing only the indicators may be deceptive as the amount of portfolio due relative to the total portfolio may decrease in times of portfolio growth, with no increased collections.

\*\* In the case of regulated MFIs, bank regulation often dictates the criteria for transferring a loan to legal collection.

**Table 5c Tier I Loan Portfolio Due Diligence Field Visit: Loan Portfolio Management**

<b>KEY ISSUES (Concerns)</b>	<b>YELLOW CARDS</b>	<b>RED CARDS</b>
<p>What kind of analysis is conducted to determine the cause of past due loans?</p> <p>Is there a pattern of loans becoming delinquent at a certain point in their amortization?</p> <p>Are past due loans growing in absolute amounts or is an existing pool of past due loans becoming more delinquent?</p> <p><i>(Sometimes the peculiar design feature of loan products leads to arrears, for example, a level of required savings that is too high.)</i></p>	<p>Institution has no capacity to analyze repayment performance of its loans in arrears</p>	
<p>What has been the loss experience over time in terms of the impact of other factors, e.g., economic recessions, or changes in loan standards and collections?</p> <p>Has fraud played a role in losses?</p> <p><i>(Institutions that blame external factors for arrears seldom perform well. However, those that do not react to changing conditions of their target group by managing change do not perform well over the long term either.)</i></p>	<p>Clear external threats to loan portfolio quality that are not actively managed by credit department—i.e., cholera epidemics, changes to import duties, civil strife, etc.</p>	<p>Poor or mistaken management of clear external threats to loan portfolio quality, such as sudden suspension of lending, without due process of sorting out those affected from those not</p>

**Table 5c Tier I Loan Portfolio Due Diligence Field Visit: Loan Portfolio Management**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
What kind of analysis is conducted to determine the cause of past due loans? Is there a pattern of loans becoming delinquent at a certain point in their amortization? Are past due loans growing in absolute amounts or is an existing pool of past due loans becoming more delinquent? <i>(Sometimes the peculiar design feature of loan products leads to arrears, for example, a level of required savings that is too high.)</i>	Institution has no capacity to analyze repayment performance of its loans in arrears	
What has been the loss experience over time in terms of the impact of other factors, e.g., economic recessions, or changes in loan standards and collections? Has fraud played a role in losses? <i>(Institutions that blame external factors for arrears seldom perform well. However, those that do not react to changing conditions of their target group by managing change do not perform well over the long term either.)</i>	Clear external threats to loan portfolio quality that are not actively managed by credit department—i.e., cholera epidemics, changes to import duties, civil strife, etc.	Poor or mistaken management of clear external threats to loan portfolio quality, such as sudden suspension of lending, without due process of sorting out those affected from those not

#### 4. Prepare the Analysis

The analyst needs to form an overall impression of the portfolio risk of the MFI. Again, it is important to note the need for flexibility in the analysis of a microloan portfolio, given the diversity of MFIs, the uniqueness of the sector, etc. The evaluation of each MFI’s portfolio is individual. Its outcome will depend on many factors that are unique both to the MFI and the evaluator. However, the questions and issues to raise, that are listed in the tables, will allow the evaluator to form a reasonably clear judgment and establish a level of comfort with an MFI’s reporting of loan portfolio quality.

At the end of the Tier I process, the evaluator should gain a very strong impression about the trustworthiness of the information he has been provided. This impression will be based on the transparency of data, the ease with which it is provided, the familiarity of top managers with loan portfolio quality indicators and reports, the consistency of information across several MIS reports, the commitment of staff to ironing out inconsistencies, the general environment of orderliness and internal control, the presence of actual *ex post* control mechanisms, and clarity in all aspects of the MFI’s operation. When the Tier I due diligence leaves an evaluator with an uncomfortable feeling, chances are quite high that the reality he would find after completing Tiers II and III would be substantially worse. Rarely do micro-credit portfolios look better upon closer examination than they do at the outset.

#### TIER II DUE DILIGENCE

Tier II due diligence builds on the work done in a Tier I due diligence. Someone who wishes to do a Tier II due diligence must complete **all** of the tasks and analysis laid in this document for **both** Tier I and Tier II. For the sake of simplicity in presentation, the remainder of this section will refer only to those activities that must be carried out **in addition** to those of Tier I, in order to complete a Tier II evaluation.

At this level, the analysis moves out of the head office into the branches, and pushes the verification process farther than is possible in two days. The essential question of Tier II is whether or not what was learned during discussions with management during the Tier I due diligence is reflected in practice at a representative sample of branch offices, and among a random sample of loan officers. Ultimately, the discussions with loan officers serve to corroborate informal procedures followed in the field, which may not be documented anywhere else. For example, the loan officers may use their intuition in interviews with potential clients to determine if the client is being straightforward as opposed to the formal loan evaluation procedures. Through discussions with a few loan officers, the analyst may gain an understanding of what the loan officers’ intuition actually means, the questions that are asked, etc. This can be accomplished in 2–3 days, depending on the number of branches selected and their geographical distribution, and by a small number of evaluators whose

number will depend on the size of the MFI to be examined. In most cases, the preliminary review and head office meetings of Tier I will flow seamlessly into the process of deepening the analysis to include branch offices and loan officers.

The objective remains to determine if the policies, procedures, practices, and internal controls regarding loan portfolio management are prudent, and whether the MFI's MIS accurately reflects the risk profile of the loan portfolio. The approach remains iterative, covering many of the same areas as in Tier I. In this instance, interviews with branch managers and loan officers, surprise attendance at a credit committee in a branch, and a review of client loan files deepen the auditor's take on how well the institution functions.

Central to Tier II due diligence is the verification of consistent practices among branches, and by credit officers out in the branch network in the organizational structure. There are four areas of focus that substantially add to the Tier I work:

1. Veracity, consistency, utilization, and timeliness of MIS
2. The relationship between branch management and head office in terms of how the branch understands credit policy and procedures
3. The degree to which the work of individual loan officers reflects stated policy and actual best practice
4. A review of individual loan files

Given this, there is no need for the analyst to gather additional information prior to visiting the MFI than that needed to carry out the Tier I exercise. Nor is there any reason to carry out a deeper desk review than that of Tier I. Therefore the following is the additional work that must be done as part of the field visit made by the analyst to the MFI being evaluated.

### **Systems Department/MIS Review**<sup>8</sup>

In a Tier II due diligence, the analyst will need to focus more effort on the verification of the reports and the capabilities of the management information system, including both the accounting system and the portfolio tracking system. In Tier II due diligence, one analyst should spend at least one full day reviewing the MIS to determine the reliability of the system and

the level of accuracy of the reports produced. The analyst conducting the MIS review should have a basic understanding of microfinance and the related information needs, as well as a basic level of knowledge of information systems and how they function. The analyst conducting the MIS review should recognize that although a computerized system may have increased the volume of information available to management and staff on a timely basis, improper use of that technology may also increase the potential for inaccurate reporting and flawed decision making. Because data can be extracted from many financial and transaction systems, appropriate control procedures must be set up to ensure that information is correct and relevant. Ineffective and/or inaccurate incomplete MIS reports may increase the risks facing the MFI, including risks related to credit quality.<sup>9</sup>

By the end of the Tier II evaluation, it should be possible for the analyst to draw well-formed and substantiated conclusions about the information quality. The essential credibility of available information should always be a question: Is the story consistent, both internally and with past performance and present capacity? Information systems, electronic or otherwise, must meet certain basic requirements. They should track loan documentation that shows willingness and ability to repay; that indicates the lender has adhered to sound lending policies and has the basic capacity to obtain and maintain client accounts, and that generates useful reports.

Crucial to the capacity of the MIS to meet the information needs are the internal controls related to the MIS. The internal control systems ultimately affect the integrity, reliability, and accuracy of data, and the quality of MIS output. The MFI must have effective internal controls and the means to protect and secure the MIS from unauthorized or accidental modification and to ensure timeliness, availability, and usability of data. The analyst should confirm that the MFI has a disaster recovery system in place. Are there written policies and procedures regarding the internal controls of the MIS? Who is ultimately responsible for the security and internal controls regarding the MIS? Is that person(s) qualified and prepared to handle that responsibility?

As a result of the MIS review, the analyst should be able to obtain clear answers to the questions outlined in Table 6.

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<sup>8</sup> For further detailed information on the design of management information systems for MFIs, see *Management Information Systems for Microfinance Institutions*, CGAP Technical Tool No. 1 (Washington, D.C.: CGAP, February 1998). Much of this section has been drawn from this handbook.

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<sup>9</sup> From the MIS review.

**Table 6a Tier II Loan Portfolio Due Diligence Field Visit: Management Information System**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
<p>Does the MIS allow regular accounting, monitoring, and evaluation of the loan portfolio and related activities?</p> <p>Does the MIS produce timely reports?</p> <p><i>(Late reports, or reports that do not help loan officers efficiently manage each step in collections process, will degrade performance.)</i></p>	<p>Reports that are 3 or 4 days late</p> <p>Reports that do not track collections process closely</p>	<p>Reports that take more than a week to generate payments information accurately</p>
<p>Do the accounting and portfolio systems interface? For example, does interest automatically stop accruing on a loan that remains past due over a certain number of days, or does the program require manual manipulation of such data?</p> <p>Are payments reflected in both systems simultaneously or is double entry required?</p> <p>Do the totals agree for major accounts such as the loan portfolio?</p>	<p>Some difference, especially greater than that resulting from a lag in clearing unidentified payments received by banks on behalf of NGOs</p>	<p>General confusion about a substantial number of borrower account balances (&lt;10%), real disagreement between accounting and operations to correct information</p>
<p>What kind of historical data is available?</p> <p>Can all information about individual clients be compiled and accessed simply?</p> <p><i>(An MIS that does not easily present historical repayment performance for clients virtually assures that this MOST important variable is not being taken into account when making loans.)</i></p>	<p>Lack of access to prior repayment history of client when approving subsequent loans</p>	<p>Prior credit history of clients destroyed once loans repaid</p>
<p>Who has access to portfolio information and with what frequency?</p> <p>When do they get it and how do they use it?</p> <p>Particularly, are these reports used and trusted by loan officers?</p> <p>Are the reports produced by the MIS utilized in the management decision-making process?</p> <p><i>(Information that is not used is probably flawed somehow, and therefore not a positive force for maintaining portfolio quality.)</i></p>	<p>Existence of parallel manual MIS to control credit operations in lieu of machine generated results.</p>	<p>Managers, loan officers <b>derisive</b> of the utility of computerized MIS reports in their daily work</p>

### Branch Office Management

It is important that both analysts spend time in the branches, in order to reach an independent opinion on the extent to which branches carry out stated loan policies.<sup>10</sup> The analysts should choose the branches to be visited either randomly or based on a preliminary review of the portfolio reports and other information from the branches (which may reflect high delinquency in one or more branches due to local economic conditions in the region, poor underwriting practices, or even fraud at the level of the branch). The analysts should avoid letting MFI management decide which branches are to be visited, as management will

normally want the analysts to visit only the stellar performing branches.

Although the activities of a Tier II due diligence focus heavily on the work of loan officers, and to a lesser extent on their immediate supervisors, analysts should make every attempt to interact with staff members at every level in the organization. It is important not to lose sight of the fact that informal discussions with staff members who may not be directly involved in the administration or management of the loan portfolio may disclose valuable information to the due diligence.

Depending on the number of branches and the proximity of the branches to each other, the analysts may spend one day visiting a number of branches separately, conducting brief interviews of branch managers, and observing different aspects of the lending process and the centralized/decentralized

<sup>10</sup> R. Rock and M. Otero, eds., *From Margin to Mainstream: The Regulation and Supervision of Microfinance* (Boston, Mass., USA: ACCIÓN International, 1997), 43.

**Due Diligence Guidelines for the Review of a Microcredit Loan Portfolio**

decision-making processes at the branches. The analysts should review some of the loan documentation and loan files, as well as how the MIS is utilized

in the branches. The analysts should address at least the following questions during the review of the branches.

**Table 6b Tier II Loan Portfolio Due Diligence Field Visit: Management Information System**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
<p>Is information stored in the MIS easily accessible or is it relatively secure?</p> <p>Does the MIS allow different degrees of access depending on the user?</p> <p>How are user levels determined?</p> <p>Do management and staff understand the need for MIS internal controls and procedures?</p> <p><i>(Loose internal controls environment or open access to MIS allows easy entry for fraud.)</i></p>	<p>Failure to back up MIS weekly</p> <p>Weak controls over access—too many staff have access to data files, without adequate supervision to changes made after the fact</p>	<p>Open source or access to MIS throughout all levels of MFI</p>
<p>Was the MIS designed specifically for this MFI?</p> <p>Is it an adaptation of an off-the-shelf system?</p> <p>Was it purchased from another MFI or financial intermediary with similar information needs?</p> <p>Does the systems staff receive adequate technical support, or is the staff qualified to program and redesign the MIS as necessary?</p> <p>Is it relatively easy to design and change reports?</p> <p>Are there standards and procedures for changes and systems development?</p> <p><i>(Homegrown systems frequently lose technical support and eventually collapse under burden of program growth.)</i></p>	<p>Antiquated system that is having trouble keeping up with demands</p>	<p>Collapsed system, unable to perform; long delays expected before new system comes on line</p>
<p>Does the MFI ask its external auditors to carry out MIS audits, or include a close review of MIS during its annual audit exercise?</p> <p>Are the results of these audits available?</p> <p><i>(Failure to audit MIS leaves many opportunities for fraud to slip in.)</i></p>	<p>No MIS audit during last 24 months</p>	

**Table 7a Tier II Loan Portfolio Due Diligence Field Visit: Branch Office Management**

<p align="center"><b>KEY ISSUES</b> <i>(Concerns)</i></p>	<p align="center"><b>YELLOW CARDS</b></p>	<p align="center"><b>RED CARDS</b></p>
<p>What activities are carried out in the branches? Are payments disbursed and received in the branches? <i>(If branches manage cash, an extra layer of internal controls is required to prevent fraud.)</i></p>	<p>Haphazard cash management in branches; some payments received, especially for arrears</p>	
<p>How much oversight do the branches receive from the head office? Are most operational decisions made at the branch level? Are loan officers involved in the decision-making process? What decisions need to be made at the level of the head office? <i>(Operations that are too centralized become inefficient; how-ever, branch operations need to be highly standardized to promote an adequate environment of internal control.)</i></p>	<p>Branches managed on a personal basis by head-quarters staff, rather than through decentralized procedures and account-ability mechanisms</p>	
<p>How much time do loan officers and clients spend in the branch? How are collections work handled with risky clients? How aggressive are the loan officers and their immediate supervisors in their collections work? <i>(Loan officers should spend most of their day, every day, in the field! If they spend a lot of time in the office, they are not collecting loans.)</i></p>	<p>Presence of loan officers in office several hours daily</p>	<p>Loan officers spend less than 2 or 3 hours in the field every day</p>
<p>Are there explicit salary incentives for field staff? Do these have a perverse effect on ideal behavior in the way they are implemented? <i>(Accountability is critical to success. Sometimes incentives systems actually cause significant problems and imbalance.)</i></p>	<p>Unbalanced incentives system that leads to behavior that is too extreme in any one direction, or takes away from the motivation of staff</p>	<p>No accountability mechanisms for poor performing loan officers and their immediate supervisors.</p>

**Due Diligence Guidelines for the Review of a Microcredit Loan Portfolio**

**Table 7b Tier II Loan Portfolio Due Diligence Field Visit: Branch Office Management**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
<p>Who approves the restructuring and re-financing of loans? Do loan officers have the authority to reschedule/refinance without the involvement of supervisors? If yes, do loan officers understand the consequences to portfolio quality and income of refinancing/rescheduling, and avoid it unless absolutely necessary?</p> <p>Is an extra level of approval authority required?</p> <p>Is a written request/justification required? What does such a request look like?</p> <p>If restructuring and refinancing are permitted, is there a limit in terms of how many times it may be done over the life of one loan?</p> <ul style="list-style-type: none"> <li>The payment date of a particular loan should not coincide with the disbursement date of another. If the interest rate, term, or amount has been modified, the loan should be booked as restructured.</li> <li>Loans were paid off with cash, not in kind or other means of payment.</li> <li>Do they engage in concurrent lending</li> </ul> <p><i>(Unsupervised refinancing will be abused and consequently will misstate risk levels inherent in the loan portfolio.)</i></p>	<p>Widespread restructuring, especially if done without independent oversight</p> <p><i>(This is deep concerning and should prompt much more extensive testing of the quality of the loan portfolio.)</i></p>	<p>Discovery of substantial and indiscriminate restructuring</p> <p><i>(This may well cause the due diligence process to stop.)</i></p>

**Table 7c Tier II Loan Portfolio Due Diligence Field Visit: Branch Office Management**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
<p>How do the branches project portfolio demand?</p> <p>Are loan officers and other field staff involved in that process?</p> <p>Are all projections provided by head office staff?</p> <p>Is their balance between the growth impetus and the loan portfolio quality requirements?</p> <p><i>(Inadequate mechanisms for projecting credit demand frequently result in liquidity crisis and ultimately, high arrears.)</i></p>	<p>Branches uninvolved in projecting future credit demand, or even annual disbursement targets</p>	<p>Heavy-handed credit demand projections executed by head-quarters, and actively resisted by branch staff who do not feel they are reasonable</p>
<p>How is staff morale at the branch level?</p> <p>Is head-office leadership seen as being in touch with the issues at the branch level, or as a bureaucratic imposition?</p> <p>Are there substantial disagreements about important policy issues?</p> <p><i>(Low morale in branch-office staff increases the probability of fraud, as staff no longer have strong desire to stay.)</i></p>	<p>Low morale, reflected in slow pace of work, high staff turnover, and frustration expressed openly by staff and supervisors</p>	
<p>Is there consistency in the way that different branch offices work, their policies, and their management style?</p> <p>Are poorer performers being attended to effectively by head office leadership?</p> <p><i>(Inconsistency generally reveals basic weakness in management at the head office. This means that problems do not get addressed effectively, except to the extent possible at the branch by good field officers.)</i></p>	<p>Inconsistent results among loan officers allow-ed to persist for several months; apparent inability to get poor performers into line or finally remove; inconsistency across branches, and loan officers in branches</p>	<p>Poor performers not removed from system within a period of less than 3 months</p>

## The Work of Loan Officers

When conducting Tier II due diligence, it is important that the analysts recognize that the loan officers are one of the most important sources for data verification. The loan officers know the true story of the institution and the clients, as well as the procedures that are actually followed in the field. Depending on the size of the MFI, the analysts should be prepared to spend up to three full days each with the loan officers, away from the presence of senior management, in order to best capture the true feel of field operations. The analysts should accompany loan officers on client visits, in order to witness procedures followed in the field first-hand. On these visits, the analysts should be able to get a sense of the client's history with the MFI, level of satisfaction, relationship with loan officers, etc. Discussions with clients should

be brief and unstructured, and the questions asked should be few and relatively open-ended.

During **informal** conversations with loan officers, the analysts should touch on portfolio quality, how closely policies are followed, and how flexible they are (e.g., loan sizes, terms, etc.), follow-up on outstanding portfolios (to determine relationship with clients, etc.), rescheduling/refinancing, and delinquent loan procedures. The analyst should be careful when asking questions of the loan officers in order to avoid intimidating field staff and impeding the discussions and outcomes. The analysts should **tactfully gain an understanding** of the answers to the following questions by accompanying loan officers while they carry out their normal rounds with clients.

**Table 8a Tier II Loan Portfolio Due Diligence Field Visit: Loan Portfolio Management by Loan Officers**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
<p>What is the typical background of the loan officers?            What does the loan officer training consist of?            Are these appropriate to the lending methodology employed?  <i>(Failure to adequately train loan officers lies at the heart of the deterioration in lending practice)</i></p>	<p>Absence of a formal training and updating program lasting past the initial week or two done at the point of initial hiring.</p>	<p>Greatly varying criteria used across branches to grant loans and follow through on the collections process</p>
<p>If the institution operates with incentives Do the loan officers perceive the goals of loan portfolio growth as outlined by management to be realistic? Do the loan officers view the incentive system as a fair judge of performance?            How are the loan officers' territories established? Are these perceived as being fundamentally fair to all?  <i>(Accountability is hard if loan officers feel work distribution is unfair, or that they do not have equal productive potential, morale suffers and arrears rise)</i></p>	<p>Large number of loan officers that do not receive incentives pay, or that receive a small amount in relation to their base salary</p>	
<p>What are the credit monitoring procedures that loan officers follow?            How often are existing and new clients visited?            Are the loan officers well-known in the communities where clients operate their businesses?  <i>(Presence lies at the heart of loan recovery. Constant rotation of loan officers among zones is not generally a good practice.)</i></p>	<p>Presence of loan officers in office several hours daily             Conversely, if analyst visits communities, is it clear that LO is known by all and knows his/her way around</p>	<p>Loan officers spend less than 2 or 3 hours in the field every day</p>
<p>Do loan officers use the official MIS, or have they invented their own, more effective system for keeping track of client payments?</p>	<p>Existence of parallel manual MIS to control credit operations in lieu of machine generated results.</p>	<p>Managers, loan officers <b>derisive</b> of the utility of computerized MIS reports in their daily work.</p>

**Table 8b Tier II Loan Portfolio Due Diligence Field Visit: Loan Portfolio Management by Loan Officers**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
<p>What is the attitude of the loan officers towards “acceptable” levels of late payments and their commitment to aggressive collections efforts?</p> <p>Does the MFI continue to try to collect on the loan even if it has been written off? Is that a reasonable action?</p> <p><i>(Attitude is everything. Loan officers who are full of excuses for poor performance will not generate good performance.)</i></p>	<p>Relaxed attitude about key results, targets not being met, loan officers who place blame on poor performance outside the institution</p>	<p>Very relaxed attitude about repayment, unwillingness to go out immediately and collect loans when a day or two late</p>

### Review of Loan Files

An important element of the Tier II analysis is the random selection of a small sample of loan files for review at each branch. This allows auditors to spot check loan documentation and credit appraisal at the level of specific clients. Using a complete list of loans from that branch as of a certain date (reconcile total amount with head office report of same date), the auditors will randomly select a sample of 20–30 files with a distribution that approximately reflects the product range, diversity of loan officers, size, delinquency, and refinance status. The selection makes no attempt at statistical precision, but rather is a back-of-the envelope reflection of the composition of the branch portfolio. By the time the evaluation team sits down to review client files, the auditors should have a clear understanding of what to expect based on prior discussion with personnel. Any aberrations should be noted in detail with respect to their nature, circumstances and frequency. Do the files make a transparent and properly documented case for each loan decision, as per the criteria of the institution? Are guarantee coverage, approval levels, and other credit policy issues covered?

Internal control is an essential part of credit management. At the most basic level of control, there must be written applications for all loans and credit files for all borrowers. All loans over a certain amount must be selected for review. Check that the credit officers do not disburse or receive cash from clients, except in properly authorized instances that can be transparently tracked. Analysts should check the loan files for evidence of re-aging, rescheduling, or refinancing of loans, or other means of “evergreening.” The analysts also should have clear answers to the questions in table 9.

The Tier II analysts should evaluate the method developed by the MFI for classifying its portfolio and the effectiveness of estimating losses by

comparing real losses to past estimates. The analysts should determine if the MFI has developed or plans to develop new methods for estimating risk, based on their own experience rather than on a predetermined format, that is, by number of days past due. For a microfinance institution, the risk classification system could be based on observed patterns of loan repayment with regard to specific lines of business (commerce vs. production) or geographic location (rural vs. urban portfolio or specific branches). The loan classification system could also classify loans by identifying refinanced loans, individual, and group loans, loan type (fixed asset vs. working capital), loan size, and guaranteed versus non-guaranteed loans. These classifications could be used not only to establish provisioning rates but to set differential risk-based interest rates.<sup>11</sup>

Classification of loans by degree of risk is a general industry practice among well-managed banks and provides bank management with a greater understanding of its lending risks. Banks and other commercial financial institutions rate the quality of their portfolios, not only based on the level of late payment but also taking into account other factors, such as collectible guarantees, client history, loan type, and industry trends that could affect a client’s potential capacity to repay. To illustrate, a client that is making timely payments on his third loan but who was delinquent on his first would have his loan classified as riskier than that of someone who had never been late with a payment. As with stress testing and static pool analysis, portfolio classification systems are not currently used by most MFIs.

<sup>11</sup> The ACCIÓN CAMEL, Technical Note, Microenterprise Best Practices, p. 42.

**Table 9 Tier II Loan Portfolio Due Diligence Field Visit: Loan File Documentation**

KEY ISSUES (Concerns)	YELLOW CARDS	RED CARDS
<p>Are basic requirements for obtaining loans verified and documented?</p> <p>Where appropriate in any given credit methodology, do the working papers in the loan file indicate that:</p> <ul style="list-style-type: none"> <li>• calculation of payment capacity has been made, for example, all-inclusive cash flows of the family business?</li> <li>• sales and expenses during the periods under consideration show reasonable growth, with an eye toward verifying if the flow of funds reflects a reasonable reality for the micro borrower or if there have been extra-ordinary variations?</li> <li>• the amount of the loan stands in reasonable relation to the current assets with the micro-business, in order check the level of indebtedness?</li> <li>• the amounts of the loans have increased in a manner that appears to correlate with the growth of the business?</li> <li>• the total loan does not exceed some multiple (2 x) of the micro-business?</li> <li>• the loans have at least two signatures for approval?</li> </ul> <p><i>(Poorly kept or incomplete loan documentation invite fraud, though complete documentation does not prevent it.)</i></p>	<p>Incomplete or poorly documented loan files</p>	<p>Chaos in the loan documentation system</p>

**Concluding Comments about Tier II**

In Tier II due diligence, the field visit and related interviews serve to compare and verify the consistency and conformity of reports and information provided by the MFI’s management with actual practice in the field. Through interviewing branch staff, loan officers and clients, as well as reviewing files and other documentation, the analyst should be able to verify the conformity of financial and statistical information received earlier in the process to the manner in which the program operates in practice. Again, as with Tier I, the analyst should conclude Tier II having a strong sense of the trustworthiness of the information about loan portfolio quality that has been provided by top management. Again, as with Tier I, an analyst who finishes a Tier II exercise with fundamental doubts about an MFI’s presentation of the risk of its portfolio should be wary. Further investigation will most likely turn up a worse situation than anticipated.

Tier II has the advantage over Tier I of comparing an “official,” head-office presentation of the MFI and its policies with actual practice in the field. If Tier II is carried out by a careful analyst, who has more than passing familiarity with the world of microfinance, then significant problems will almost always be identified, and some measure taken of their

relative potential importance for the future of the institution. Tier II due diligence is not, however, powerful enough to estimate the precise degree to which unhealthy policies or misrepresentation can affect the estimated risk of a loan portfolio. That is the purview of a Tier III due diligence exercise.

**TIER III DUE DILIGENCE**

Tier III due diligence builds on the work done in both Tier I and Tier II. Someone who wishes to do a Tier III due diligence must also complete all of the tasks and analysis laid out in this document for **both** Tier I and Tier II due diligence. For the sake of simplicity in presentation, the remainder of this section will refer only to those activities that must be carried out **in addition** to those of Tier I and Tier II in order to complete a Tier III evaluation.

The goal of Tier III due diligence is to carry out an analysis that will approximate the depth and scope of that done by rating agencies, credit enhancers, and investment banks involved in commercial transactions. The end result is a clear and quantifiable understanding of the risks to the loan portfolio (as well as other risks that could impact the institution’s cash flow to repay the proposed transaction) and an ability to make an informed

judgment as to the future performance of that portfolio.

A Tier III analysis will allow the analyst/auditor to answer three types of questions:

1. Is what the MIS says about arrears and refinanced loans credible?
2. Is there a significant level of fraud? Is the MIS loan balance credible?
3. Are there substantial deviations from the stated lending methodology?

Tier III tests the validity and/or accuracy of individual account balances underlying the loan portfolio balance and the estimated risk in the loan portfolio from delinquent and restructured loans. Tests include client visits and vouching to original documentation to verify that the loan balance on the books of the MFI corresponds to the amount in the records of the borrower as of a certain date, and to measure the frequency of certain risky methodological deviations. Visits to client businesses will also instill a certain confidence in statements about the issue of fraud.

Tier III is a simple, quantitative portfolio analysis that stands on the shoulders of the preceding evaluation of credit policy and accounting issues in Tiers II and I. Primarily a data gathering exercise, Tier III is quite regimented. It employs statistical tools to make more exact statements about entire portfolio. It involves exhaustive sampling of large and restructured loans. For some of these issues (such as a phantom-client fraud), the merest presence is a red card. For other variables (such as credit policy irregularities), a certain proportion is expected.<sup>12</sup>

Tier III due diligence aims to achieve **a level of certainty** regarding the quality of the loan portfolio that would satisfy a commercial investor. A commercial investor demands clarity with respect to all the risk factors inherent in a proposed transaction and expects up-to-date, detailed, and reliable portfolio information (along with other information) presented in an acceptable format for analysis. Microfinance normally carries with it a high degree of information risk (lack of timely, reliable, or detailed data), unlike most of the companies that are evaluated during a traditional due diligence process as conducted by rating agencies, investment bankers, and financial

analysts.<sup>13</sup> Traditional due diligence is based on the assumption that the financial statements are accurate<sup>14</sup> and reasonably reflect the company's financial condition and performance at a particular date.

Because most microfinance institutions are not tightly regulated or do not necessarily undergo high quality external audits, information they produce on loan portfolio performance and financial statements may misrepresent the actual condition of the organization. A commercial investor would normally require a greater level of certainty about actual repayment rates, levels of refinancing, and adherence to credit policy than provided by the in depth, but largely subjective reviews of Tiers I and II. So, while the analyst will have identified the main areas of concern with regard to loan portfolio management, and will probably formed a rather detailed and well documented opinion about risk levels in the portfolio, the due diligence process in Tier III will actually determine quantitatively, and to a pre-selected degree of certainty, whether the MIS of an MFI accurately reflects the reality of repayment and refinancing performance and whether credit policies are being executed consistently according to key indicators.

### **When Is Tier III Appropriate?**

In some instances, the additional cost of greater certainty regarding actual arrears, actual level of refinancing, or incidence of fraud may be justified. If investors are considering a substantial equity stake in a licensed MFI (which could require additional contributions of capital should the institution perform poorly), they may want a more exact statement about the probability of misrepresentations about portfolio quality within certain degrees of confidence and upper bound (variance above the predicted value), or a bank regulator may feel that a deeper analysis is required to fulfill his prudential supervision obligations.

Any sampling approach chosen for a Tier III due diligence should provide access to a "full slice" of the loan portfolio database, including unique identifiers, specific arrears status, and balance and payment information. To carry out Tier III due diligence, the analysts involved must have access to a wide range of data sources—accounting information, physical vouchers, accounting journal entries, and

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<sup>12</sup> Tier III is a simple approach that does not look at the probability of future cash flows from specific sub-portfolios, and is therefore not as useful in actual valuation, but is useful for making assumptions about the probability of future cash flows. Often, it is difficult or far more expensive to lay hands on sufficiently detailed information for that kind of (more revealing) analysis.

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<sup>13</sup> In researching due diligence processes for this document, the authors conducted numerous interviews with representatives from various rating agencies, investment bankers, and commercial investors, who repeatedly confirmed that information risk is not a primary concern in the traditional due diligence process.

<sup>14</sup> The analysts rely, in part, on the fact that a well-known local auditing firm affiliated with one of the big four auditing firms usually audits the financial statements.

other substantiating documentation, which can be independently verified to ensure reliability. Tier III will require more information than that provided for Tiers II, and I prior to an on-site visit.

The heart of the Tier III due diligence process takes place on-site, in the head and branch offices. Given the level of detail involved in analyzing the loan portfolio, credit processes, and portfolio management, the on-site visit could take three professionals 15–30 days, depending on the age of the institution and the availability and quality of information. It is expected that the team will spend another 15 days off-site analyzing, modeling, writing, and editing the complete analysis.

Although one might assume that the due diligence of a loan portfolio carried out by traditional commercial rating agencies, would be much more extensive than that performed by the most experienced analysts of microfinance institutions, it is not necessarily so. Rather, these rating agencies have developed statistical models that help to predict the potential defaults of selected portfolios and can plot historical net loss performance of those portfolios. They have been able to do so because there is a great volume of historical information in the traditional commercial financial sector that can for the most part be accepted at face value. As mentioned above, analysts carrying out traditional due diligence do not generally doubt the integrity of the audited financial statements, and they also rely upon the company's representations and warranties that the information is accurate. They do not have to spend considerable time and resources digging behind the numbers to ensure that the reported numbers are what they say they are or that the institution is following accepted accounting practices (for example, in measuring delinquency). Accountants or raters normally rely on a data dump directly into their own statistical packages to which they then apply their own quantitative analytical tools. Consequently, the traditional due diligence process of a loan portfolio is much shorter, usually one to two days on-site to perhaps a week at most (if regulatory and legal issues affecting the portfolios are complex), than the number of days suggested here for analyzing a micro loan portfolio.<sup>15</sup>

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<sup>15</sup> Another factor contributing to a traditional analyst's limited time on-site is that the transactions being rated or provided credit enhancement may have to undergo a separate portfolio audit by the institution's external auditors, to provide the analyst with independent verification of portfolio quality. The portfolio audit requirement may remain for the first few tranches of a transaction until a track record is established. Finally, MFIs to date have not developed or used sophisticated sampling and modeling techniques due to the lack of sufficient historical data (reflecting in part the young age of many MFIs), lack of standardized and reliable

The composition and experience of the team conducting Tier III due diligence, in terms of financial and statistical analysis, spreadsheet skills, language capabilities, understanding of the microfinance sector and its unique characteristics, is critical to the success of Tier III due diligence. Much of the team's time will be spent with the MFI staff in trying to carry out a sound statistical sampling of the portfolio. At least one member of the team must have excellent spreadsheet and modeling skills and it could be a local junior professional working closely with a senior professional in ensuring that the proper information is being gathered to produce the desired spreadsheets and models and then interpreting the data.<sup>16</sup> One of the two will need to stay on to monitor the local junior auditors who will actually carry out the loan portfolio.

### Tier III Approach

Since fieldwork and detailed testing at Tier III can be quite extensive, the person who needs the review can either do it themselves or contract out to an analyst/auditor to complete and conclude on the detailed tests. Terms of Reference for auditors are included as an annex to this guide. **Note that for the review at Tier III to be effective, the analyst/auditor should have a detailed knowledge of the client's business.** Hence, should the decision be to contract out the review at this point, the following important preparatory steps are essential:

1. Document and discuss with the contractor the findings and conclusions from the Tier I and Tier II reviews. Conclusions from analytical reviews and from the Tier II review of the MIS set an expectation of what may be found in Tier III and determine where to concentrate effort. If for example, a high incidence of deviation from the credit methodology has been observed, there may be no need for further testing for substantial deviations in Tier III. Tier I and II conclusions may adequately establish the fact.
2. Discuss tier III objectives as listed in the overview in this case, or including any other additional specific objectives tailored to the specific nature and practices of the MFI. These objectives will form the foundation for sample planning and detailed tests.

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financial information, and the inadequacy of management reporting, particularly with respect to the accounting and portfolio systems.

<sup>16</sup> See S. Salzman and D. Salinger, "ACCIÓN CAMEL Technical Note" (Washington, DC: USAID/Microenterprise Best Practices Project, September 1998) for examples of spreadsheets used in the portfolio analysis.

3. Define the population to meet the stated objectives, and discuss and agree sample design and selection methodology before the fieldwork begins. When contracting out, normally the contractor will put forward a proposed sample design.
4. Agree on the output report and the format of conclusions. (See sample terms of reference in annex 1.)

The sequence of activities includes defining the objectives, planning the sample, selecting the sample and performing the tests, and evaluating the results.

### **Define the Objectives**

The critical part of Tier III is to define the objectives for the review. If the organization that has commissioned the Tier III requires certainty about the level of loan write-offs, delinquency or refinancing, perhaps because it is considering a sizeable investment, it will need to take a representative sample of the entire portfolio in order to produce a statement that will allow it to emit an opinion about the values represented for the loan portfolio quality. If it were to simply take a simple sample of the entire portfolio, this approach would appear to be the most powerful in terms of its conclusions.

On the other hand, experience with microfinance programs suggest that fraud, illegitimate refinancing and risky lending tends to be concentrated in specific loan officers, branches, or regions. If the organization that commissioned the Tier III due diligence wanted to be certain that it had captured the potential deviations, it might want to ensure that its sample included loans from all regions, or all branches, or all loan officers. This would require stratifying the sample and could drive up the cost considerably—beyond reason for the purpose of the due diligence.

For example, in the case of a portfolio of 65,000 loans, with no stratification by branch of loan officer, 90 percent certainty that the true proportion of the portfolio-at-risk does not exceed the estimated proportion by more than two percentage points requires a sample of 259 cases. If stratified by branch, the sample jumps to 11,000 cases. Add stratification by loan officer and it requires 20,000 cases. These numbers increase rapidly if the upper bound is lower or if stratification is used. Strata would be defined along dimensions where errors are likely and/or costly—branch, loan officer, loan size, and restructured loan.

On the other hand, normal audit procedures are generally inadequate, as they do not test a substantial number of loan operations, nor do they

follow through in the field in a manner that is consistent with discovering the most common areas of fraud. Because microcredit portfolios are not heavily concentrated in a few large loans, standard audit procedures will not review a material number of operations, and instead will rely on MIS, which may not be accurate.

The opinion that would result from such a review might be the following:

“In our opinion, the schedule of the loan portfolio presents fairly in all material respects the loan portfolio component of the MFI as at March 31, 2004.”

### **OR**

“In our opinion, the loan portfolio component may be quantitatively misstated by an amount of \$5,000,000, as at March 31, 2004.”

Organizations might take another, less costly approach, one that does not directly test the value of late payments, but rather, tests for the existence of behaviors that it would consider risky or that would invalidate the statements the MFI has made about its portfolio quality. This approach would not be powerful enough to suggest what the adjusted balance would be. But it would be powerful enough to say with a high degree of confidence that certain prohibited or risky practices exist, in significant levels, in the loan portfolio of an MFI. For many investors, this type of information might be sufficient to make a decision about working with an MFI that is not transparent about its portfolio administration, or is unable to impose discipline on its loan officers and branch managers.

This approach is a hybrid statistically valid testing of MIS and internal control procedures that will speak to the following three questions:

1. Is what the MIS says about arrears and rescheduled/refinanced loans credible?
2. Is there a significant level of fraud, refinancing, or ‘alternative’ payments (in-kind, post-dated checks)?
3. Are there substantial deviations from the stated lending methodology?

The first and second objectives are similar to the extent that they aim to confirm account balances. They are by nature subject to substantive testing. From a statistical viewpoint, any value item subject to testing is known as a variable. The first objective can further form the basis for reviewing and testing the adequacy of loan-loss allowance and is similar in

nature to the work needed to certify a pre-specified level of risk in a portfolio. The second test may contribute to this review in the event that it unearths rescheduled or refinanced loans which the MIS misrepresents as current. The third objective tests for attributes of lending practices, such as disbursements without appropriate approvals, unauthorized rescheduling, rapid increases between loan sizes, and incidence of non-cash repayments, among others. It is by nature a test of the internal control environment. As seen later in the section on evaluation of results, findings from substantive tests and tests of control are analyzed and reported differently. The auditor/analyst will need to determine that the population from which to draw the sample is appropriate for each specific objective. In this case, all three questions can be tested using a single source document, the detailed loan portfolio report in the loan tracking system. As such, the tests for these particular objectives can be based on the same sample.

The opinion that would result from this type of review might be the following:

“In our opinion, MFI’s practices comply in all material respects with the MFI’s policies and procedures for loan portfolio management and internal control systems are sound, adequate and effective and can be relied upon to generate accurate component balances.”

**OR**

“In our opinion, the MFI’s practices deviate from the MFIs policies and procedures for loan portfolio management and weaknesses identified in internal control procedures may represent a 30 percent risk in component balances.”

### **Plan the Sample**

If the organization commissioning a Tier-III evaluation requires certification of the reported levels of loan defaults, it should contact an audit firm and discuss with them the level of representative sampling that will be required to produce that result. In negotiating with the audit firm, it should stress with that firm that it is not only seeking to test the accounting accuracy (which it will tend to do by looking at a limited number of test cases), but that it is also interested in discovering whether or not substantial levels of unreported delinquency or risky practices exist. This will drive up the sample size considerably, but is the only way that the commissioning organization will know whether the stated risk approximates real risk. Ultimately, large audit firms have their own way of calculating sample size and

deciding design; and they will not likely give the type of opinion required if they cannot follow their own internal procedures. **For this reason, this tool only pursues a description of the less costly, second option for the rest of this chapter, which examines whether a strong likelihood of risky or fraudulent practice exists within the MFI.**

Sample design involves determining the sampling approach. The sampling approach can be statistical or non-statistical. A statistical sample enables conclusions to be drawn from some portion of the entire loan portfolio in a representative manner. For example, this could be looking at all refinanced loans or all loans made by newly hired loan officers to analyze lending policies in these two areas of potential risk. Non-statistical sampling focuses on those items in the population believed to provide the most useful information, but in a non-mathematical way. It is also known as judgmental sampling and the conclusions are judgmental. For example, the analyst might want to look at the loans of a certain branch that seemed to have overcome problems during the preceding year to see just how those problems were overcome or whether they were simply buried. A non-statistical sample cannot be used to make statistically valid inferences on an entire population. For efficiency and accuracy, both approaches can be combined.

Sample design impacts upon sample size in statistical sampling. The tighter the precision required, the more complex the design and the larger the sample size. The larger the sample size, the higher the cost of carrying out the due diligence. Sample size can be computed using sample size tables (available in statistical textbooks), statistical sampling computer software, or the sample size formula also available in statistical textbooks. Practical factors to consider include resource availability/cost in relation to the decision at hand. The decisions surrounding sample design should be discussed and agreed with all parties involved from the onset.

Since the purpose in this second, hybrid approach is to look at the way a particular MFI manages portfolio risk – and whether it engages in a systematic ‘cover-up’ of poor results through any one of a variety of potential techniques, it is appropriate to **oversample** the types of loans that are more likely to reveal these practices.

Some factors to look at more closely are:

- larger loans;
- delinquent loans;
- loans belonging to clients that were more than 30 days delinquent on a prior loan;

- all loans made by loan officers with higher than average levels of loan write-offs;
- loans made by new loan officers; and
- loans that are relatively large (or whose payment) increased greatly from the prior loan.

The decision on which areas to over-sample can be based on the findings from Tiers I and II. For example, if the investor is concerned about the presence of refinancing delinquent clients, all loans belonging to clients that were delinquent over 30 days on a prior loan could be over-sampled. If concerned about significant deterioration in training of new staff were an issue, one could over-sample new loan officers. If a push by the MFI to reach financial sustainability seemed unrealistic, larger loans could be over-sampled. The auditors can also combine any number of these criteria. In all cases, they would ask the MFI to identify all loans of clients belonging to a particular group, and then apply scientific and representative sampling strategies to that subset of the entire portfolio. They might also wish to include a substantial number of healthy loans in the sample. In all cases, they would need to look at several hundreds of loans, not a few dozen.

Over-sampling is necessary because one expects the incidence of risky or fraudulent behavior to be relatively low as a percent of the entire portfolio. It would be worrisome if the institution were systematically refinancing 5–10 percent of its delinquent borrowers in order to report a 2-percent late payments rate. Yet the auditor might not want to look at 90 healthy loans just to determine just how much refinancing there has been, and instead focus on a set of loans where the probability of discovering irregular refinancing is far higher than in the loan population as a whole. If the institution were systematically refinancing, this fact alone could be sufficient to stop further investigation. It is not necessary to determine the precise level of this behavior.

So, if the auditor built a sample of 400 loans, composed of samples of the 100 largest loans made by the MFI, 100 loans made to clients who were late on their prior loans, 100 loans that are currently delinquent, and 100 loans that are healthy but are assigned to loan officers with a higher-than-average level of late payments in their loan portfolios. Each loan to be sampled in each of these categories would be selected at random (except for the group of the 100 largest), although some consideration might be given to the logistics of the exercise. It might not be reasonable to require the evaluator to travel 1,000 kilometers to review two or three cases.

For each of these groups, taking an incremental approach to sampling—the method of discovery—involves drawing a limited sample. The analyst tracks the instance of irregularities within each of the subsets of the 400 loans. If an irregularity appears, then an additional sample of the same size is drawn and checked. If there is no further instance, then the sampling stops. In this sense, the process is incremental. Without stratification, an incremental approach becomes more feasible. One can decide to pull 400 loans, check whether the incidence is within desired parameters and, if not, pull additional sets of 100 loans, check again, and so forth. By fixing the number of loans to pull ahead of time, before doing the next check, one can minimize the logistical problem of moving among each branch for every incremental sample.

This approach is best for questions involving very small proportions of the loan portfolio. How many instances are necessary before the alarm is raised depends on the desired confidence level. This approach allows measurement of instances that are a very low percentage of the total population. This approach would simply be a **method of discovery** in which, if  $n$  cases in the sample are encountered, the analyst can make an inference about the total portfolio. In these instances, the analyst expects close to 100 percent correlation. If, for example, the amounts and dates of loans paid out, paid off, or refinanced show errors, then fraud or deliberate misrepresentation is suspected. Any deviation from the stated authorization procedure, such as in the relation between the value of the guarantee to the size of the loan, too few members in a group, or excessive size increases, can be viewed as a red card as well, according to their appropriateness as defined by the lending methodology that is being reviewed.

### **Select the Sample and Conduct Detailed Tests**

Timing is a big issue. Tier III auditors will need to be able to verify the amount outstanding as of the date the sample is drawn by comparing what is the case at that moment with what the MIS says. Clearly the auditors will have to draw the sample on a date **after** the institution gives the portfolio data. This means that when the actual files and vouchers are pulled for verification, the reality they reflect is a later date. Although this is an obvious point, it is essential to reconcile data from a specific date with MIS reports from the same date in any due diligence exercise.

To extract each sample of 100 loans that are to be looked at during the Tier III, the method chosen will determine how this is done. For simple random sampling, either Excel or SPSS or an off-the-shelf

audit sampling software can be used. (With Excel, use the “Analysis Toolpak” add-in and click on “Tools > Data Analysis > Sampling.” With SPSS, go to “Data > Select Cases,” then use the option “Random”.)

There are two types of inputs for the Tier III exercise:

1. An electronic file of portfolio data from the information system of the MFI, which reflects the total portfolio in the format described in the attached instructions, and which should be made available before the team arrives on site
2. Corroborating documents, such as payment vouchers, accounting journal entries, reports from the loan tracking system, and loan documentation (loan contracts, collateral guarantee documentation, and the rationale for the credit decision). This information is gathered before the field visit. The objective for requesting, converting, and sorting the MIS information is to allow the calculation of an estimate of the actual incidence of certain specific variables.

The second type, the corroborating documentation, will be pulled and audited on a case-by-case basis according to the output of the sample size and stratification calculation **after** the due diligence team arrives on site.

### **Gathering Information on the Selected Sample<sup>17</sup>**

Once the sample has been selected, the evaluators should go to the branch offices where each of the sample loans originated and gather the information listed below. The evaluator will have to compare information from the loan files, the loan tracking system, and the accounting system, and will also need access to payment vouchers, loan applications, repayment schedules, and delinquency reports for both the current loan and the prior loan. The evaluator should also have selected a number of key indicators that speak to risk within a given lending methodology, for testing in this exercise. The same information is gathered for all loans, irrespective as to which sample set it belongs!

The information gathered through this process should be recorded onto an EXCEL spreadsheet for subsequent analysis.

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<sup>17</sup> These procedures are taken from the “Illustrative Agreed-Upon Procedures to Test the Loan Portfolio Delinquency Report and Compliance with Loan Policies and Procedures,” Annex D of *External Audits of Microfinance Institutions: A Handbook*, CGAP Technical Tool No. 3 (Washington, DC: CGAP, December 1998).

- For each selected loan, compare the repayment schedule with the payment vouchers that support actual payments received. Determine means and dates of the past six repayments. Classify loan by type of payments received (cash, check, post-dated check, new loan, repossession of collateral, other).
- Follow each of these payments through to the general ledger, checking compliance with the recording policies established by the MFI for interest and principal amounts, and for the recording and accounting treatment of non-cash payments.
- For non-performing loans, determine the actual aging of the overdue payments according to the repayment schedule and compare it with the delinquency aging report provided by the MFI. This can be done by comparing an individual client’s ledger account with the delinquency report.
- For each selected loan, determine whether the client’s prior loan was repaid by a non-cash or partial cash payment (through rescheduling, refinancing, post-dated or third-party checks, or receipt of collateral or equipment). This is done by reviewing the final two or three payments of the client’s prior loan to determine repayment behavior. The final payment voucher of the prior loan should be checked to determine actual means of repayment.
- For each selected loan, including the previous two loans, test compliance with stated credit policy for the limited number of key indicators that relate to risk, as determined in Tier II. For some indicators, compliance is based on ratios found in a single loan application (such as the relation of repayment capacity to repayment amount). In others, the indicator compares data from two or more subsequent loans (such as the rate of increase in loan or payment amount)

In addition, and especially in those cases where loan officers manage cash payments in the field, the analysts will want to visit a large number of loan clients. They will want to over-sample clients who are or have been late in their repayments. In these visits, which should probably be pitched to the clients as a sort of “client service evaluation,” the team should endeavor to accomplish these things:

- Visit a substantial number of clients from the sample of non-performing loans to determine, on the basis of their records or recollection, their

repayment history on their present outstanding loan. Compare their understanding of their repayment status with the loan portfolio delinquency report. In the case of non-cash payments, compare the client's understanding of their repayment status with that of the MFI.

- Visit a substantial number of clients with current loans to confirm their existence or occurrence of transactions. Meet the clients, trace loan-tracking records to client passbooks and ascertain the validity of transactions. For any clients that are not available to meet, determine their neighborhood and ask other clients in that vicinity where those clients live and what they do for a living and compare responses.
- Determine how cash payments are actually made to the MFI. For example, are payments made to loan officers in the field? Do group leaders make the group's payment to the MFI office, or to a bank? Determine what documentation is provided to clients for the cash payments, specifically with respect to value and conditions. It is particularly important to focus on the time between the actual repayment and when that repayment is entered into the MIS of the MFI.
- Determine the veracity of information contained on the loan application, particularly with respect to the key indicators that can be derived from business level information. (Generally, these indicators will involve information that can be collected and processed by non-specialized audit personnel.)
- Look for evidence of fraud through the granting of loans to non-existent groups, kickbacks of some, or all, of the loan amount to the originating loan officer, bribery, or other forms of malfeasance. (For this objective, the team should **not** be accompanied on its visit by that client's particular loan officer.)

## Evaluate the Results

**Analyze Tier III findings.** Based on the test findings, the analyst/auditor should compute the **size** of error reported in relation to the current loans (second objective) and non-performing loans and restructure loans (first objective). In analyzing the errors detected, the analyst/auditor will need to determine whether an item in question is in fact an error. Reference to the objectives defines those conditions that constitute an error, and whether that error is willful misrepresentation. For example, an incorrect posting between

customer accounts does not affect the total balance of the loan portfolio, although it may affect a particular procedure like the analysis of non-performing loans. The analyst would always consider qualitative aspects of the errors including the nature and cause of the error and the likelihood that there is a systemic pattern in the loan portfolio.

Excel (or SPSS or any statistical audit package) will return not only the average error but also the standard deviation, and the precision at a 95-percent confidence level. (With Excel, go to "Tools > Data Analysis > Descriptive Statistics," and with SPSS, click on "Analyze > Descriptive Statistics > Explore.") The analyst then projects the error results of the sample to the population. The method of projection will need to be consistent as the method used to select the sampling unit. Where the population has been divided into strata, the project of errors must be done separately for each stratum.

To evaluate the results of the tests, the analyst/auditor would project the sample error in the population and then add an appropriate allowance for sampling risk to arrive at a net "potential misstatement." If this is above the tolerable misstatement, the conclusion would be that there is an unacceptably high risk that the account balance is materially misstated.<sup>18</sup> In an audit or an evaluation carried out by a bank examiner, the client would then be asked to look for and correct similar errors in the entire population, and if not, the audit would be qualified. In this due diligence exercise, the investor would evaluate this conclusion in light of the risk the investor is willing to take. Ultimately, even Tier III evaluations are subjective in nature since the commissioning agent must determine which of the practices uncovered represent unacceptable levels of risk or behaviors that indicate a culture of opaqueness that can lead to high risk if exposed to difficult external shocks. (The general ranges for acceptability for the variables examined in Tier III were provided in the discussions of Tiers I and II, and so are not repeated here.)

**Reporting Tier III results.** According to the type of sampling chosen, the analyst will be able to make statements about the frequency and certainty of particular observations about specific lending practices. In general, the purpose of this sampling exercise is to test the confidence the evaluators have in the MFI's reporting about the quality of its loan portfolio. At the end, there should be a very precise estimate about the answers to these questions:

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<sup>18</sup> Donald A. Schwartz, "Computerized Audit Sampling," *The CPA Journal* (November 1998), [www.nyssscpa.org/cpajournal/1998/1198/Features/f461198.html](http://www.nyssscpa.org/cpajournal/1998/1198/Features/f461198.html).

- How accurately does the loan tracking system reflect the lateness of payments?
- How accurately does the loan tracking system reflect the current loans?
- How frequently might questionable lending practices, such as refinancing, in-kind payments, and the granting of parallel loans, be used to alter the apparent condition of a loan portfolio?
- What is the actual behavior of key indicators that underlie the risk in microlending portfolios, such as the rate of increase in the value of average loan payments?

And, if field visits to borrowers are undertaken as part of this exercise:

- To what extent do loan officers who receive cash payments in the field delay their reporting to the branch or actually engage in theft of borrower payments?

Any interpretation of the significance of the results obtained through this sampling exercise must necessarily depend on the work that corresponds to the Tier I and II phases of the due diligence exercise, and the purpose for which the exercise was carried out. Normally, Tier III serves merely to add a far greater degree of certainty to the patterns that were most probably observed during Tiers I and II. However, Tier III might occasionally detect risks that were not discovered during earlier work. In this, Tier III would probably serve to modify the yellow and red cards that arose out of the prior two tiers.

Specifically, the Tier-III format for reporting results should cover the test objective, base document, sample size, sample selection, and methodology. For non-statistical sampling, a report of the findings and explanation of the feeling or sense it gives about the entire portfolio is necessary. For statistical sampling, it should give the estimates resulting from the sample and the precision and confidence intervals for the estimates as in the following examples. Normally the Tier III report should include references to the accuracy of MIS, the prevalence of refinancing or fraud, and the occurrence of incidences of risky lending practice—for example, payment amounts increase too-rapidly from one loan to the next, single borrowers have multiple credit lines, loans are too large in relation to calculated repayment capacity.

If the commissioner of the evaluation took a representative sample of the entire loan portfolio, in the most rigorous level of Tier III, the report would show the volume of error and compute the corrections needed to the account balance. By comparing the value of corrections to the value of the sample, the

analyst demonstrates the computation of the project of test results to the rest of the loan portfolio based on the sample findings.

If the commissioner chooses instead to apply the hybrid sample design to test the accuracy of the MIS and look for misrepresentation, fraud, and risky credit practice, the report would indicate the incidence of deviations observed, either by percentage or by how many times a deviation is observed. Normally, an analyst will also trace deviations to their root cause, as this may give a deeper feel for the information or send the analyst in a specific direction of investigation.

For example: results are often quoted as a percentage, for example, a 30-percent incidence of rescheduling. If sample size were 70 at a 5-percent confidence level, the precision—read from a statistical table—would be about 1 percent:

“I am 90-percent certain that the incidence of rescheduling in the entire portfolio is on average 30 percent, but ranges between 25–35 percent (the confidence interval values for plus/minus 5 percent from 30 percent for upper and lower limits).”

Another example might come from sampling for exceptions in accounting data, such as deviations from client’s established controls, monetary misstatements in transactions and monetary misstatements in account balance details:

“We find a 3-percent sample exception rate and a sampling error of 1 percent, with a sampling risk of 10 percent. We conclude that the population exception rate is between 2–4 percent at a 10-percent risk of being wrong (or 90-percent chance of being right).”

The evaluators should turn over to the commissioner any worksheets that were developed and completed in the process of carrying out the due diligence exercise. The following is a suggested final tally that should be filled out, at least for those variables that were examined during the Tier III review; a tally sheet should be filled out for each on of the subsets over-sampled, and for the total sample, in a consolidated final sheet. Values in the table are simply suggestive. Actual values should be filled out by the evaluators on the basis of their own expectations and experience, and through discussions with the MFI about credit policy and hard and fast parameters they expect to be respected by their loan officers.

## **COMMENTS ON LOAN PORTFOLIO DUE DILIGENCE AT ALL LEVELS**

Given the general lack of in-depth oversight of MFIs by those who invest in their activities, stated loan portfolio performance almost always exceeds actual performance when examined closely. This is not in itself a cardinal sin. Banks, and most certainly MFIs, have a strong incentive to put their best face forward when it comes to the quality of their assets. The challenge for the analyst is to determine to what degree this “optimistic” presentation of an MFI’s portfolio performance crosses that fine line between presenting the “half-full” glass, and misrepresentation that brings with it a material misrepresentation of the status of the portfolio, and hence, a decidedly increased risk in that portfolio’s profile.

Those who would look at the results of any level of the loan portfolio due diligence presented here might find the following to be a useful guide:

1. While there is a cure for ignorance, there is generally not a cure for deceit. If the analyst gets a feeling that an MFI is being deliberately confusing about the performance of its loan portfolio, then chances of ever understanding its true risk are virtually non-existent. Most MFIs are truly ignorant of the consequences of their poor MIS performance and, once trained, become disciples of transparency. In practice, it’s really quite easy to distinguish between those MFIs that think transparency is a good management practice, and those that think transparency threatens their access to donor funds.
2. Weak MIS will inevitably lead to deteriorated loan portfolio performance. There should be no doubt about this. Any time there is a basic failure to reconcile the results from the loan tracking system results with the accounting system, or loan delinquency reports do not reflect in a timely or accurate manner every single transaction, quality will eventually degrade, no matter if current quality looks high.
3. Weak MIS and, hence, inaccurate portfolio reporting is not itself singularly condemning. It is quite common. Rather, the analyst should focus on the efforts being made to deal, at the current moment, with these inaccuracies, and the effectiveness of alternative, perhaps even informal, loan payment tracking systems developed by loan officers. If loan officers have worked out an effective alternative system that can be verified by the due diligence exercise, then the MFI results can be credible. If, on the other hand, the loan officer cadre is sitting back and failing to manage their assigned loan portfolios through alternative systems, the portfolio quality will inevitably deteriorate. Placing faith in the eventual arrival of an as yet unproven new computerized system should not substitute for taking immediate measures in carrying out the day-to-day work of lending.
4. Commitment to high levels of loan recovery starts at the very top. By far, the most important aspect of an MFI manager’s basket of activities must be the recovery of loans. Nowhere is this more apparent than in the attitude and activities of the general manager. Analysts who encounter top managers within MFIs who do not seem to be well informed and quite actively involved in all aspects of loan recovery should be very concerned.
5. Analysts should be looking for patterns of abuse or unhealthy practice. Given the high level of discretion that must necessarily be given to field staff, there will also be a certain level of variance in the way lending methodologies are deployed by individual staff. Analysts should constantly look for patterns in the variance, and the materiality of these deviations in relation to the risk of the loan portfolio. Sometimes, modifications made by loan officers actually improve the methodologies as designed in the credit manual, although not in the majority of cases. If the analyst is uncertain whether a specific deviation is healthy or not, in the context of a particular lending technique, they should not hesitate to locate an expert opinion outside of the MFI.
6. Analysts should be looking for patterns of abuse or unhealthy practice. Given the high level of discretion that must necessarily be given to field staff, there will also be a certain level of variance in the way lending methodologies are deployed by individual staff. Analysts should constantly look for patterns in the variance, and the materiality of these deviations in relation to the risk of the loan portfolio. Sometimes, modifications made by loan officers actually improve the methodologies as designed in the credit manual, although not in the majority of cases. If the analyst is uncertain whether a specific deviation is healthy or not, in the context of a particular lending technique, they should not hesitate to locate an expert opinion outside of the MFI.

Example: Tally Sheet for Tier III Due Diligence Exercise				
	Expected value according to lending methodology	Actual value discovered during exercise	Standard deviation and other measures of confidence	Difference between expected and actual values
Average delay between payment and posting	5 days (due to time required to get statement from bank)			
Number times loan listed as delinquent when it was on-time	0			
Number of times loan listed as on time when it was delinquent	0			
Percent of loans refinanced while outstanding balance on prior loan above two payments	10			
Percent of loans refinanced while late on prior loan	0			
Percent of loans refinanced without required process	0			
Average increase in loan payment from prior loan	20%			
Average value of payment in relation to estimated repayment capacity	50%			
Average value of loan in relation to working capital	35%			
Average number of members in client's group	4			
The average difference between the value of largest and smallest loans in group	2x			
The average difference between group's accumulated savings and initial loan amount	20%			
Number of clients with concurrent loans outstanding	0			

7. Analysts should be looking for patterns of abuse or unhealthy practice. Given the high level of discretion that must necessarily be given to field staff, there will also be a certain level of variance in the way lending methodologies are deployed by individual staff. Analysts should constantly look for patterns in the variance, and the materiality of these deviations in relation to the risk of the loan portfolio. Sometimes, modifications made by loan officers actually improve the methodologies as designed in the credit manual, although not in the majority of cases. If the analyst is uncertain whether a specific deviation is healthy or not, in

the context of a particular lending technique, they should not hesitate to locate an expert opinion outside of the MFI.

8. There is no easy fix to loan portfolio delinquency. Once a portfolio has become significantly contaminated, it takes quite a long time and draconian measures to bring it back under control. These measures often include replacing the majority of the loan officers and their immediate supervisors, re-engineering the basic credit methodology, removing substantial numbers of existing clients, writing off of a large amount of unrecoverable debt, and many times even

changing the top management. Analysts should beware of management promises to “get repayment levels up” over the short term if they do not seem prepared to do more than have their loan officers work a bit harder on this aspect of portfolio administration.

9. There is often a disconnection between what management thinks it has directed loan officers to do and what they actually do in the field. Often this is due to contradictory incentives or confusing signals that are established by the head office. Many top managers of MFIs will regard this due diligence exercise as an important opportunity to reconnect with actual practice in the field and to re-establish basic operating principle and procedures, no matter how negative the ensuing results. Again, the analyst should be sensitive to the responsiveness of management to the findings of the exercise and realize that these findings may be news to senior people in the organization.
10. The analyst may want to engage in a two-step approach to the loan portfolio due diligence process. One step discovers practice in an initial visit, discusses negative findings with management, provides a period for management to resolve unhealthy practices, and then, in the second step, engages in more definitive due diligence once basic issues have been addressed. Going by the history of appraisals in the field of

11. microfinance, the first round with any particular MFI is bound to reveal substantial difficulties in the management systems of that MFI. But the process of having the appraisal done proves to be quite instructive to MFI management as a better way to manage their organizations, and they go into the second round having addressed many of the concerns brought out initially.

In conclusion, this loan portfolio due diligence tool should provide those concerned with the underlying quality of MFI loan portfolios with a guide, for varying levels of precision and certainty, to gain a greater understanding of the veracity of information as presented by the institution and the degree of risk that repayment levels will deteriorate in the short to medium term. While this tool does not offer a guarantee to the analyst that core problems will remain undetected, it does offer a blueprint, which if conscientiously employed by someone moderately experienced in micro lending, will most certainly highlight areas of concern. It is always finally up to the analyst to decide how to interpret findings. Conversations with experienced microfinance practitioners or analysts should be sufficient to clarify if there are areas of concern about which the novice analyst is uncertain in terms of their relative importance – in relation to the purpose for which the due diligence has been undertaken. In this, the tool has been designed for use by evaluators with widely varying skills and experience.

## ANNEX 1

### Illustrative Terms of Reference for a Detailed Loan Portfolio Review

#### Introduction

1. The Board of Directors [or other commissioner] of \_\_\_\_\_. invites your firm to submit a technical and financial proposal for the special review of \_\_\_\_\_ financial institution loan portfolio. The review is intended to give assurance to \_\_\_\_\_ [regulators/investors] for \_\_\_\_\_ [specific purposes, if any]. It will also assist management by evaluating and reporting to them the level of compliance and effectiveness of the loan portfolio management practices and controls for which they are responsible.

#### Background

2. [Give institutional background and events leading to the request for the view and the specific use of the results. Include a description of the institution's branch structure, number of staff and number credit clients.]

#### Scope

3. The detailed loan portfolio review will be performed using mainly but not exclusively the approach developed under the leadership of the Consultative Group to Assist the Poor (CGAP) know as the Loan Portfolio Review Tool. The tool is a three-tiered approach for discovering with varying degrees of precision and certainty the soundness of the financial institution's loan portfolio. The tiers build on each other progressively. The first tier establishes a basic level of confidence about the quality of portfolio management policies and performance. The second tier provides a fair amount of confidence that manager and staff practices at the branches reflect head office policies and the information systems at branches yield credible data that supports the portfolio performance presentation at head office. The third tier provides a higher level of confidence using statistical or non-statistical sampling.

4. The review aims to obtain reliable information on the condition of the loan portfolio, the accuracy of portfolio reports by \_\_\_\_\_ [the financial institution's] information system, adherence to general credit management policy and the absence of fraud and of substantial risky practices that undermine credit risk controls. The scope of work covers all loan portfolio management procedures from client administrative procedures, credit risk management procedures, transactions recording and reporting and the adequacy of controls necessary to secure propriety, economy, efficiency and effectiveness and particularly to prevent fraud. The contractor is required to plan and develop a detailed work program that will yield the required level of confidence to satisfy \_\_\_\_\_ [the specific aim].

5. The contractor may also make any special adaptations to the tool to fit the specific needs of the Board Directors (or other commissioner) and the nature of our operations, provided such changes are discussed and approved beforehand and do not compromise the objectivity of the results.

#### Approach

6. In achieving its objectives the contractor will carry out all three tiers of the due diligence procedures laid out in the accompanying documentation and the table in the annex. All the three tiers aim to reflect that:

- a. The loan portfolio as reported by the financial institution reflects its fair value
- b. Adequate provisions have been made for possible loan losses
- c. Management and staff have sound policies and the proper skills, resources, and systems to originate, monitor and collect loans.

Under the gradually deepening review approach of the three tiers, the contractor will discuss the findings of each tier before proceeding to the next. The findings of Tier I or Tier II could possibly unearth a reasonably high likelihood of improper credit management practices, that the Board of Directors [or other commissioner] may determine is

adequate for its objectives precluding the need to perform any further work. The table in the annex graphically represents the potential decision points.

In the even that all three tiers will be necessary, the contractor will evaluate prior findings to identify areas of concern for discussion with the Board of Directors [or other commissioner] and for shaping the detailed work plan of the next tier.

## **Reporting**

7. The contractor is required to give an opinion to Board of Directors [or other commissioner], through a written report, on the adequacy and soundness of the procedures and controls of the loan portfolio of the whole MFI, and the extent to which they can be relied on to produce accurate reporting of the condition of the loan portfolio. The report will include a conclusion about the incidence of dangerous deviations in credit practices at a 95-percent confidence level.

8. To provide the required assurance the contractor will undertakes a program of work that will have the following objectives:

***Tier I – Head office:*** Employ analytical procedures to understand the financial institution’s performance and the factors affecting its business. Through inquiry, assess the adequacy of credit policy, accounting processes and loan portfolio management.

***Tier II – Branch offices:*** Assess the functionality of the financial institution’s information systems and the soundness of internal controls to general credible loan portfolio data at head office. Through inquiry and testing loan files, verify compliance with credit policies, appropriateness of staff incentives and management controls to support sound credit practices, and the validity, accuracy and completeness of transactions recording.

***Tier III – Detailed testing:*** Sample a range of 400 loans and up using the method of discovery to incrementally explore loan samples in the event that dangerous deviations from credit policy occur, to confirm or estimate their incidence.

9. The contractor will also submit detailed working papers that may be bound separately.

## **Timing**

10. This work is to be completed within \_\_\_\_\_ weeks of initiation. This time frame can be modified by mutual consent during the implementation process should difficulties arise.

## **Standards**

7. The contractor’s work will be performed with due professional care, in accordance with appropriate professional auditing practice.

## **Independence**

9. The contractor must be independent of any member of the Board of Directors of the financial institution and any staff members. Independence means that no staff or owner of the contracting firm that would be directly involved in the review serves as a director of the financial institution, or has any personal, financial or close business relationship with the financial institution.

## **Access**

12. The contractor will have rights of access to all of the financial institution’s records and information which it considers necessary to fulfill its responsibilities.