

Finance - Self Study Guide for Staff of Micro Finance Institutions

LESSON 5

DELINQUENCY MANAGEMENT

Objectives: Generally, the loan portfolio of a micro-finance organization is its largest asset. The loan portfolio enables the organization to continue to provide credit to borrowers and to earn revenue. It is necessary, therefore, to manage the portfolio in such a way as to limit delinquency and loan default.

This lesson will demonstrate the importance of accurately measuring the portfolio risk, provide an understanding of how the quality of the portfolio affects the viability of a micro-finance organization, and offer ways to manage the credit operations to minimize the risk to the portfolio.

You will learn the importance of delinquency management for the overall viability of a micro-finance organization. Topics covered include:

- Portfolio outstanding
- Repayment rates
- Measuring portfolio risk
- Aging analysis
- Loan loss reserves
- Write-offs
- Rescheduling/refinancing loans
- The cost of delinquency
- Controlling delinquency



Portfolio Outstanding

The portfolio refers to the principal amount of loans outstanding, including past due loans for a micro-finance organization as a whole. Interest owed by borrowers is not usually considered part of the portfolio. As discussed in the Accounting Study Guide, principal outstanding is an asset for a micro-finance organization whereas interest contributes to a micro-finance organization's revenue.

[Note: some organizations capitalize – that is, record as an asset on the Balance Sheet – the interest revenue expected when the loan is disbursed or when the loan term has ended and an outstanding balance is still remaining.]

The primary revenue earning asset of a micro-finance organization is its portfolio. The risk that some loans will not be repaid and, therefore, that both interest revenue and principal may be lost, must be anticipated. Management of this risk is crucial to the viability of the micro-finance operation.

Consider the meaning of delinquency, arrears, late payments, overdue, past due, and default. The terms are often used interchangeably but *generally* arrears, past due and overdue refer to an amount that has not been paid that has become due. Delinquency refers to the *rate* of arrears or the fact that a loan is in arrears, e.g. “this loan is delinquent” means it has an amount that has become due and has not been paid. Default refers to a loan that is not expected to be paid back and/or has been written off (discussed below).

Using the following matrix, examine the four possible combinations into which a delinquent loan might fall:

	Low Late Principal Outstanding	High Late Principal Outstanding
Current Repayment	<u>Situation #1</u> Late principal amount outstanding is a small portion of total principal outstanding and therefore does not represent a high potential loss. Recent payments have been regular suggesting the borrower is no longer having difficulties repaying the loan. These two factors together are the most favourable.	<u>Situation #2</u> Late principal amount outstanding is a high proportion of total principal outstanding and therefore represents a high potential loss. However, recent payments are regularly received, so the borrower is still active. This indicates the prospect for eventual collection is good.
Late Repayment	<u>Situation #3</u> Late principal amount outstanding is a small portion of total principal outstanding. Recent payment is poor suggesting that the situation is continuing to deteriorate and may become a larger problem.	<u>Situation #4</u> Late principal amount outstanding is a high proportion of total principal outstanding and therefore represents a high potential loss. Recent payment is also poor indicating the problem is not improving and perhaps the borrower is not active. These two factors together are the least favourable.

Repayment Rates

Define the repayment rate and how it is calculated at your organization. The repayment rate does not indicate the *quality* of the loan portfolio but measures the rate of loan recovery. *Repayment rates measure the amount of payments received with respect to the amount due, whereas other ratios (Portfolio at Risk and Delinquency Ratios discussed below) indicate the amount of risk in the portfolio.* The repayment rate is a good measure for monitoring branch or loan officer performance over time if it is calculated correctly, but is less useful for internal financial management. A micro-finance organization should not use the repayment rate as a comparative measure with other organizations as it is only ever possible to compare repayment rates if they are calculated in exactly the same manner and for the same period from one organization to the next.

There are many methods used to calculate the repayment rate. Some micro-finance organizations calculate the repayment rate incorrectly:

$$\text{Repayment Rate} = \frac{\text{amount received (including prepayments and past due amounts)}}{\text{amount due (excluding past due amounts)}}$$

This formula overstates the amount received by the prepayments and past due amounts received. This is why repayment rates can sometimes be greater than 100%. This does not provide useful information about the performance of the *outstanding* portfolio.

It is important that components which are included in the numerator also be included in the denominator.

Two formulas are suggested:

$$\text{On-Time Repayment Rate} = \frac{\text{amount received on time less prepayments}}{\text{total amount due}}$$

or

$$\text{Repayment Rate} = \frac{\text{amount received (current and past due) less prepayments}}{\text{total amount due plus past due amounts}}$$

These formulae remove the effect of prepayments and show the actual rate of received payments against expected payments either on-time or taking into account past due amounts.

Repayment rates can be useful for cash flow projections as they indicate, based on past experience, what percentage of the amount due to a micro-finance organization can be expected to be received.

Measuring Portfolio Risk

To measure the risk of a portfolio it is necessary to measure the delinquency rate. Delinquency is also referred to as arrears or late payments. Delinquent loans (or loans in arrears) are loans on which any payments are *past due*. There are several commonly used measures of delinquency. *The amount past due is the amount of loan principal that is meant to be received but has not yet been received.*

The amount past due stated as a percentage of the portfolio outstanding is the Amount Past Due ratio. The important point about past due is that it gives an indication of the risk that a loan will not be repaid.

$$\text{Amount Past Due} = \frac{\text{amount past due}}{\text{portfolio outstanding (including amounts past due)}}$$

This formula understates the risk to the portfolio and understates the potential severity of a delinquency problem as it only considers the payments as they become past due, not the entire amount outstanding of the loan actually at risk.

For example, a client who has borrowed Ksh1,000 for petty trading for 12 months at 15% interest on the declining balance must repay Ksh90 per month (made up of *approximately* Ksh83 principal and Ksh7 interest). If she misses the first three months of payments, the amount past due is Ksh270. The principal amount past due is Ksh249, yet the entire Ksh1,000 is at risk since there is a chance that she may not make any payments. According to the previous formula the percentage Amount Past Due would be 25% :

$$\begin{aligned}\text{Amount Past Due} &= \frac{\text{Ksh249}}{\text{Ksh1,000}} \\ &= 25\%\end{aligned}$$

Since no payments have been received, the true amount at risk is the full amount of the loan, Ksh1,000 (or 100%), not Ksh250.

A more conservative formula to use to calculate risk is the Portfolio at Risk. The Portfolio at Risk formula considers the risk that the entire amount outstanding will not be repaid.

$$\text{Portfolio at Risk} = \frac{\text{outstanding balance of loans with payments past due}^1}{\text{current portfolio outstanding}}$$

The Portfolio at Risk ratio helps to monitor default risk by comparing the outstanding portfolio to the balance of all loans which have one or more payments overdue. It is important to include the *balance* of all loans with a payment overdue and not just the amount overdue. This ratio reflects the true risk of a delinquency problem because it considers the full amount of the loan at risk even when the payments are small and the loan terms are long. If a portfolio is growing rapidly, using the Amount Past Due Ratio may understate the risk as the outstanding portfolio (denominator) is growing at a faster rate than the amounts becoming due (since the outstanding portfolio grows with the total disbursed amount whereas the amount due only grows with the payments as they become due). Therefore the potential risk may not be known for some time.

Using the example above, if a client borrows Ksh1,000 and makes the first two monthly payments and then misses the next three months, the principal *past due* is Ksh249 (Ksh83 per month). The principal still outstanding is Ksh1,000 less 2 months of payments (principal portion is Ksh166; principal plus interest equals Ksh180). This results in Ksh834 still outstanding. The Portfolio at Risk is therefore 100% for this loan:

$$\begin{aligned}\text{Portfolio at Risk} &= \frac{834}{834} \\ &= 100\%\end{aligned}$$

The Portfolio at Risk ratio is affected by the organization's write-off policy (discussed below). Continuing to maintain loans on the books rather than write them off once it has been determined that they are unlikely to be repaid overstates the size of the portfolio.

¹ If interest is included in the amount of the loan when it is recorded as an asset, it should be included in the outstanding balance in the calculation of Portfolio at Risk.

"A well-defined policy that establishes a Loan loss reserve and periodically declares loans non-recoverable saves a programme from declaring a large amount non recoverable all at once, and thereby drastically decreasing assets." ² Alternatively, if loans are written off too quickly, the Portfolio at Risk ratio will be low. It is therefore necessary to know both the loan losses of an organization *and* its loan loss ratio.

The method used by an organization to define past due amounts directly influences the calculation of ratios, and the determination of the organization's level of risk. For example, an organization's credit policy states that loans which have two weekly payments past due should be treated as delinquent. The following formula is used to determine the rate of Portfolio at Risk:

Client	Disbursed	Principal Repaid					Out- Standing
		Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	
A	1150	25	25	25	25	25	1025
B	1150	25	25	25	25	25	1025
C	1150	25	-	-	25	25	1075
D	1150	25	-	-	-	25	1100
Total							4225

$$\text{Portfolio at Risk} = \frac{2,175}{4,225} = 52\%$$

If a micro-finance organization has relatively long loan terms and frequent repayment installments (such as weekly), it is even more important to use the Portfolio at Risk formula rather than the Amount Past Due formula. Weekly payments over a long term result in relatively small payments each week. Each payment past due has a small effect on the rate of delinquency, even though the amount of risk to the portfolio might be increasing. If the Ksh1,000 loan described above were a two year loan, then after two months with no payments, only Ksh90 would be in arrears, yet the majority of the Ksh1,000 outstanding should be considered at risk.

Aging Analysis

The Portfolio Report, including an aging analysis, is the primary tool used to monitor the quality of the loan portfolio. The value of loans with an amount past due is an important indicator of the risk of potential loan losses. The amount of time a loan has had an amount past due is also an important indicator of the likelihood of loan repayment.

A portfolio should be aged based on the level of Portfolio at Risk (as opposed to the amount past due). Aging enables the micro-finance organization to see, over time, whether or not the delinquency problem is improving or declining and where problems are.

$$\text{Aging of Portfolio at Risk} = \frac{\text{Outstanding loans with payments 30-60-90 Days Past Due}}{\text{Current Outstanding Portfolio}}$$

Refer to the next two pages, "Amount Past Due Aging" and "Portfolio Aging", noting the difference between the two approaches.

² Stearns, Katherine. The Hidden Beast: Delinquency in Microenterprise Programmes. ACCION International. 1991

SAMPLE PORTFOLIO REPORT
Aging of Amount Past Due

Loan #	Client	Amount	Outstand- ing Loans	Past Due	%	AGING (days)						TOTAL
						1-30	31-60	61-90	91-180	181-365	> 365	
1	Takacsy	300,000	250,000	50,000	20.0	25,000	25,000					
2	Earle	390,000	211,000	38,000	18.0	13,000	13,000	12,000				
3	Galdo	150,000	101,000	30,000	29.7	13,000	11,000	4,000	2,000			
4	Feria	50,000	41,000	12,000	29.3	4,000	4,000	4,000				
5	Perez	78,000	64,000	64,000	100.0			5,000	14,000	45,000		
6	Manalo	300,000	206,000	30,000	14.6						30,000	
7	Elbaz	32,000	28,000	4,000	14.3	1,500	1,500	1,000				
8	Harrington	50,000	45,000	45,000	100.0		4,000	4,000	18,500	18,500		
9	Debique	100,000	84,000	25,000	29.8	5,000	5,000	5,000	10,000			
10	Coyle	100,000	16,000	8,000	50.0						8,000	
11	Lalonde	257,000	60,000	60,000	100.0				12,000	48,000		
12	Blondheim	37,000	32,000	25,000	78.1	3,000	3,000	3,000	3,000	13,000		
13	Prudencio	43,000	37,000	14,000	37.4			7,000	7,000			
	<i>Current</i>	<i>5,600,000</i>	<i>4,750,000</i>	<i>0</i>	<i>0.0%</i>							
TOTAL		7,487,000	5,925,000	405,000	6.8%	64,500	66,500	45,000	66,500	124,500	38,000	405,000
						1.1%	1.1%	0.8%	1.1%	2.1%	0.6%	6.8%

$$\begin{aligned}
 \text{Total Amount Past Due * as a \% of Outstanding Loans} &= \frac{405,000}{5,925,000} \\
 &= 6.8\%
 \end{aligned}$$

*(defined as the amount that has become due and has not been received)

SAMPLE PORTFOLIO REPORT
Aging of Portfolio at Risk

Loan #	Client	Amount	Outstand- ing Loans	Past Due	%	AGING (days)						TOTAL
						1-30	31-60	61-90	91-180	181-365	> 365	
1	Takacsy	300,000	250,000	50,000	20.0		250,000					
2	Earle	390,000	211,000	38,000	18.0			211,000				
3	Galdo	150,000	101,000	30,000	29.7				101,000			
4	Feria	50,000	41,000	12,000	29.3			41,000				
5	Perez	78,000	64,000	64,000	100.0					64,000		
6	Manalo	300,000	206,000	30,000	14.6						206,000	
7	Elbaz	32,000	28,000	4,000	14.3			28,000				
8	Harrington	50,000	45,000	45,000	100.0					45,000		
9	Debique	100,000	84,000	25,000	29.8				84,000			
10	Coyle	100,000	16,000	8,000	50.0						16,000	
11	Lalonde	257,000	60,000	60,000	100.0					60,000		
12	Blondheim	37,000	32,000	25,000	78.1					32,000		
13	Prudencio	43,000	37,000	14,000	37.4				37,000			
	<i>Current</i>	<i>5,600,000</i>	<i>4,750,000</i>	<i>0</i>	<i>0.0%</i>							
TOTAL		7,487,000	5,925,000	405,000	6.8%	0	250,000	280,000	222,000	201,000	222,000	1,175,000
							4.2%	4.7%	3.7%	3.4%	3.7%	19.8%

$$\begin{aligned}
 \text{Total Portfolio at Risk * as a \% of Outstanding Loans} &= \frac{1,175,000}{5,925,000} \\
 &= 19.8\%
 \end{aligned}$$

*defined as the outstanding balance of loans with an amount past due

The information in both examples is exactly the same with the exception of the aging figures. Note the difference in Amount Past Due as a percentage of Outstanding Loans (6.8%) and the Portfolio at Risk as a percentage of Outstanding Loans (19.8%). How much of the portfolio is in fact at risk?

Taking the examples and looking at them over time, if the Amount Past Due or Portfolio at Risk in the later categories is increasing, then the delinquency problem is deteriorating and is an indication to management that there is an increasing problem with the quality of the portfolio.

Calculating the Portfolio at Risk should be done for each aging category to determine the length of time past due loans have been past due and to make an estimate of the required Loan loss reserve (discussed below). Aging of Portfolio at Risk amounts also allows fund managers to determine if new policies implemented to control delinquencies are working. Aging of Portfolio at Risk Reports should be calculated periodically. They can be calculated for a micro-finance organization as a whole, for a region, a branch, a credit officer or by sector (activity or geographic split). Aging of Portfolio at Risk reports should be compared over time with previous reports rather than as a comparison between branches or organizations. This is because there are circumstances particular to each branch or organization, such as age, the make-up of the loan portfolio, etc., that affect the delinquency.

Discuss the use of analyzing the aging of the portfolio over time and how it can help all staff of a micro-finance organization manage the risk in their portfolios.

Loan Loss Reserves

Aging of the Portfolio at Risk creates the information required to establish the adequacy of the Loan loss reserve. *A Loan loss reserve is an accounting entry (as discussed in the Accounting Study Guide) which represents the amount of outstanding principal that is not expected to be recovered by a micro-finance organization. The longer a loan is in arrears, the lower is the chance of receiving payment.*

The Loan loss reserve can be stated as a percentage of outstanding loans.

$$\text{Loan loss reserve Ratio} = \frac{\text{Total Reserve}}{\text{Average Portfolio Outstanding}}$$

The amount of the Loan loss reserve should be based on historical information regarding loan default and the aging analysis and should be calculated periodically (e.g., monthly, quarterly) to determine whether a Loan loss provision needs to be made to adjust the Reserve.³ The Reserve as a percentage of loans outstanding may be set by regulation in some countries if the micro-finance organization is regulated as a formal financial institution. If it is not, the rate should be determined for each category of arrears based on what the organization thinks is the probability of the loan defaulting. For example, if approximately 10% of loans which are past due less than 30 days end up defaulting, a provision of 10% should be created. If 50% of loans which are past due more than 60 days but less than 180 days end up defaulting, a 50% provision should be created. Look at the following Sample Aging Report:

³ The Loan loss reserve is recorded as a negative asset on the Balance Sheet as a reduction of the Outstanding Portfolio or as a liability. The Loan loss provision is the amount *expensed* on the Income Statement. Loan loss provisions increase the Loan loss reserve while Write-offs decrease the Reserve and the Outstanding Portfolio.

SAMPLE AGING REPORT
(December 31, 1995)

	(A) Number of Loans Past Due	(B) Outstanding Balance of Loans Past Due	(C) Loan Loss Reserve (%)	(D) Loan Loss Reserve (\$) (B) x (C)
1-30 days past due	200	8,750	10%	875
31-60 days past due	75	5,000	50%	2,500
61-90 days past due	60	2,500	75%	1,875
90-120 days past due	15	1,100	100%	1,100
> 120 days past due	10	650	100%	650
	360	18,000		7,000

Source: SEEP Financial Services Working Group

Loan loss reserve calculation

Refer to the Sample Aging Report above and consider the likelihood of recovering loans once they are past due in each of the categories as it relates to your organization. For example, loans that are overdue 1 to 4 weeks may have a 90% chance of recovery; loans overdue 5 to 8 weeks may have a 50% chance of recovery; greater than 8 weeks may have only a 10% chance of recovery, etc. Once you have decided in percentage terms what the likelihood of recovery is, refer to the Loan loss reserve table below and explain how to make a reserve for each category of aged loans. Fill out the Loan loss reserve table, making a reserve for each category. For example, loans with a 90% chance of recovery would require a 10% provision; those with a 20% chance of recovery would require an 80% provision. Once you have completed the reserves for each category, sum together all of the reserves resulting in an overall reserve amount (stated as a percentage of Average Portfolio Outstanding).

LOAN LOSS RESERVE

Days in Arrears	O/S Balance of Loans	Reserve Rate	Reserve Amount
Current Loans	690,173	%	
> 30 days	337,483	%	
30 to 60 days	74,339	%	
60 to 90 days	24,374	%	
90 to 120 days	10,222	%	
> 120 days	9,409	%	
TOTAL	1,136,000	N/A	
Loan Loss Reserve =		Total Reserve _____ Portfolio Outstanding	
		_____ = _____ % 1,136,000	

Review the adequacy of the provisions you made and then compare it to your organization's overall provision. [Note: this exercise can be done for a specific branch or a specific sector.]

Write-offs

Once it has been determined that the likelihood of a loan being repaid is remote, a write-off occurs. Write-offs only occur as an accounting entry and do not mean that loan recovery should not continue to be pursued if it makes economic sense. Writing off a loan does not mean the organization has relinquished its legal claim to recover the loan.

As described in the Accounting Study Guide, write-offs are made against the Loan loss reserve previously established and therefore do not affect the net portfolio outstanding unless an increase in the Loan loss reserve is made. To determine the rate of loan losses for a specific period (annual), the Loan Loss Ratio is an important indicator. The Loan Loss Ratio refers only to the amounts written off in a period and the ratio is not related to the Loan loss reserve except in that write-offs reduce the Reserve.

To determine the amount written off in a period, calculate the difference between the Loan loss reserve from the previous period and that of the current period, and subtract the provision made during the current period. If the result is negative, this is the amount written off; if positive, a loan previously written off was recovered during the current period.

$$\text{Loan Loss Ratio} = \frac{\text{Amount Written Off in Period}}{\text{Average Portfolio Outstanding for the Period}}$$

This ratio can be compared over time to see if write-offs as a percentage of outstanding portfolio are increasing or decreasing. Refer to the following Portfolio Quality Ratios which were created from the Income Statement, Balance Sheet and Portfolio Report in the Sample Account Analysis. Go through each of the ratios. (You will complete the ratios for 1995 in the "Delinquency" Exercises.)

Portfolio Quality Ratios		1994	1993
Portfolio in Arrears	Payments in Arrears	0.13	0.19
	Value of Loans Outstanding		
Portfolio at Risk	Balance of loans in arrears	0.29	0.38
	Value of loans outstanding		
Loan Loss Ratio	Amount Written off	0.05	0.00
	Avg. Loans Outstanding		
Reserve Ratio	Loan loss reserve	0.07	0.10
	Value of Loans Outstanding		

Rescheduling and Refinancing Loans

When a client is unable to repay her loan due to illness, disaster, mismanagement or some other crisis, there are times when it is appropriate to reschedule or refinance the loan. *Rescheduling a loan refers to extending the loan term and/or changing the payment schedule. Refinancing refers to providing an additional amount of loan funds to the original loan amount.* This allows the client to begin making the loan payments again and, it is hoped, continue until the loan is paid in full. Rescheduling or refinancing loans is very risky and must only be done under extreme circumstances as a way of ensuring that the entire loan is repaid.

Rescheduling or refinancing loans reduces the arrears in a portfolio by converting a delinquent loan into one that is suddenly a loan with no arrears, even though the risk has not necessarily been reduced and may in fact be higher due to the rescheduling or refinancing. All rescheduled loans should be monitored separately and with additional care. They should not be reported as *healthy* loans in the portfolio.

The Cost of Delinquency

What are i) consequences to the client of late payments or default and ii) consequences to a lender of late payments or default?

Delinquent loans play a critical role in a micro-finance organization's cost structure, revenue and cash flow management. Additional efforts to decrease delinquency usually mean additional costs for closer monitoring, more frequent visits to borrowers, more extensive analyses of the portfolio, legal fees for pursuing seriously delinquent borrowers, and other costs. The more time, effort and resources that are put into controlling delinquency, the less time is available for the organization to reach new borrowers and expand services or outreach.

Delinquent loans result in postponed or lost interest revenue. Loan payments that are meant to come in at a certain time to meet cash flow requirements and do not, result in additional costs to micro-finance organizations.

The amount of postponed revenue can be determined by subtracting the interest received from the expected interest revenue.

$$\text{Expected Interest income for the period} = \text{period interest rate} \times \text{amount outstanding beginning of the period}$$

The difference between the amount actually received in the period to the amount expected to be received is the amount of postponed or lost income for the period.

What other costs are associated with delinquent loans? Delinquency slows down the rotation of the portfolio. If the loan principal is not recovered at the scheduled time, loans to other borrowers cannot be made because the cash available is reduced. Consider how delinquency affects cash flow management.

If interest is postponed or lost, often the loan principal is also lost. This means that many additional loans must be made to make up the lost principal. For example: a P1,000 loan for 6 months with 10% flat interest would result in Interest income of P100. If this loan is never repaid, the income of P100 is lost as well as the loan principal of P1,000. To recover the P1,100 (principal + interest), it is necessary to make 11 new loans of P1,000 each earning P100 each ($P100 \times 11 = P1,100$). This does not take into account the costs incurred to make those additional 10 loans or to follow-up on the delinquent loans.

Read through the following examples illustrating the cost of default:

Example 1

Initial loan amount	\$3,000
Interest (rate - 15% flat)	\$450
Loan term	46 weeks
Weekly payment	\$75
Payments received	14 weeks (\$1,050)
Payments overdue	32 weeks (\$2,400)
Total lost income and principal	= \$2,400
Made up of: Lost income	= \$312
Lost principal	= \$2,088
Revenue * earned per \$1,000 loan for 46 weeks	= \$150

[*Note: This revenue represents the interest earned per loan and does not take into account any expenses or interest costs associated with delivering the loan. This differs from the contribution margin in that no variable costs are deducted.]

Number of loans required to earn lost principal:

$$= \frac{\text{Lost principal}}{\text{Revenue per loan}} = \frac{\$2,088}{\$150} = 14 \text{ loans of \$1,000}$$

Number of loans required to earn lost principal and interest:

$$= \frac{\text{Lost principal and interest}}{\text{Revenue per loan}} = \frac{\$2,400}{\$150} = 16 \text{ loans of \$1,000}$$

Example 2 takes into account the variable costs associated with disbursing and managing a loan and uses the contribution margin as calculated in Session 3: Break-Even Analysis. The annual contribution margin is calculated by reducing the revenue per \$1,000 outstanding by the variable costs per \$1,000 outstanding.

Example 2

Initial loan amount	\$3,000
Interest (rate - 15% flat)	\$450
Loan term	46 weeks
Weekly payment	\$75
Payments received	14 weeks (\$1,050)
Payments overdue	32 weeks (\$2,400)
Total lost income and principal	= \$2,400
Made up of: Lost income	= \$312
Lost principal	= \$2,088
Revenue earned per \$1,000 loan for 46 weeks	= \$150
Variable costs per \$1,000 loan	= \$ 90
Contribution margin per \$1,000 outstanding	= \$ 60

Taking into account the variable costs of disbursing and managing loans:

The number of loans required to earn lost principal:

$$= \frac{\text{Lost principal}}{\text{Contribution margin per loan}} = \frac{\$2,088}{\$60} = 35 \text{ loans of \$1,000}$$

The number of loans required to earn lost principal and interest:

$$= \frac{\text{Lost principal and interest}}{\text{Contribution margin per loan}} = \frac{\$2,400}{\$60} = 40 \text{ loans of \$1,000}$$

Note the substantial increase in the number of loans required when taking into account the variable costs associated with disbursing and managing loans. This emphasizes the significant cost delinquency has on a micro-finance organization.

Controlling Delinquency

Now let us consider ways to control delinquency. Delinquency should not necessarily be blamed on borrowers but on the loan product and methodology. There are five essential elements to managing delinquency:

1. The credit service must be valued by clients. The main reason clients repay a loan is the desire to receive a subsequent and larger loan. This incentive is not effective unless clients value access to the organization's credit. Therefore, loan products should suit clients' needs, the delivery process should be convenient, and clients should be made to feel that the organization respects and cares about them.
2. Clients must be screened carefully. The borrower selection process should weed out, as much as possible, unreliable borrowers or entrepreneurs whose activities will not enable them to repay a loan. Once borrowers are selected, it is important that they receive loans structured in accordance with their repayment capacity.
3. Field staff and clients must understand that late payments are not acceptable. A micro-finance organization's image as a lending institution rather than a social development organization is very important. Borrowers must clearly understand that in accepting a loan, they agree to a financial contract that must be respected by repaying the loan according to the payment schedule. The benefit of creating disciplined borrowers is critical to the success of a micro-finance organization.

Some organizations charge a late-payment penalty after a certain number of days have passed without payment. There is evidence that this works well in discouraging late payments but, if a client is substantially late with her payment, an accumulating penalty could result in too great an additional cost and might cause her to default on the loan altogether (a maximum late penalty, such as one month's interest, can be established to avoid this.)

Some micro-finance organizations encourage on-time repayments with certain incentives such as offering successively larger loans to borrowers who repay promptly, or returning part of the interest paid to the borrower if she repays 100% of the loan on time.

4. To minimize eventual loan losses, effective delinquency follow-up procedures are needed. List the steps you take when a loan becomes past due. Discuss what can be done to follow up delinquent loans. Examples are: activating the group to follow up, contacting the village leaders for follow up, visiting the client, scheduling weekly staff meetings to discuss problem loans, etc. Ultimately delinquent loans may have to be passed on to a collection agency.
5. The consequences of loan default must be sufficiently unappealing to clients. For example:
 - no further access to loans (for borrowers or entire group)
 - bad credit rating
 - collection of collateral
 - legal action
 - visits by debt collectors

Study the table below outlining the costs and benefits to borrowers of on-time and late or no payments:

	ON-TIME PAYMENTS	LATE OR NO PAYMENTS
BENEFITS	probability of immediate, larger follow-up loans	maintain capital (or portion) from loan in business
	development of positive credit history	lower expenses if interest payments not made
	positive reputation among peers	fewer or no trips to branch to make payments (lower transaction costs)
	access to training, savings or other programmes and advice from credit officers	lower transaction costs for attending meetings
	awards or prizes for timely payment	
COSTS	pay interest and capital of current loan	loss of access to other programme services
	time and transportation costs (transaction costs) to make payments	delay of future loans or loss of access to future loans
		possible legal action and costs
		frequent visits by credit officers
		pressure from group members

Source: Stearns, Katherine. 1991. *Methods for Managing Delinquency*. GEMINI Technical Report. Bethesda, Maryland: Development Alternatives, Inc.

The final important point to bring up regarding the prevention of delinquency is **the need for an accurate and useful management information system which allows staff to report and monitor loan repayments accurately**. The easier it is for field staff to figure out whose payments are due and when, who is late and by how much, the more time they can spend with borrowers. Credit Officers should review their portfolios daily to see which borrowers are behind in their payments and by how much.



EXERCISES

Complete the “Delinquency Management” Exercises on the next page.

Delinquency Management
EXERCISES

1. What does ‘‘amount past due’’ mean?

2. What is the suggested formula for repayment rate?

3. What are the limitations of repayment rate? What does it not indicate?

4. What is a delinquent loan?

5. What is the formula for Amount Past Due Ratio?

6. What is the formula for Portfolio at Risk Ratio?

7. What does “aging of Portfolio at Risk” mean?
8. What is a Loan loss reserve? How is it created?
9. What is meant by a) a rescheduled loan and b) a refinanced loan?
10. How should rescheduled and refinanced loans be monitored and reported?
11. Thuc Dong is a member of the Women’s Credit Association in Viet Nam. She received a loan of VD 400,000 with a 15% annual flat interest rate. The term of her loan was 26 weeks with weekly payments. She made loan payments for 14 weeks. She did not pay the remaining 12 weeks.

From the above case, calculate the following:
 - i) lost interest revenue and principal (separately)

- ii) the number of loans required to generate revenue to cover lost principal
 - iii) the number of loans required to generate revenue to cover lost interest revenue and principal
12. Using the Balance Sheet, Income Statement and Portfolio Report from the Sample Account Analysis, calculate the following Portfolio Quality Ratios for December 31, 1995:
- i) Amount Past Due Ratio
 - ii) Portfolio at Risk Ratio

Using the Balance Sheet and the Income Statement from the Sample Account Analysis, calculate the following Ratios for December 31, 1995:

- iii) Loan loss reserve Ratio
- iv) Loan loss Ratio