

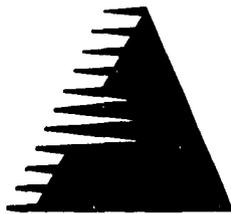
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**THE HIDDEN BEAST:
DELINQUENCY
IN MICROENTERPRISE
CREDIT PROGRAMS**

KATHERINE STEARNS



DISCUSSION PAPERS SERIES

DOCUMENT No. 5

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Katherine Stearns is currently Program Specialist for ACCION International in Washington, DC. She previously served as ACCION's Director in Costa Rica.

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FOREWORD

Organizations that implement microenterprise credit programs are becoming convinced that financial viability and capacity to cover costs with income are essential for long-term sustainability. Furthermore, programs dedicated to expansion have found that there is insufficient donor funding available to capitalize their portfolios on the level necessary to meet the demand for credit. In addition to covering their operating costs with their own income, these programs must mobilize savings, access bank loans, and develop other financial mechanisms to build their portfolios. To be viable under these circumstances, microenterprise credit programs need to maintain the value of their assets, minimize their costs, and maximize their income. All three of these tasks imply managing portfolios with low levels of delinquency. High rates of delinquency are costly, reduce income from interest payments, and can result in defaults which eat away at a program's primary asset, its credit portfolio.

The issue of delinquency in microenterprise credit programs has several confusing characteristics. Although it is considered an important measure of a program's success, there is no common definition of delinquency, leaving observers unable to interpret delinquency rates. Despite the importance of delinquency to the health and viability of credit programs, many program managers are unaware of their true portfolio quality, and ignorant of the impact that delinquency has on their financial situation. Furthermore, high levels of delinquency are often blamed on the borrowers, when the credit institution itself is usually the culprit.

This document is intended to shed light on these confusing characteristics. It should help donors and supporters of microenterprise programs by giving them better tools with which to measure the portfolio quality of credit programs. It should also help program managers by giving them some insights on the costs of delinquency and how to measure and monitor portfolio quality within their programs.

The other primary purpose of this document is to argue that microenterprise credit programs themselves control their levels of delinquency. With few exceptions, poor portfolio quality is more a reflection of a flawed credit program, rather than "bad" borrowers or an unfavorable economic context. We suggest strategies that can help microenterprise credit programs control their delinquency.

Although there remains much work to be done on the topic, we hope that this document initiates a more open and productive dialogue about delinquency within the microenterprise credit field.

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I. INTRODUCTION

The strength and survival of lending institutions, both formal and informal, hinge upon the institutions' ability to collect their loans. Many savings and loan associations in the United States have been forced into bankruptcy because of borrower default. Chase Manhattan Bank recently wrote off \$1.5 billion in bad debts and declared quarterly losses of \$625 million, primarily because of poor recovery of real estate and international loans (*BusinessWeek*, 1990). Informal "Partners" in Jamaica, where members pay a set amount each period and then collect the entire amount deposited when it is their turn, have disbanded because participants stopped paying their way. Microenterprise credit programs have been forced to close their doors because poor payback led to diminishing loan funds.

Who suffers when a lending institution fails, and who is responsible? Borrowers and potential borrowers suffer because they lose access to future loans. Providers of capital, be they savers, formal lenders, stockholders, donors, or even taxpayers (if the savings are federally insured), suffer because they lose their money. Responsibility rests on the shoulders of the lending institution itself, its management and its regulators.

In the case of microenterprise credit programs, microentrepreneurs, who usually have no access to alternative credit at comparable rates, suffer. Savers, lenders, and donors also suffer in their role as funders. The management of the implementing institution, along with its regulators (its board and donors) are ultimately responsible.

Organizations that conduct microenterprise credit programs, however, are often reluctant to assume fully this responsibility. Part of the reason is that many of the implementing organizations have limited experience as lending or financial institutions. They are accustomed to working with

donated funds, and answering to funders whose main concern is that their money be well spent, not recovered. They are not used to being judged by quantitative financial measures like portfolio quality and cost per dollar lent, which are used to measure the effectiveness of credit programs. Though these institutions have assumed some of the functions of financial institutions, specifically that of providing credit to certain sectors of the population, they are wary of assuming all of the responsibilities because of their lack of experience and expertise.

One result of this situation has been ambiguity about portfolio quality and delinquency in microenterprise credit programs. Though delinquency is considered an important measure of a program's success, it has no commonly used definition. Delinquency figures are frequently reported without revealing how they were calculated, leaving the observer unable to determine what the figures indicate about a given portfolio. Despite the importance of delinquency to the health of credit programs, some programs are unable or unwilling to determine their level of delinquency in a timely fashion, and are unaware of how it affects their institution and borrowers. Many institutions also see poor portfolio quality as a cost of working with the poor, implying that the borrowers, and not the institution, are responsible.

The purpose of this paper is twofold. First, it is intended to point out weaknesses in the way that delinquency is currently treated in the microenterprise credit field, and to encourage the use of appropriate and well-defined measures of portfolio quality. The second section of the paper discusses the many different definitions and formulas currently used to report on delinquency and portfolio quality. It concludes with recommendations on how to present an accurate and understandable picture of portfolio quality.

The second purpose of the paper is to demonstrate that microenterprise credit programs can control their portfolio quality. The paper argues that it is the lender, not the borrower, who causes or prevents high levels of delinquency in credit programs. While many external factors influence the quality of a portfolio, the institution itself, through its philosophy, image, and methodology, plays the pivotal role in determining its own portfolio quality. The third section begins by examining the implications that portfolio quality has for credit institutions and their borrowers. Delinquency is found to be a cost which, like other costs, institutions can and should control. The fourth section identifies the causes of delinquency and suggests strategies that have proven effective at controlling delinquency. The section ends with a summary of key recommendations that can help microenterprise credit programs minimize their levels of delinquency.

II. MEASURES OF PORTFOLIO QUALITY

The microenterprise credit field is getting too old to be dishonest about delinquency. How can everyone have a repayment rate of 98%?

(Representative of a donor agency)

There is considerable confusion around the issue of portfolio quality among microenterprise credit programs¹. There are many different measures used, some of which are called by the same term without any clarifying definition. It is frequently impossible to determine the portfolio quality of a program without conducting a detailed analysis of the portfolio.

Portfolio quality is usually depicted by repayment rates, delinquency figures, loan loss rates, and other measures. Given that these measures are quantitative, expressed in monetary terms or percentages, they would seem to be comparable. For example, a program with a 15% delinquency rate would be considered to have a lower delinquency rate than a program with a 20% delinquency rate. Because many programs calculate their delinquency rates with different formulas, however, these numbers can be misleading.

A. Choosing Formulas

Table 1 is a simplified example of a credit portfolio as of December 31, 1989. Starting from the left, the columns show: an identifying letter for each operation, the date the loan was disbursed, the final due date of the loan, the loan term or period in months, the amount of the loan, the amount due in each monthly payment, the amount already paid, the balance outstanding or still due, and the amount which is past due. The last four columns break out the amount past due by the number of days late. The table only includes amounts of principal (no interest), and all loans were to be repaid in equal monthly installments².

1 This section focuses on measures of portfolio quality to be made available to the "public", that is evaluators, donors, board members, researchers and others. Measures used for management purposes are discussed in the section on controlling delinquency.

2 When examining portfolio quality, principal payments and interest payments should always be considered separately. Measures of principal past due indicate the level of risk of the portfolio, or a portion of program's assets, while interest past due affects the program's cash flow.

TABLE 1
SAMPLE PORTFOLIO*
(as of Dec. 31, 1989)

OPERATION	DATE	DUE DATE	TERM (months)	LOAN AMOUNT	PAYMT AMOUNT PAID	LOAN AMOUNT BALANCE PAST DUE	1-30 DAYS	31-60 DAYS	61-90 DAYS	>90 DAYS		
A	12/13/88	05/12/89	5	200.00	40.00	200.00	000.00					
B	12/28/88	04/27/89	4	175.00	43.75	175.00	000.00					
C	12/23/88	03/23/89	3	150.00	50.00	000.00	Loan written off as nonrecoverable in June 1989.					
D	01/27/89	07/26/89	6	250.00	41.67	250.00	000.00					
E	03/13/89	06/11/89	3	100.00	33.33	100.00	000.00					
F	06/21/89	12/18/89	6	350.00	58.33	350.00	000.00					
G	07/11/89	01/07/90	6	200.00	33.33	166.67	33.33					
H	07/31/89	05/27/90	10	600.00	60.00	300.00	300.00					
I	08/20/89	02/16/90	6	175.00	29.17	116.67	58.33					
J	09/24/89	03/23/90	6	300.00	50.00	150.00	150.00					
K	11/23/89	06/21/90	7	500.00	71.43	142.86	357.14					
L	07/11/89	03/08/90	8	550.00	68.75	206.25	343.75	137.50	68.75	68.75		
M	08/21/89	02/17/90	6	350.00	58.33	000.00	350.00	233.33	58.33	58.33	58.33	
N	08/30/89	01/27/90	5	300.00	60.00	120.00	180.00	120.00	60.00	60.00		
O	10/04/89	02/01/90	4	175.00	43.75	43.75	131.25	43.75	43.75			
P	07/01/89	11/28/89	4	220.00	55.00	165.00	55.00	55.00	00.00	55.00		
Q	12/13/89	04/12/90	4	200.00	50.00	000.00	200.00					
R	12/28/89	05/27/90	5	250.00	50.00	000.00	250.00					
TOTALS				5045		2,486.19	2,408.81	589.58	230.83	242.08	58.33	58.33
As % of portfolio						100%	24%	10%	10%	2%	2%	
BALANCE of loans with payments past due as % of portfolio							1060	131.25	578.75		350	
							44%	5%	24%	0%	15%	
18 LOANS DISBURSED												
5 LOANS COMPLETELY REPAID												
1 LOAN DEFAULTED												
12 LOANS IN PORTFOLIO OR OUTSTANDING												
5 LOANS WITH SOME PAYMENT PAST DUE												

* For simplicity, no interest is included in this table and the principal is to be repaid in equal installments.

Table 2 presents a list of indicators used to measure portfolio quality. All of the 20 formulas listed in Table 2 were extracted from documents describing or evaluating microenterprise or credit union projects. They are all used, either independently or in combination, to portray the portfolio quality of credit programs in developing countries. The second column in Table 2 shows the result of using each formula on the sample portfolio in Table 1.

- The formulas in the first section of Table 2 measure what is commonly referred to as **delinquency, arrears, or late payments**. They calculate payments or loans past due (either their number or value) as a percentage of loans disbursed, loans due or loans outstanding. The **amount outstanding, or portfolio**, is commonly referred to as **current, active, actual, or outstanding portfolio**, and is the total amount owed by borrowers that the institution expects to receive.
- The second section includes formulas for calculating **repayment and on-time repayment rates**. These formulas measure the amount (or number) of payments received with respect to the total amount (or number) due or disbursed.
- The last section presents formulas used to calculate **loan loss or default rates**. These formulas measure the number or value of loans that have been declared **nonrecoverable, or written off**, as a percentage of the portfolio or total disbursed, during a certain period of time.

TABLE 2

MEASURES OF PORTFOLIO QUALITY

I. Measures of Late Payments

Formula	Result from Sample Portfolio
1. $\frac{\text{amount past due}}{\text{portfolio}}$	$\frac{589.58}{2408.81} = 24\%$
2. $\frac{\text{outstanding balance of loans with payments past due}}{\text{portfolio}}$	$\frac{1060}{2408.81} = 44\%$
3. $\frac{\text{amount past due}}{\text{amount disbursed}}$	$\frac{589.58}{5045} = 12\%$
4. $\frac{\text{amount past due plus amount defaulted}}{\text{portfolio}}$	$\frac{589.58 + 150}{2408.81} = 31\%$
5. $\frac{\text{amount past due} > 1 \text{ yr. after final due date}}{\text{amount due through that final due date}}$	$\frac{0}{589.18 + (2486.19 - 71.43)} = 0\%$
6. $\frac{\text{outstanding balance of loans past final due date}}{\text{portfolio}}$	$\frac{55}{2408.81} = 2\%$
7. $\frac{\text{outstanding balance of loans} < 6 \text{ months past due}}{\text{portfolio} < 6 \text{ months past due}}$	$\frac{1060}{2408.81} = 44\%$
8. $\frac{\text{outstanding balance of loans} > 2 \text{ months past due}}{\text{portfolio}}$	$\frac{350}{2408.81} = 15\%$
9. $\frac{\# \text{ of loans with payments past due}}{\# \text{ of loans in portfolio}}$	$\frac{5}{12} = 42\%$
10. $\frac{\# \text{ of loans with payments past due}}{\# \text{ of loans disbursed}}$	$\frac{5}{18} = 28\%$
11. $\frac{\# \text{ of payments due in period but not received}}{\# \text{ payments due in period}}$	(in December) $\frac{4}{9} = 44\%$

$$12. \frac{\text{\# of loans > 1 month past due}}{\text{\# loans in portfolio}} = \frac{4}{12} = 33\%$$

II. Measures of Repayments

$$13. \frac{\text{cumulative amount received}}{\text{cumulative amount due}} = \frac{2486.19}{3154.34} = 79\%$$

$$14. \frac{\text{cumulative amount received}}{\text{cumulative amount disbursed}} = \frac{2486.19}{5045} = 49\%$$

$$15. \frac{\text{amount received in period}}{\text{amount due in period plus amount past due}} \quad (\text{in December}) \quad \frac{315.36}{833.51} = 38\%$$

$$16. \frac{\text{amount received in period}}{\text{amount due in period}} \quad (\text{in December}) \quad \frac{315.36}{474.76} = 66\%$$

$$17. \frac{\text{\# payments received in period}}{\text{\# payments due in period}} \quad (\text{in December}) \quad \frac{6}{9} = 67\%$$

III. Measures of Loan Loss

$$18. \frac{\text{amount declared nonrecoverable in period}}{\text{average portfolio of period}} \quad (\text{in 1989}) \quad \frac{150}{\frac{525 + 2408.81}{2}} = 10\%$$

$$19. \frac{\text{amount declared nonrecoverable in period}}{\text{relevant portfolio of period}} \quad (\text{in 1989}) \quad \frac{150}{525} = 29\%$$

$$20. \frac{\text{\# of loans declared nonrecoverable}}{\text{\# of loans disbursed}} \quad (\text{cumulative}) \quad \frac{1}{18} = 6\%$$

Within each category, the formulas use different variables to measure portfolio quality. In section I, the delinquency rates for the sample portfolio vary from 0% (formula 5) to 44% (formulas 2, 7, and 11). Consequently, a program that reports a 20% rate might be saying that 20% of the total amount disbursed is past due (using formula 3), or that 20% of the portfolio is composed of loans past their final due date (using formula 6). In order to interpret a delinquency rate, one must know what formula is being used.

Even knowing the formula used, however, is not sufficient if the terms of that formula are not defined. In the sample portfolio past due is defined as *1 day* after a payment's due date. Using formula 3, that results in a delinquency rate of 12%. If past due is defined as 91 days after a payment's due date, however, then the same formula produces a delinquency rate of 2% ($58.33/2408.81 = 2\%$).

When told of a 15% delinquency rate, an observer really has little indication of the quality of the portfolio in question. ***The only way that delinquency, repayment, and loan loss rates can provide a meaningful indication of portfolio quality is if the formulas used are provided and defined.***

Given so many possible ways of reporting on portfolio quality, which measures should a program use? The purpose of providing a measure is to present an accurate picture of the portfolio quality of a program, much as financial statements are supposed to present an accurate picture of a program's financial situation. A measure should indicate to what extent clients are repaying loans on time or late, how late, how much of the portfolio is not being paid back at all, and what degree of risk there is for the portfolio.

1. Measuring Risk

One of the most commonly used formulas is formula 1:

Formula 1:

$$\frac{\text{amount past due}}{\text{portfolio}}$$

Although this measure, or some variant, is the one most commonly used among microenterprise programs, it understates delinquency because it only counts the *payments* as they become past due, not the entire balance of the loan which is actually at risk. In addition, if the program's portfolio is

growing rapidly, or the loan terms are increasing, a delinquency problem will be hidden. A couple of examples from the sample portfolio illustrate these phenomena.

Two loans were made in December, 1989 (operations Q and R), neither of which had a payment fall due by the date of the report in Table 1. If those two loans had not been disbursed, the portfolio would have been \$1958.81. The delinquency rate, using formula 1, would have been 30% instead of 24%. The two loans increased the portfolio (the denominator in formula 1) and reduced the delinquency rate by 6%. Even if repayment is extremely poor, those new loans are reflected immediately in the denominator, and only very gradually in the numerator as payments pass their due dates.

Likewise, when loan terms are longer, the size of payments decreases. Smaller payments will slow the increase in the numerator (payments past due) as payments become past due. Returning to the sample portfolio, if each of the loans with payments past due had loan terms twice as long, then the amount of each payment would be half of what it actually is. The amount past due would be \$294.79 and the delinquency rate would be 12% ($294.79/2408.81 = 12\%$) instead of 24%, even though the same borrowers are behind by the same number of payments in both cases.

Formula 2, which is used by banks and other formal financial institutions, corrects for many of the weaknesses of formula 1.

Formula 2.:

outstanding balance of loans with payments past due
portfolio

The formula measures the percentage of the portfolio that is at risk or **contaminated** by a late payment. While formula 1 measures the *amounts* that are actually past due, this formula considers that the *entire outstanding balance* of a loan that has any payment past due is actually at risk. In the sample portfolio, this formula results in a delinquency rate of 44% as opposed to the 24% result using formula 1. This "contaminated" formula reflects the true dimensions of a delinquency problem even when the payments are small and the loan terms are long. If a portfolio is increasing rapidly, delinquency may still be understated, as the denominator will include all loans, even those that have had no payments fall due (as does the denominator in formula 1). This, however, is a short-term effect because as soon as one payment is late, the entire balance is reflected in the percentage in arrears.

EXAMPLE 1

Using formula 1, the percentage of a portfolio in arrears may be decreasing, when the portfolio is actually becoming more risky and the quality is worsening. The following example has been taken from an actual credit program with loan terms averaging 48 months.

	Dec. 1988	Dec. 1989
a. Amount outstanding (portfolio):	2,702,910	4,856,041
b. Amount past due (by 30 days):	309,769	506,170
c. percentage in arrears (b/a)	11%	10%
d. Total recovered December 1988 to December 1989:		704,476
e. Total due December 1988 to December 1989:		912,622
f. Amount recovered/Amount due (d/e):		77%

As the figures show, even though delinquency decreased from 11% to 10%, the program was collecting only 77% of what became due during that period. In other words, 23% of the amount due during the year was *not* collected. But, because the portfolio (the denominator in the delinquency calculation) grew tremendously, and because the long loan terms limited the amount that could possibly become past due each month (the numerator), the delinquency calculation shows an improving portfolio. Another way of looking at it is that even though the amount past due increased by 63%, the portfolio increased by 80%, effectively covering up the increase in the amount past due, and reducing its percentage of the portfolio.

If the portfolio stops growing, and the repayment rate stays the same, the delinquency rate will immediately reflect the deteriorating quality of the portfolio. Assume that the portfolio, the amount due, the previous amount past due, and the percentage recovered remain constant in the following year:

Amount recovered:	$77\% \text{ of } 912,622 = 702,719$
Amount past due:	$506,170 + (912,622 - 702,719) = 716,073$
Portfolio:	$4,856,041 - 702,719 = 4,153,322$
% in arrears:	$716,073/4,153,322 = 17\%$

In this case, the percentage in arrears will continue to increase dramatically as larger portions of the portfolio fall due but are not recovered (numerator), and the portfolio size (denominator) remains the same. If the loan terms were shorter, larger amounts would be falling due each month and the percentage in arrears would increase more quickly. The example shows how a rapidly increasing portfolio can hide a worsening arrears situation.

EXAMPLE 2

An example from a program that had some initial delinquency problems shows how much more informative formula 2 is than formula 1. The following figures are from an actual credit program.

	May, 1988	March, 1989
Portfolio:	\$ 302,707	\$ 422,862
Amount past due*:	\$ 77,672	\$ 109,944
Balance of loans with payments past due:	\$ 263,355	\$ 131,087
% delinquent using formula 1: (amount past due/portfolio)	26%	26%
% delinquent using formula 2: (balance of loans with payments past due/portfolio)	87%	31%

Using the more common measure of delinquency (formula 1), the quality of the portfolio appears to have remained the same between the two dates. Using the other measure, however, it becomes obvious that the portfolio was in a much riskier situation in 1988 than 1989. In May, 1988 nearly 90% of the amount outstanding pertained to loans that had one or more payments past due; nearly all of the loans had some payments past due and were consequently at risk. By March 1989, however, only 31% of the entire portfolio was at risk; the rest of the portfolio was composed of loans that had no payments past due. Those loans with payments past due had nearly all of their payments past due, as their amount in arrears (\$109,944 or 26%) was nearly the same as their balance due (\$131,087 or 31% of the portfolio). Surprisingly, at both times, the delinquency rate using formula 1 was 26%.

* Past due in this case includes all payments outstanding oneday or more after their due date.

When using either formula 1 or 2, the term "past due" should be defined. Especially with formula 2 (contaminated portfolio), the time frame for past due should reflect when the risk that a borrower will not pay increases, considering the type of loan (working capital, fixed asset, commerce, manufacturing, etc.), loan term, payment schedule, and the program's past experiences. For example, a borrower with a 6-month loan and monthly payments may fall 10 days behind on a payment without the delay signifying a serious problem or any real risk to the program. Including that loan as part of the contaminated portfolio would exaggerate the actual level of risk to the portfolio. If a market vendor with a 2-month loan and weekly payments falls behind by 10 days, however, that probably indicates a problem that puts the recovery of the payment in doubt, and increases the risk to the outstanding portion of the loan. In the latter case, the payment should be reported as past due. One rule of thumb is to consider loans past due when a payment completes one entire cycle without being paid or, in other words, when two payments have been missed. Thus, loans with weekly payments are considered past due seven days after a missed payment, and loans with monthly payments are past due after 30 days.

The 50 programs affiliated with ACCION define past due as any payment not received within 30 days after the due date. It is important to emphasize, however, that this is a definition of past due for *external reporting purposes*. Internally, each program considers a payment past due after 1 day and begins to take actions to collect the payment. In Bolivia, action is taken within hours of a missed payment. The 30 day "grace" period for reporting is included because many programs have field offices or clients who pay in banks. Sometimes the head office, where the program's global delinquency rate is calculated, does not receive confirmation of payments for several days (or even weeks if the information comes in a bank statement), even though the client has paid on time. ACCION determined that counting a payment past due after 30 days provides the most accurate reflection of the portfolio quality of its programs. Other organizations may use different definitions of past due. Whatever definition used must be explained if observers are to understand the quality of the portfolio in question.

An even better understanding of the quality of a portfolio is possible when delinquency rates include a breakdown of the arrears by age. For example, referring to the sample portfolio, stating that payments past due by more than 30 days equal 14% of the portfolio is not nearly as insightful as specifying that 10% is past due by 31-60 days, 2% by 61-90 days, and 2% by more than 90 days. With the breakdown by age, one can see that while many payments arrive late, they are generally made within 60 days and few present serious repayment problems. That situation is very

different from one in which 3% is past due by 31-60 days, 4% by 61-90 days, and 7% by over 90 days. The latter example indicates a portfolio in which payments frequently slip from one category into the next, and which is likely to show increasing levels of arrears as time goes on. Even though the quality of the two portfolios is quite different, both have a delinquency rate of 14%.

In sum, portfolio quality and risk are best represented by the delinquency formula which measures the balance of loans past due divided by the portfolio. The term "past due" should be defined or, preferably, the arrears should be broken down by age.

2. Measuring Recovery Performance

Another commonly used formula is formula 13, which measures repayment rates.

Formula 13.

$$\frac{\text{cumulative amount received}}{\text{cumulative amount due}}$$

The sample portfolio has a cumulative repayment rate of 79% (formula 13) and an arrears rate of 24% (formula 1). Repayment rates and delinquency rates do not add up to 100% because the two formulas measure amounts paid or amounts past due as percentages of different things. Repayment rates are a percentage of the **amount due** (during a specified period or cumulative), while arrears are usually a percentage of the **amount in the portfolio** at a specified point in time. Consequently, while delinquency figures indicate the **amount of risk** in the portfolio, by measuring the amount past due compared to the entire portfolio, repayment rates show the **recovery performance** of the portfolio, measuring what has been recovered compared to what has fallen due.

Repayment rates are excellent indicators of recovery performance. They can, however, give a deceptive view of a portfolio if there is a tendency for payments to be made in advance. Payments made in advance "hide" or compensate for payments past due. A repayment rate can be over 100% if borrowers make payments before they fall due, but the portfolio may still have a significant percentage of arrears.

In the sample portfolio, operation K has made one payment in advance (only \$71.43 has fallen due but the borrower has paid \$142.86). That advance payment increases the numerator of the repayment rate by

\$71.43 with no impact on the denominator, effectively "hiding" \$71.43 of payments that have fallen due but have not been paid. Because the payment was made in advance, the repayment rate is better, 79% instead of 76%. However, the arrears rate ~~increases~~ slightly with the advance payment (from 24.48% to 25.22%), because a larger portion of the portfolio is at risk; the advance payment decreased the portfolio by \$71.43 without changing the amount in arrears.

A more accurate repayment rate could be calculated using the following formula:

$$\frac{\text{amount received which fell due during period}}{\text{amount which fell due}}$$

This formula corrects for the difficulties described above, but was not used in any of the documents reviewed for this paper. Using this formula requires an information system which differentiates on-time payments from those that had been past due or made in advance.

Repayment rates are excellent indicators of the recovery performance of a credit program, but do not indicate the level of risk or quality of a portfolio. Like measures of delinquency, they should be carefully defined when used.

B. Concealing Delinquency

Even using the contaminated portfolio measure for delinquency, presenting a breakdown by age, and indicating a repayment rate, the quality of a portfolio can be obscured by three actions: **declaring loans nonrecoverable** (loan defaults, loan losses, or loan write-offs), **rescheduling loans**, and **refinancing loans**. Though these actions are useful mechanisms for sound portfolio management, their misuse can make measures of portfolio quality very deceptive.

1. Loan Write-Offs

The loan loss rate (Section III in Table 2) measures how much of the portfolio a program has **written off** or **declared nonrecoverable**. Loans should be written off against a **loan loss reserve** established by the institution³. Loans are written off when their recovery is in doubt so that

³ The establishment and management of loan loss reserves are discussed in more detail in section III. A Which examines the costs of delinquency.

the program's assets, of which the portfolio is part, are accurately reflected. The portfolio should not include loans that the program does not expect to be repaid; including such loans inflates the reported assets of the program. Instead, the portfolio should be an accurate reflection of the amount out in loans that the program expects to receive. Loan write-offs are strictly for accounting purposes, and efforts to collect on amounts written off should continue.

Declaring loans nonrecoverable removes them from the portfolio and directly influences the delinquency rate of that portfolio. For example, in the sample portfolio, if the program had not written off the loan for \$150 (operation C), the portfolio would be \$2558.81, the total amount past due would be \$739.58, and the delinquency rate would be 47% instead of 44% (using formula 2) or 29% instead of 24% (using formula 1). The loan loss rate would be zero. Likewise, if the program declared loan "P" nonrecoverable, the delinquency rate would go down to 42% or 22%, but the loan loss rate would increase from 12% to 17% using formula 19 ($150 + 55/1204.41$).

As these examples show, by declaring loans nonrecoverable, a program decreases its delinquency rate, but also decreases its portfolio, thereby decreasing its assets. Many microenterprise credit programs do not write off loans because they wrongly believe that declaring a loan nonrecoverable means that no further action will be taken to collect payment. The 1983 evaluation of the Badan Kredit Kecamatan program found that in 10 years there had been no write-off policy, leaving long-delinquent loans, with nearly zero probability of recovery, reflected in both the portfolio and delinquency rates of the program (Goldmark and Rosengard, 1983, p. 46). Such a lack of policy on write-offs means that the program's financial statements overstate the actual assets of the program, because money that is extremely unlikely to be recovered is included as portfolio.

A well-defined policy that establishes a loan loss reserve and periodically declares loans nonrecoverable saves a program from declaring large amounts nonrecoverable all at once, and thereby drastically decreasing assets. It also enables a program to present more accurate financial statements and portfolio reports. Robert Christen recommends that loans that have been past due for more than one year should be written off (Christen, 1990, p.121). Ideally, the program's own experience of when recovery of delinquent loans becomes unlikely should determine the time period beyond which those loans are written off.

The loan loss rate is calculated for a period of time, usually one year. The simplest way to calculate it is to use the *average* portfolio of that period.

Formula 18:

$$\frac{\text{amount declared nonrecoverable in period}}{\text{average portfolio in period}}$$

If a program's portfolio is increasing substantially, however, this will tend to underestimate the loan loss rate because the denominator will reflect a "new" portfolio, not the one that generated the losses. If loans are written off after being one year past due, then the denominator should reflect the portfolio of that prior year (Christen, 1990). The portfolio of that prior year is called the **relevant portfolio** and is used in the following formula:

Formula 19:

$$\frac{\text{amount declared nonrecoverable in period}}{\text{relevant portfolio of period}}$$

2. Rescheduling and Refinancing

Writing off loans immediately reduces the amount that a program has in arrears, but also reduces the active portfolio. **Refinancing and rescheduling** loans can reduce arrears without reducing the active portfolio. Rescheduling a loan involves changing the payment schedule so that the borrower is no longer in arrears, and has a new payment schedule which he should be able to meet. Refinancing a loan implies adding an additional amount to the pending balance (lending the borrower more money), and perhaps rescheduling the loan so that payments can be met.

Formal financial institutions maintain rescheduled and refinanced loans in a separate "higher risk" portfolio, and may even charge a higher rate of interest to reflect that risk. Most microenterprise credit programs, on the other hand, return them to their portfolio and do not keep track of the percentage of that portfolio composed of refinanced or rescheduled loans. Because refinancing and rescheduling convert a delinquent loan into one that is suddenly back on schedule with no arrears (even though the borrower may be just as unlikely to repay as before), they can disguise serious repayment problems. They are appropriate actions in certain circumstances, but extremely dangerous and costly if used

inappropriately⁴. If frequently used, the rescheduling and refinancing of loans can render meaningless any measure of delinquency or repayment, as delinquency rates can be kept very low, and repayments high, even though the portfolio may be of poor quality.

C. The Keys to Measuring Portfolio Quality

There are many possible ways to report on portfolio quality; some of them do not present the full picture, some present a deceptive picture, and some do provide a good understanding of the quality of the portfolio in question. The following points summarize the best ways to present portfolio quality.

- The amount of risk in a portfolio is best represented by formula 2:

$$\frac{\text{outstanding balance of loans with payments past due}}{\text{portfolio}}$$

The term "past due" should be defined or, preferably, the percentage should be broken down by age, such as the percentage past due by 31-60 days, 61-90 days, and over 90 days.

- The best measure of recovery performance is:

$$\frac{\text{amount received}}{\text{amount due}}$$

- This formula can be used for a certain period, such as year, since a given date, or since program inception. Ideally, the amount received would not include payments made in advance, as they tend to overstate the repayment rate.
- Writing off loans which are nonrecoverable is an important component of portfolio management. Programs should have a defined policy for writing off loans, and can report their loan losses with the following formula:

$$\frac{\text{amount declared nonrecoverable in period}}{\text{relevant portfolio of period}}$$

⁴ The dangers of refinancing and rescheduling are discussed in the section on "Attacking an Existing Arrears Problem".

- **Refinancing and rescheduling loans are also important components of portfolio management, but can be dangerous and costly vices for credit programs. If used inappropriately, they render meaningless the measures of portfolio quality discussed above.**

III. THE CHARACTERISTICS AND COSTS OF DELINQUENCY

Delinquency can eat away at a portfolio without anyone realizing it, and then suddenly explode out of control, like a hidden beast!

(Field worker, microenterprise credit program)

Poor portfolio quality has caused the demise of many financial institutions, both formal and informal. A study of credit unions in the United States found that the leading cause of failures from 1981 to 1985 was poor loan collection practices, which showed up in nearly two-thirds of the cases (Stetenfeld, 1987 p.20). The KUPEDDES program in Indonesia replaced a rural credit program terminated because of a high default rate (Biddle, et. al., 1989 p.4). Many credit programs for small entrepreneurs or farmers in developing countries have been severely cut back or have simply disappeared because loans were not repaid (Deschamps, 1989).

A program that has high delinquency and loan loss rates is not viable as a credit program, even though it may continue with large subsidies and donations if it is deemed valuable for social or political reasons. Frequently, government programs, dependent on high levels of subsidy, fall into this category. Conceived as credit programs, they sometimes become grant programs. Such programs are dependent upon continual, large donations, without which the loan fund decapitalizes. The institution cannot borrow capital to increase its portfolio, or capture savings, because its ability to pay back or return savings will always be hampered by its poor portfolio quality.

Beyond determining whether an institution can survive, the portfolio quality is considered one of the primary indicators of a microenterprise credit program's success (Tendler, 1987, p.18). On-time payments indicate that loans are appropriate for the needs of the clients because they are capable of paying them back on time. It is also an indication that clients value the service and their relationship with the institution enough to want to repay loans on time. On the other hand, high delinquency and loan loss rates suggest that a program is providing inappropriate loans, which clients are unable to pay back on time, or a

service that clients do not value enough to maintain a positive credit history and working relationship with the institution.

While low delinquency is an important indicator of performance for microenterprise credit programs, it is not the only one. A program must weigh the importance and benefits of low delinquency against the means used to achieve it. In some cases, programs sacrifice the original beneficiary population, to some degree, with the hopes that this will have a favorable impact on the delinquency rate. Many credit programs that started with a target population of poor microentrepreneurs shifted to wealthier entrepreneurs who seemed less risky when they began experiencing high levels of arrears. One of the primary reasons cited for low delinquency rates in a rural credit program in Costa Rica was that the excess demand for the cheap credit offered by the program enabled the bankers to be extremely selective with the borrowers (Vogel, 1981). The poorer farmers, who were supposed to be the primary beneficiaries of the program, had their credit stringently rationed. Ironically, the same study pointed out that lower delinquency rates were actually associated with the smaller loans.

In other cases, a program might assume disproportionate follow-up or monitoring costs in order to maintain a low delinquency rate. In the long run, extremely high costs will have the same impact on the program as high levels of delinquency and default: the program will not be able to maintain itself or expand without large, continual donations. ***Although an important indicator in its own right, delinquency must be looked at in the context of other indicators to determine program performance.***

Because of the many implications that delinquency has for credit programs, there has been interest in the establishment of a standard or acceptable rate of delinquency against which programs can measure themselves. Using a ratio of outstanding loans past due (or the value of loans past their final due date)/value of portfolio, the 1985 AID *Manual for Evaluating Small-Scale Enterprise Projects* (Goldmark and Rosengard, 1985) suggested that a rate of 10% or less was good, 10-20% adequate, and more than 20% poor. The report clarified that an institution that regularly writes off uncollectable loans should have lower rates (p.101). As the remainder of this section will show, however, such a standard is quite arbitrary. Instead, ***the ultimate determinants of whether a delinquency rate is acceptable are the program's objectives and financial situation.***

Delinquency and loan losses imply postponed income, lost income, and lost portfolio to a program. Likewise, some measures aimed at

diminishing delinquency are costly. If the program is aiming for a certain level of cost effectiveness or self-sufficiency⁵, acceptable rates of delinquency and default are those which do not deter the program from reaching this objective, as well as its other goals such as reaching the poor or expansion.

In sum, delinquency and loan default should be understood as costs. They are peculiar costs, with the characteristics of a "hidden beast", because three special traits enable them to break out of control and ruin a credit institution:

- ***First, the costs of delinquency are hidden, making it difficult for credit institutions to recognize them. Programs generally try to minimize their level of delinquency because it is used to judge their effectiveness, but they do not understand to what extent their daily financial situation is being affected by arrears in their portfolios.***
- ***Second, programs have a tendency to attribute delinquency disproportionately to external factors. Consequently, they do not confront and resolve the contributing factors within their control.***
- ***Third, delinquency is contagious. It has a tendency to spread and worsen, leading to high levels of default, unless it is aggressively controlled.***

The remainder of this document looks at the costs and effects of delinquency and default, the causes, and some strategies that have proven effective at limiting delinquency and default.

A. The Quantitative Costs of Delinquency

Delinquency has numerous effects on a program's cost structure, income, and financial situation. General portfolio management implies direct costs such as information systems for monitoring payments and staff time to visit borrowers. Additional efforts to decrease delinquency usually imply additional costs for closer monitoring, more frequent visits to borrowers, more extensive analyses of the portfolio, legal fees for pursuing seriously delinquent borrowers, costs associated with repossessing and selling physical guarantees, and others. The more

⁵ Meaning the ability to cover actual operating costs with operating income.

time, effort, and resources put into controlling delinquency, the less there is available for the program to reach new borrowers and expand services or areas of coverage. Usually, in programs geared toward self-sufficiency, some of these additional costs are paid by the delinquent borrowers (in the form of penalty fees, legal fees, etc.), and some by all borrowers in the form of higher interest rates charged to cover operating costs.

The income side of the equation is also affected negatively by delinquency. Interest on loans is the principal source of income for microenterprise credit programs. Delinquency affects this critical source of income in the following ways:

- Delinquent loans imply delinquent interest, or postponed income, from the entire balance of loans with payments past due (the contaminated portion of the portfolio), not just from the portion past due. The income that is supposed to come in during a particular month does not arrive until a later month, representing an opportunity cost for the program. Such delays in income can have serious detrimental effects on the program's cash flow and level of self-sufficiency (see Example 3).
- Delinquency slows down the rotation of the portfolio, resulting in another type of lost income. A program may expect to use \$100 twice during a year by making two 6-month loans for that sum, or actually lending out \$200 in the year with only \$100 in cash. But if the first borrower falls in arrears, the program may be able to lend only \$150 during the year. Most programs charge a percentage of the amount disbursed as processing and monitoring fees. In this case, fees would be collected on \$150 worth of disbursements instead of \$200.
- When loans are far past due, many programs give up on recovering the interest and concentrate on just recovering the principal, foregoing their own income. Of course, if the loans are not recovered after the delay, the interest is not recovered either, representing lost income to the program.

EXAMPLE 3

The actual amount of postponed income can be determined by comparing the interest received in a given month to the nominal interest rate times the portfolio.

Portfolio on January 1, 1990:		\$100,000
Nominal interest rate:	(24% per year/12) =	2%
Interest due in January:	(.02 x 100,000) =	\$2,000

If the program receives only \$1500 in interest payments in January, then its January income is \$500 less than it should be because of delinquent payments. The program is effectively collecting 1.5% interest in January ($1500/100,000$) instead of the stated rate of 2%.

As delinquent loans age, the risk of default increases. Loan defaults bring additional costs to credit programs beyond those described above. Most programs, and all formal financial institutions, maintain loan loss reserves or provisions for bad debts as an account on their balance sheet. There are several accepted methods of creating reserves. Banks and many credit programs create a special equity or liability account by expensing an amount before net income from their income statement. When loans are declared nonrecoverable and written off, the reserve and the portfolio are then decreased⁶.

The amount of reserves on the balance sheet should reflect the program's expected loan losses with regard to the portfolio. That amount is established by the program, sometimes with recommendations of auditors, and is calculated based on the program's experience of recovering loans past due, and the quality of the portfolio. It may also be determined, in part, by conditions set by an institution lending or donating to the program. US banks usually maintain a reserve of about 2% of a portfolio classified as "acceptable risk" loans. ACCION's affiliates usually maintain a reserve of about 3% of their active portfolios.

Provisions for default and defaults themselves have direct repercussions for a program's income and assets. While the reserve

⁶ For a more complete discussion of the establishment and management of loan reserves, see Christen, 1990.

protects a program from drastic decreases in income and assets by having funds "set aside" in the financial statements to be written off, the establishment of a reserve implies an expense for a program. It is one more item subtracted periodically from the program's income, either reducing a surplus or taking the program one step further from self-sufficiency. A lower quality portfolio will need a larger reserve which will, in turn, have a larger negative impact on the program's income situation. This effect is illustrated in Example 4.

EXAMPLE 4

Interest charged on loans:	15%
Minus	
Cost of funds:	8%
Operating expenses:	2%
Earnings before reserve:	5%

With a reserve of 2%, the institution will enjoy earnings of 3% (5% - 2% = 3%). If the reserve is increased to 3%, earnings drop by one-third, to 2%. If the bad debt rate is 5%, the institution's earnings disappear completely (Goldmark et al., 1987, p. 53).

Even with a reserve, loan losses ultimately decrease the assets of a program by decapitalizing the portfolio. Self-sufficient programs must charge enough interest to generate sufficient income to replace those losses (Christen, 1990, p. 120).

In the end, if a credit program is to be self-sufficient, it is the borrowers who must pay the cost of delinquencies and default. Ideally, the delinquent borrowers would pay the costs of their delinquency through fees for late payments, and defaulting borrowers would pay all the costs of their default. Because delinquent and defaulting borrowers are the ones from whom it is most difficult to collect, however, good borrowers often foot much of the bill through higher interest payments⁷. Either the program covers its costs and maintains the value of its portfolio by charging enough fees

⁷ Donors often end up paying a large portion of these costs as well.

and interest to cover the delinquency costs and loan losses, or donors pick up the tab, or the program's income and assets decrease.

B. The Other Costs of Delinquency

Like other program costs, certain levels of delinquency are expected and tolerable. As delinquency increases, however, it can begin to damage the program, its borrowers, and potential borrowers in many ways.

While low levels of delinquency engender pride on the part of program staff, high levels create a sense of frustration and even futility, especially when attempts to control delinquency do not succeed. The loan officers or advisers, those who have continual personal contact with the clients, are the most directly affected, and they can infect the morale of the entire staff.

Delinquency also has a direct impact on the attitudes of microenterprise program borrowers. Just as many credit programs are promoted rapidly by word of mouth among clients and potential clients, word of repayment problems travels quickly. Clients within the same area tend to hear about who pays loans back on time, who does not, and what happens to those who do not. Communication among borrowers makes delinquency extremely contagious. A recent evaluation of the SIMME (Urban Microenterprise Multiplier System) program in Guatemala provides a perfect example (Blumberg and Revere, 1989, p. 38).

Moreover, the *Asesores* (loan advisers or promoters) insisted, *word gets around*. Many SIMME clients in a neighborhood or type of business know who else has a loan, and they hear whether collection is vigorous or not. Worse yet, we were told, some MEs (microentrepreneurs) are openly flaunting their nonpayment. One Asesor told of an ME who bragged of being eight payments behind to a meeting of loan clients the Asesor had arranged, and implied that since no action had been taken against him, the others were foolish to continue making payments.

Not only do clients lose respect for an institution with repayment problems, but so do other institutions, limiting a program's ability to expand. Local and international sources of capital are less likely to support a credit program that has trouble getting loans repaid. Because of reported arrearages higher than in most ACCION programs, the affiliate in Costa Rica had to host a special Inter-American Development Bank (IDB) mission to conduct a more thorough analysis of the portfolio. The portfolio's

trend toward improvement, and extremely low loan loss rate, convinced the mission that an IDB loan could be approved without undue risk. Likewise, local banks, an ever-increasing source of funds for ACCION's expanding programs in Latin America, will only lend to a program that has delinquency well under control.

Unfortunately, microentrepreneurs are often blamed more (and suffer more) than the credit institution for poor repayment rates. Banks appear justified with a policy of not lending to small and microentrepreneurs if specialized agencies set up for that purpose cannot collect their loans. Poor repayment rates confirm the formal sector argument that lending to microentrepreneurs is too risky. Because high delinquency decreases a program's income, portfolio, and ability to leverage funds, microentrepreneurs have less access to credit.

Besides limiting access to credit, delinquency can have disastrous effects on individual microentrepreneurs. Many programs charge clients a surcharge, or a higher interest rate, on payments made after their due date. As the client falls further and further behind, a larger and larger portion of the payment goes for interest and fees instead of paying back the principal. If the client stops making payments altogether, and legal action is initiated, the client may also have to pay legal fees. Worse yet, if the loan was backed by a physical guarantee, such as a piece of machinery from the business, that item might be confiscated, leaving the entrepreneur without her means of production. Or, the client may even end up in jail for a short period of time. Of course, drastic actions are limited to drastic cases, and to those programs willing to carry them out. It should be recognized, however, that a bad loan can ruin a microentrepreneur, bankrupt an enterprise, and plunge an entire family into a desperate economic situation.

Surprisingly, depending upon the credit program, delinquency may actually have positive instead of negative effects on individual borrowers. With a low interest loan with little or no late payment charges, an entrepreneur might find it more profitable to keep using the loan well beyond the final due date, rather than paying it back on time. Likewise, if the program does not use vigorous collection techniques or offer repeat loans or other incentives, the client might very well maximize his or her economic benefits by paying late or not repaying the loan off at all. Whether an individual entrepreneur perceives a cost or benefit to late repayment or default of a loan depends upon the policies of the credit program.

IV. CONTROLLING DELINQUENCY

The previous section describes the costs and detrimental effects that delinquency and default can have on microentrepreneurs and the programs designed to serve them. What can be done to minimize those costs and effects? To what extent is portfolio quality a function of the target group and environment in which a credit program is operating, and to what extent is it a function of the policies and operations of the credit institution itself?

In 1981, the PISCES studies provided some of the first well-documented evidence that credit programs could effectively assist informal microentrepreneurs and achieve low delinquency and loan loss rates (Ashe, 1981, p.44). Since then, programs throughout the world, such as the Grameen Bank in Bangladesh, many ACCION programs in Latin America, and others, are proving that credit programs can attain low delinquency rates even when lending to very poor entrepreneurs. The experiences of these programs suggest that high delinquency, more often than not, is a function of a program's objectives, methodology and operations, rather than the target group and economic environment. The following section discusses the causes of delinquency and argues that, in most cases, it is the lender, and not uncontrollable external factors or the borrower, who is responsible for the level of delinquency of microenterprise credit programs.

A. Uncontrollable Factors

Natural disasters and changes in government policy can have abrupt and terrible effects on the quality of a microenterprise credit portfolio. Earthquakes, floods, fires and hurricanes wreak havoc on economies and the activities of microentrepreneurs. A government crackdown on street vendors, or a new tax that suddenly doubles the price of certain inputs, can have the same effect. These situations are easily identified, and the program must design strategies to deal with them when they occur. For example, after the monsoon flooded over 80% of Bangladesh in 1988, Branch Managers of the Grameen Bank established emergency grace periods on outstanding loans (depending on the severity of the floods in each area) to give the borrowers a chance to recover and resume their economic activities. This strategy protected the program from needless defaults, gave the borrowers an opportunity to maintain good payment records, and did not encourage future delinquency because it was a one-time response to an obviously desperate situation.

Crises also occur on an individual level. Entrepreneurs or their immediate families can suffer from illness or death that throws the family and the enterprise into a dire economic situation. These cases are also usually identifiable and must be addressed on an individual basis, with strict but humanitarian measures. In some cases, the loan can be restructured or refinanced to help the entrepreneur resume business. In other cases, the loan must be written off. As with natural disasters, accommodating measures should be justified by their direct link to a critical situation. Otherwise, less critical situations may tempt the program into "soft" measures that end up encouraging delinquency when it is not justified.

Some programs establish emergency or insurance funds that protect them, as well as their borrowers, against emergencies. Many member organizations of the Solidarity Group Association of Colombia, an affiliate of ACCION, have a compulsory emergency fund into which borrowers must deposit 1% of their credit each month. In the case of an emergency, verified by the fellow solidarity group members and the loan officer, an individual can borrow up to three times the amount saved in this account. This prevents the borrower from diverting enterprise credit to resolve the emergency, and helps avoid delinquencies.

There are innumerable less catastrophic situations that frequently hinder on-time repayment by microentrepreneurs. For example:

- Microentrepreneurs frequently must pay up-front for raw materials, but accept deferred payments from formal-sector buyers, such as department stores. An analysis of late payments in ADEMI's portfolio in 1988 found that activities with highest delinquency were those that gave 30-60 days credit on products they sold, but had to pay their suppliers in less than 30 days (Gómez, 1989, p.24). In these cases, the entrepreneur is actually financing the formal sector business, at the expense of his own cash flow.
- The local economy affects the ability of microentrepreneurs to pay back loans. Borrowers in a slow rural economy, where increased production is unlikely to produce large increases in sales, may fall behind on payments.

Factors such as these require constant monitoring and consideration by a credit program. While the program may not be able to control them, the program should be able to compensate for them in its design, methodology, and collection procedures, all of which must adapt themselves to some extent to the local environment. For example, in the

first case, perhaps borrowers in these activities should have longer loan terms, or organize themselves to pressure the department stores to pay for their products on delivery. In the other case, the program may need to encourage diversification and give year-long, small, working capital loans so that borrowers can meet their consumption needs, make their payments out of the small income that the business generates, and build their own asset base. This is the strategy that the Grameen Bank pursues.

Many factors outside of a program's control can influence the quality of the program's portfolio. Some of them require special consideration, an adjustment of normal loan policies, or innovative methods. They must be taken into consideration during program design, and continually reassessed as the program operates. If appropriate measures are implemented, the negative effect of these factors can usually be mitigated, enabling the program to maintain a healthy portfolio.

B. Controllable Factors

Besides environmental factors, such as those mentioned above, borrower behavior is the other culprit frequently blamed for high levels of arrears. Programs with low levels of delinquency are proving, however, that borrower behavior is actually a factor over which the program has considerable influence. For example, borrowers may not pay back loans to a new institution because of their "perception of not needing to pay" (Jackelen, 1989a, p.53), despite what the new program tells them. This perception comes from past programs, many of which may have been heavily subsidized and relatively indifferent to loan recovery (Meyer, 1988, p. 127). Given this context, a new program may need to present itself as a formal financial institution, as opposed to a "development program", to promote on-time repayment behavior.

Similarly, different cultures have different concepts of credit. While a borrower in one culture might feel ashamed if she falls behind on a loan payment, a borrower in a different country might be more inclined to boast about "beating the system". A credit program can structure its response to delinquency to these cultural factors and effectively influence borrower behavior. In some countries, programs may need to put delinquent borrowers in jail to set a precedent while, elsewhere, the names of delinquent borrowers could be published with the same results.

To a large degree, borrower behavior can be influenced by the credit institution (Gadway and Kulibaba, 1989, p.6).

According to the traditional view, the borrower fails to repay because his misuse of loan funds renders him unable to pay. According to the New View, widespread default is more frequently a reflection of borrower unwillingness to pay....Loan default is an institutional problem in the sense that loan repayment tends to reflect the quality of the credit facility and the value that access to that facility has to the borrower more than the use to which the borrowed funds were put....Borrowers with a genuine demand for credit will be observed protecting their access to a good facility by strict performance with the terms of their loans.

A good credit facility encourages on-time payment behavior by its borrowers. There are three areas which are critical for programs to promote on-time payment behavior: philosophy and image, credit methodology, and information systems. Poor execution in these three key areas encourages late payments and defaults, while effective execution minimizes delinquency.

1. The Program's Image and Philosophy

The program's image is determined by the way in which the program presents itself to the sector and handles its relationship with entrepreneurs. In many cases, the program must differentiate itself from the "give-away" type development programs which may be familiar to microentrepreneurs. The program needs to establish financial institution-borrower relationships, as opposed to charitable organization-beneficiary relationships, if it wants to ensure timely repayment. Borrowers should realize that the program depends upon their payment to make future loans, in the same way that credit union members understand that each loan is actually the savings of the community. The program can still project an image of being on the side of the microentrepreneur, but the borrower's responsibility to pay back on time must be clear.

Programs must also tailor their services, as best they can, to the needs and demands of the microenterprise sector. Programs with excess demand from the intended client population can be selective. This selectivity need not be based upon guarantees or assets of the borrower, but upon reliability, reputation in the community, and other characteristics that play an important role in loan repayment. Where demand for services is high, borrowers feel fortunate to have the opportunity that the program offers, and are committed to maintaining a good relationship with the program. Programs with low demand, on the other hand, tend to be less selective. If a program is not meeting goals for amount disbursed and

number of participants, it may try to cajole and convince entrepreneurs to borrow, and even give returning borrowers a second or third chance, despite poor repayment records. Both actions generate little commitment on the part of the borrower, promote a negative image of the program, and consequently encourage delinquency.

In the early years of one ACCION program, for example, the number of borrowers entering the program and the amount being lent were far below the projections. In order to meet donor expectations, the program carried out several mass marketing campaigns; the number of new borrowers became the program's priority, with little attention to repayment. Clients who had paid back previous loans with less than stellar payment records were still given new loans in order to keep them in the portfolio and increase the amount disbursed. This less than auspicious beginning, combined with other factors, contributed to a costly delinquency problem for the program that took months to bring under control.

One of the most important factors for repayment is the "mentality of the entity that generates the portfolio" (Tucker, 1990, p. 4). Some of the best payment records among the ACCION programs have been attained by programs that began under the premise that no level of late payments was acceptable, even though the borrowers were from the poorest segments of the economically active population. An evaluation of the ACCION-affiliated program in Guatemala found that one of the two most important factors contributing to the outstanding portfolio quality was the program management's "attitude toward delinquency: namely that even 1% is unacceptable" (Hatch and Gomez, 1989, p.39).

PRODEM, the ACCION affiliate in Bolivia, began in 1987 and had 13,233 active borrowers and a portfolio of \$1.6 million by September, 1990. It has never had arrears (payments past due by one day) reach even 1% of its portfolio. In large part, the program director attributes this record to "creating an institutional culture in which late payments are simply unacceptable". This culture is fully ingrained in the entire staff, and consequently in each borrower. It permeates all contacts with the borrowers, from program marketing, to selection, to loan approval, to loan disbursement, through final loan payback.

Although extremely important, such a climate cannot ensure on-time repayments by itself. There are two other key factors that need to be present: the program's methodology must provide incentives for clients to pay back on time, and the program must have an information system that enables it to detect and respond to problems before those problems become delinquent loans.

2. The Credit Methodology

The first step in a program's credit methodology is the selection of clients. On what basis can entrepreneurs qualify to become borrowers? In formal financial circles, selection is based upon the credit history of the borrower, the collateral available, and the financial merits of the proposed project. These criteria, however, are inappropriate for programs reaching entrepreneurs who generally have no formal credit history, no real collateral, and no financial statements or projections. Instead, programs have found it effective to base selection more on personal factors and moral guarantees, rather than business factors and physical guarantees.

One selection/guarantee method that has proved quite effective is the solidarity group mechanism⁸. The mechanism helps in selection because no potential borrower wants to be in a group with someone with an unfavorable reputation for paying back loans. It is an effective guarantee mechanism because peer pressure within the group encourages on-time repayment from all borrowers, and all borrowers within a group suffer the consequences if loan payments are not made on time.

Programs that lend to individual borrowers use a combination of factors to select and guarantee loans. The loan officers, who assume much of the responsibility for selecting clients and approving loans, usually become quite familiar with the neighborhood in which they work. This familiarity enables them to learn about the reputation of potential clients. Entrepreneurs who already have an established record with the institution are usually a good and willing source of information, as their commitment to the program prevents them from recommending potentially unreliable borrowers.

If there is no group guarantee, most programs require a co-signer or some type of physical guarantee on paper. Such guarantees are usually very flexible, such as merchandise or raw materials in stock, and may even be of dubious value if the borrower reneges on the debt. But they add formality to the loan transaction, clearly establish that the program expects the loan to be repaid, and may facilitate legal recourse against borrowers in the case of default. Moral guarantees and peer pressure

8 Potential clients form groups 3- 7 entrepreneurs. Each receives his or her own loan, but the group is responsible for repayment. If one borrower begins to renege on payment, the others must cover that amount on their own credit histories suffer. On-time payment on one loan assures access to future loans.

appear to be the most effective means of preventing delinquency, but legal and physical guarantees are sometimes helpful against borrowers who are able but unwilling to pay.

Many of ACCION's programs provide individual loans to entrepreneurs with assets that can serve as physical guarantees, usually a less marginal segment of the target population, and solidarity group loans to entrepreneurs without physical guarantees. The solidarity group loans tend to be smaller (per borrower) and frequently for commercial activities. Interestingly, although the solidarity groups represent a poorer segment of the population, they have consistently presented lower delinquency rates than the individual borrowers. The following figures show the combined arrears of ACCION's 42 programs as of December, 1989 (ACCION, 1989). Some of the programs work with individual and group loans, while others work with just one modality.

	Individual	Groups
- #of programs	28	27
- portfolio	\$6,531,968	\$2,866,882
- % delinquency (amount past due > 30 days portfolio)	10.25%	6.8%

The second, and perhaps most critical, methodological factor for encouraging minimal delinquency is the establishment of proper incentives for clients to pay back loans on time. Programs must realize that while some borrowers may repay on time because they are good citizens, many make a rational or intuitive decision based on the perceived costs and benefits of paying on time. This approach to understanding delinquency has been developed and tested by Christen and Vogel, who found that it was strongly supported by an analysis of data from credit unions in Honduras (Christen and Vogel, 1984, p.3).

The basic point of departure should be the costs and benefits to a borrower of repaying or not repaying a loan....borrowers are assumed to maximize utility in deciding whether or not to repay a loan....The main advantage of...repayment is the probability of receiving a new larger loan in the future on

which a positive rate of return can be earned. Against this must be weighed the explicit financial charges on the possible new loan, the transaction costs involved in repaying and then negotiating and receiving a new loan, and the timeliness of the new loan. It should be noted that increases in financial charges or transaction costs or a deterioration in timeliness not only make a new loan less attractive but may also reduce the borrower's assessment of the probability of a new larger loan in the future.

The Honduras study found that, as hypothesized, the most important variables affecting repayment were those associated with the probability of future credit and the costs associated with the credit flow. The extent to which the credit union depended on time or savings deposits also significantly reduced loan delinquency (p.13).

Other studies have also shown access to subsequent loans to be a very powerful incentive for on-time repayment. This is the case in one of the largest microenterprise credit programs in the world, the Badan Kredit Kecamatan (BKK) program in Indonesia.

The experience of BKK, as well as other programs, suggests that the most important inducement to repayment is the availability of funds for subsequent loans once the current loan is repaid. The ability to provide continuity in lending is a more basic criterion for success than the use of borrower groups or other specific features of loan programs. BKK has succeeded without borrower groups because it has been able to maintain the flow of loan funds. (Biggs et al., 1990, p.18).

The Grameen Bank effectively combines peer pressure and incentives in a unique manner to maintain low delinquency rates on their 12-month loans. In any group, loans to the 5 members are disbursed throughout the year so that at least one member is always about to apply for a new loan. That member is usually particularly concerned that the others make their payments on time so that her own loan will be disbursed without delay.

In the case of ACCION, the loan methodology of small, quick loans that escalate in size provides a strong incentive for on-time repayment. Because studies have shown the importance of quick credit to microentrepreneurs, first loans to new clients are processed rapidly, usually within one week. They are very small, frequently less than the

borrowers' expectations, and short term, from several weeks to a maximum of 6 months. If repayment is on time, the borrower is virtually guaranteed another, larger loan, disbursed soon after the first one is completely paid off. The loan size and term increase incrementally with each loan, but are always dependent upon the on-time repayment of the previous loan and the payback capacity of the business. In solidarity groups, the future loans of each borrower hinge on the group's repayment record. Borrowers understand that, if they pay on time, they have access to a long-term *line of credit* that can meet their financing needs less expensively than moneylenders. They pay back on time because they value that service and do not want to endanger their opportunity with late payments.

While access to future loans is an incentive for on-time repayment, an uncertain supply of future credit from the same source, or alternative sources of comparable credit, can discourage on-time repayment. In rural Indonesia, one study identified "uncertainty about refinancing prospects" as the primary cause of arrears (Snodgrass and Patten, 1989, p.47). In urban Indonesia, alternative sources of credit, sometimes on more favorable terms, were seen as an important reason for higher arrears (Goldmark and Rosengard, 1983, p.47).

Other positive incentives for on-time payments, and disincentives for late payments can play important roles in controlling delinquency. For example, the KUPEDES (General Rural Credit) program in Indonesia charges borrowers an extra .5% interest per month (2% instead of 1.5%) and then returns the extra .5% to all borrowers who pay their installments in full and on time (Snodgrass and Patten, 1989, p.25). After five years of lending, and with a portfolio of \$310 million divided among 1.4 million borrowers, the program has only 7.5% of its portfolio in arrears (p.40).

Penalty charges, on the other hand, discourage late payments, and can help a program cover the costs of delinquency. Many credit programs charge additional interest on payments made after the due date. Without a penalty charge, good borrowers effectively subsidize delinquent borrowers. A review of the World Bank's experience with small enterprise lending found that "the application of a substantial penalty can, if followed through, be an effective instrument for reducing arrears" (Levitsky, 1985, p.29).

Another factor that can effect the borrowers' inclination to pay on time is savings. The credit union movement discovered long ago that communities tend to repay loans on time when they realize that it is their own savings being lent to them. Many credit programs have suffered considerable decreases in their repayment rates when they have begun

to lend foreign funds, as opposed to funds mobilized locally (Deschamps, 1989).

In sum, the most powerful incentive that programs can offer to borrowers is access to a service that borrowers value. ***Tailoring credit and other services to the demands of the borrowers, so that the service is perceived as an important opportunity for the borrowers, and making future service obviously dependent on certain behavior, such as timely repayment, is the most effective way to discourage delinquency.*** Additional incentives can provide important and creative complements to the basic services which borrowers value. Certificates, the publication of names, or a free class for good borrowers can motivate prompt repayment. Likewise, public humiliation, loss of privileges, or additional requirements for delinquent borrowers can be inexpensive but helpful ways to discourage delinquency.

Analyzing delinquency from the borrower's perspective, and understanding the actual costs and benefits perceived by the borrower, can help a program reduce its level of arrears. Such an analysis should include any factors that will change for the borrower depending on whether she pays on time or not: future loans, penalty charges, the probability of legal action, her reputation, and others. This analysis can help a program modify its lending methodology to integrate incentives that will strongly encourage on-time repayment by borrowers.

3. Information Systems

Programs with good information systems tend to have better quality portfolios, either because poor portfolios dissuade programs from developing a good information system, or because good systems help improve portfolio quality. Either way, a good information system is critical. A surprising number of programs cannot present an accurate picture of their portfolio quality. An institutional analysis of 5 credit programs in Jamaica discovered that only 3 of the 5 could report the actual amount of their portfolio that was in arrears (Weiland, et al., 1990). ***Without accurate and appropriate information, program managers cannot fully understand why and how late payments are affecting them, nor design appropriate strategies to deal with delinquency.***

Henry Jackelen points out that many programs which fail or have poor recovery share 4 characteristics, 3 of them having to do with an inadequate management information system (Jackelen, 1989a, p. 136):

- 1- They lack accounting infrastructures capable of providing the type of management information system (MIS) needed for even the most rudimentary banking effort. Without early warning of non-payment or, at the least, timely reporting of due dates, meaningful supervision is almost impossible...
- 2- ...Projects which fail to achieve high recovery rates often have not properly dimensioned the field staff requirements. If the MIS is inadequate, the ability of the programme to detect these problems is considerably hindered.
- 3- The lack of proper supervision via an adequate MIS rapidly translates into a perception on the part of field staff and borrowers that repayment is flexible and ultimately not important.

a. Information for the Field

The information system should provide reports that help the field workers manage their portfolios. A good information system permits timely follow-up and monitoring of loans. The evaluators of the two ACCION-affiliated programs in Guatemala (PROSEM and GENESIS) suggested that PROSEM's "loan repayment control system is not only very efficient but...may alone account for the four point lower delinquency rate in PROSEM's portfolio as compared to that of GENESIS" (Hatch and Gomez, 1989, p.12). Later on, they attribute PROSEM's "outstanding" performance in controlling delinquency to the efficient computerized delinquency reports issued to the advisers each week (p.39). Since that evaluation, GENESIS improved its information system and lowered its delinquency rate below that of PROSEM.

Case after case shows the effectiveness of follow-up visits for preventing delinquency. Such visits are contingent upon the field staff having accurate and timely information.

- Arrears in the ASEPADE program in Tegucigalpa rose dramatically when follow-up visits were neglected, particularly among new borrowers (Reichmann, 1988, p. 53).
- An Opportunity International program in Indonesia detected escalating arrears during an expansion phase, but responded with increased follow-up which immediately rectified what had been a deteriorating situation (Opportunity International, p.19).

- As the computerized information system in AVANCE (Costa Rica) improved, field workers received more accurate and timely reports on their portfolios and emphasis was placed on timely follow-up. The rate of arrears of payments less than 90 days past due dropped from 23% to 11% in 10 months (Chacón, 1989).

The less time that field staff must spend figuring out whose payments are due when, and whose are already late and by how much, the more time they can spend with borrowers. Example 5 is a sample of a report that, if distributed in a timely fashion, can provide invaluable support to field workers (Christen, 1990⁹). This report enables the field worker, Gabriel Araya, to quickly assess how much of his portfolio is at risk, identify the borrowers who are having trouble making payments, and determine how far behind each borrower is. This information can help him: decide who must be visited this week, plan an appropriate approach for each delinquent borrower, determine which borrowers might need to be visited by the lawyer or another loan collection officer, decide whether he needs additional help if this report has been steadily worsening each week, etc.

EXAMPLE 5

OVERDUE LOANS									
LOAN SYSTEM		FIELDWORKER: 001 GABRIEL ARAYA TYPE: WORKING CAPITAL						DATE: 03/14/88	
NAME	No. OF LOAN	FIRST PAY- MENT	AMOUNT	BALANCE	DATE LAST PAYMENT	OVER- DUE	5 TO 15 DAYS	16 TO 30 DAYS	MORE THAN 30 DAYS
LARA, PEDRO	03	1/16/88	63,800	51,324	3/4/89	25,028	00	12,668	12,668
...
...
TOTAL 101 TRANSACTIONS			9,084,085	5,905,431		267,248	94,761	106,541	65,946
15 OVERDUE LOANS						4.5%	1.6%	1.8%	1.12%

⁹ For more sample reports, and more detailed information on portfolio management information systems, see Christen, 1990.

A combination of good and timely reports enables a field worker to manage hundreds of borrowers and minimize delinquency by:

- planning a geographic route that enables her to visit a maximum number of borrowers in a given period;**
- ensuring that all new borrowers receive a follow-up visit within days of loan disbursal, so they understand the program will not "forget" about them;**
- visiting borrowers at times that are critical for preventing delinquency, such as several days before payments are due;**
- visiting borrowers quickly after a payment becomes past due to determine the problem and help solve it;**
- processing repeat loans in a timely fashion for good borrowers to encourage continued on-time repayment;**
- planning different strategies for different delinquent borrowers, depending upon their credit histories and how far behind they are on their payments;**
- detecting trends in the portfolio (such as high delinquency among borrowers with certain activities) that might help identify strategies for reducing delinquency.**

Even with good information systems, extensive follow-up requires staff time and is costly. Some programs are experimenting with mechanisms that transfer increasing amounts of responsibility to the borrowers themselves in an effort to reduce costs and enable the program to serve more clients. The GENESIS program in Guatemala City (an ACCION affiliate) has facilitated the formation of associations in markets that assume some of the field workers' responsibilities, thereby enabling the program to serve more borrowers and the field workers to spend more time as business consultants and less as loan officers (Colocho and Aroche, 1990). The associations represent the borrowers to the program, help prevent late payments by pressuring fellow borrowers to pay on time, give recommendations about the "moral solvency" of applicants from the area, promote the program to potential borrowers, and carry out other tasks.

b. Information for Program Managers

In addition to facilitating follow-up, a good information system provides managers with tools for analysis. First, in order to determine an appropriate plan of action, program staff must receive reports that divide the delinquency of the portfolio by age. Loans with payments less than 30 days past due are not nearly as risky, and do not require the same response, as loans with payments 91 days past due. Many programs fail to categorize their arrears however (Jackelen, 1989b, p.37; Prentice, 1985, p. 24; Wieland, et.al. 1990), making it impossible for them to understand fully the quality of their portfolio or devise strategies to address it.

Depending upon the characteristics of the credit program, aging arrears might take on different forms. For example, delinquency tends to turn to default quicker in short-term solidarity group loans than longer-term individual loans (Christen, 1990). Consequently, solidarity group programs might manage with daily and weekly reports, while individual programs use weekly and monthly reports to control their delinquency. PRODEM, which works with solidarity groups in Bolivia, detects late payments within hours and uses daily information to devise appropriate measures. Partnership for Productivity which makes long-term loans to rural producers in Liberia, on the other hand, ages its arrears by 0-3 months, 4-12 months, 13-24 months, and over 24 months (Lassen, 1989).

One of the most important tools for portfolio management is trend analysis. Changes over time are the first indication of a problem, or of the effectiveness of an attempted solution. The information system should permit program managers to detect trends and determine the likely causes of those trends. Managers should be able to analyze and compare, over time, the amount, number, and percentage of payments past due and the extent of contaminated portfolio, by variables such as the following:

- **Age of arrears:** Are the payments past due by 1-30 days moving into the 31-60 day category, or being paid off from one month to the next?
- **Loan officer and geographic location of entrepreneur:** Does the portfolio of one particular loan officer have a disproportionate percentage of the arrears? Is delinquency spreading in one particular area for an identifiable reason?

- **Loan type and size of loan:** Are loans to buy machinery causing more problems than working capital loans? As loan size grows, is delinquency increasing?
- **Activity of entrepreneur:** Are carpenters falling behind more than shoe makers? Has the price of wood gone up?
- **Gender of entrepreneur:** Are men more delinquent than women? Are the cashier's hours limited to times when men find it difficult to come pay?
- **Number of loans:** Are new clients more or less inclined to fall behind on their payments than those who have been with the program for a while? Should selection or orientation procedures be changed?

Having the capability to carry out these types of analyses enables a program to understand and respond to an emerging arrears problem before it is too late. Programs that do not carefully analyze the causes of delinquency might implement mistaken strategies to prevent or decrease delinquency. For example, the SIMME program in Guatemala, when suffering from increasing arrears, increased guarantee requirements. The result was that it was more difficult for those potential borrowers with fewer assets, especially women, to qualify for loans. Available information from the portfolio implied, however, that smaller-scale entrepreneurs and female microentrepreneurs actually had the best repayment records (Blumberg and Revere, 1989, p.35).

C. Attacking an Existing Arrears Problem

It is quite difficult for a program to convert a portfolio plagued by arrears into a healthy portfolio, especially if the "institutional culture" has come to accept the existing level of arrears as inevitable. There are, however, concrete steps that can bring down arrears and, eventually, create an institutional culture less permissive of arrears.

First, if the program is relatively new, the staff might need to re-examine loan terms and amounts to determine their appropriateness for the borrowers. Especially for a first-time borrower, the loan and payments should be small enough that, given his personal and business expenses, he can pay back the loan on time without problems. Successful repayment of a first loan shows the entrepreneur and the program that the client is a responsible borrower. The first loan may not have much of an impact on the business, but can be critical in establishing good payment behavior

and opening the door for larger, future loans that can help the business expand and prosper.

Second, both new and veteran programs should critically examine whether the program gives borrowers sufficient incentives to repay on time. The program can identify factors that will motivate clients to pay back on time, given the cultural and economic context in which the program operates, and integrate those factors into the lending methodology.

Third, the program should conduct trend analyses like those suggested in the previous section to see if a specific variable causing delinquency can be identified, and an appropriate response implemented. For example, if the problem is that carpenters have a hard time repaying because of their relatively long business cycle, perhaps they need a 1-month grace period that is not necessary for other activities. If the response is not evident, new lending to that activity (or geographic area, or gender, as the case may be) can be halted immediately until a more thorough analysis of the situation can be carried out. In such cases, it is important to continue to lend to borrowers who have been paying on time, or else they may see their future loans in doubt and be less inclined to continue repayment. During this process of analysis and policy making, input from the field staff is invaluable, as they are the ones actually spending time with the borrowers.

Another strategy that has proven quite effective in finding solutions is to design an incentive system for the loan officers that includes on-time payments as an important variable. If well designed, the system can motivate advisers to look for and eliminate the causes of arrears, as well as to meet other program objectives. An evaluation of the ADEMI program in the Dominican Republic concluded that one of the most important factors contributing to the decrease in arrears (payments past due more than 1 day/ portfolio) from 25% in 1986 to 10% in 1988 was the incentive system implemented for the advisers in which they receive monthly bonuses depending upon the performance of their portfolios (Gómez, 1989, p. 25).

An incentive system places the responsibility for portfolio quality on the shoulders of the field people who, with management support, can best respond to repayment problems. ADEMI's loan officers have become quite creative in their persistence at collecting unjustifiably late loans (ADEMI, 1990). In one field office, loan officers have found it quite effective to tell key people in the community when clients fall behind on their payments, or tell local shopkeepers who immediately become reluctant

to let the delinquent entrepreneur buy on credit (p.27). Such creative pressures have enabled ADEMI to maintain its late payment rate below 10% since 1988.

1. Refinancing and Rescheduling Loans

Refinancing and rescheduling loans can immediately reduce, or even eliminate, any delinquency problem, making them attractive options for programs with arrears problems. Such a short-term "solution" offers only a temporary respite, however, and actually encourages even higher levels of delinquency in the future. What does having a loan rescheduled or refinanced tell a delinquent borrower? It says that falling behind on payments is to her benefit; the payment schedule is changed and, if refinanced, additional funds are provided. In short, refinancing and rescheduling encourage delinquency. Though they seem to improve the quality of a portfolio in the short run, they actually mask a delinquency problem and contribute to a worsening portfolio in the long run.

Furthermore, even though rescheduling and refinancing can immediately reduce delinquency, they do nothing to diminish the costs associated with that delinquency. The program's income in the form of interest is still postponed, the uncollected principal still slows the rotation of the portfolio and, in many cases, the borrower is just as unlikely to repay as she was before the rescheduling or refinancing.

Rescheduling and refinancing loans do have a positive role to play in a credit program if they are used conservatively, and not as broad mechanisms to reduce delinquency. Management controls should be in place to limit rescheduling and refinancing to specific, justifiable cases. Formal financial institutions create high approval hurdles over which applications for rescheduling and refinancing must pass. Applications might need to be approved by the executive director or several members of the board, who ensure that each case is warranted.

D. The Keys to Controlling Delinquency

This section has reviewed the causes of delinquency and identified strategies for controlling it. It is worth summarizing the key points.

- Microenterprise credit programs, with rare exceptions, determine their own level of delinquency through their philosophy, the image they project, their credit methodology, and their information systems. High levels of delinquency should not be blamed on the

borrower group, but on the credit institution that has not devised effective methods for lending to that group.

- **Natural disasters, government policy, personal crises and other factors beyond a program's control can all contribute to a portfolio's delinquency. A program should be able to adjust its methodology to mitigate many of the contextual factors that affect repayment, and quickly identify and resolve the individual factors on a case-by-case basis.**
- **Whether borrowers pay back loans on time depends, in large part, on the borrowers' perception of the costs versus the benefits of timely repayment. One of the major benefits of paying back on time is assured access to future loans. Other incentives, and disincentives for late repayment, can be used to persuade borrowers that it is to their benefit to pay back on time.**
- **Credit programs need good information systems to manage their portfolios. The field staff needs timely information to conduct effective follow-up. Management needs sufficient information to determine the level of risk in the portfolio, understand the costs of delinquency, detect changes over time, determine what factors are affecting the portfolio, and devise appropriate strategies to combat delinquency.**
- **There are several steps that a program can take to improve the quality of its portfolio. First, the program should analyze whether the loan sizes and terms are appropriate for the borrowers. Second, it should examine whether there are sufficient incentives for borrowers to repay. Third, a trend analysis focusing on different variables, such as activity, size of loan, and geographic area, might reveal a specific cause of delinquency which can then be addressed. Finally, the program might want to consider the implementation of an incentive system for field workers that will encourage them to prevent unnecessary late payments.**
- **The refinancing and rescheduling of delinquent loans are helpful tools for the effective management of a portfolio if they are used sparingly, in specific justified cases. Otherwise, they temporarily mask delinquency, and actually encourage delinquency in the long run.**

V. DEALING WITH DELINQUENCY

This paper is intended to help all of us in the microenterprise credit field-donors, practitioners, evaluators, researchers, and policy makers-address the issue of delinquency in a more honest and responsible manner. Such an approach would include:

- Measuring delinquency in a way that presents a clear understanding of the quality of a portfolio and the level of risk.**
- Understanding how delinquency affects a credit institution, especially the costs of delinquency and their repercussions on the financial situation of the institution.**
- Comprehending delinquency as a cost with "hidden beast" characteristics that enable it to eat away clandestinely at an institution's income and assets, or explode suddenly out of control.**
- Accepting that the reasons that borrowers do not pay back loans on time are rational, and frequently within the power of the credit program to rectify, or at least mitigate, through: appropriate credit methodologies (including borrower selection, guarantee requirements, loan terms and sizes, and incentives for on-time repayment), effective information systems, and an intolerance of delinquency that permeates the philosophy and image of the institution.**

Accepting delinquency on these terms has different implications for donors than for practitioners. Although a thorough discussion of implications for donors is beyond the scope of this paper, one specific recommendation is in order. Some donors have been complacent about loan recovery in the past, showing more interest in an institution's ability to "get money out" than get it back (Deschamps, 1989). Just as borrowers judge the costs and benefits of on-time payment, so do credit institutions. If portfolio quality is not an important factor in access to future financing, then the credit institution has less incentive to control its delinquency. Donors should be thorough in their analyses of portfolios, in understanding the level of risk to the portfolio in question, and in assessing the financial situation of the institution. Increased funding should go to those institutions which meet their objectives while managing their portfolios in a financially sound manner.

The viability of microenterprise credit programs is determined, to a large degree, by the quality of the credit portfolio. A healthy portfolio can open doors to low costs, high levels of self-sufficiency, expansion possibilities through borrowed and donated capital, and the long-term provision of helpful services to a needy but productive population. A portfolio plagued by delinquency, on the other hand, can lead to high costs, limited expansion and capitalization options, and an increasingly inadequate supply of credit for the microenterprise population.

If appropriate measures are used, portfolio qualities can be compared across programs. However, there can be no global, acceptable level of delinquency for microenterprise credit programs. Nor do lower delinquency rates automatically make some programs better than others. Portfolio quality is a critical factor in determining the effectiveness and quality of a credit program, but is not the only factor. Delinquency is one of many costs that must be minimized, and good portfolio quality one of many objectives that must be achieved, for a program to be truly successful.

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