ARIES

Assistance to
Resource Institutions
for Enterprise Support

Management Training for Micro- and
Small Enterprise Intermediaries

Credit Management

Sponsored by

United States Agency for International Development
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Prepared by

Nathan Associates Inc.

August 1990

ARIES Materials in the Management Training for Micro- and Small Enterprise (MSE) Intermediaries Series

Strategic Management. This package aims to define a strategic planning framework for addressing the key issues in MSE project design and implementation, for MSE project managers. The package consists of 21 case studies, which are based upon the experiences of intermediary institutions as they have shaped their MSE development programs. The case studies draw on the actual experience of programs in Bangladesh, Brazil, Costa Rica, Colombia, the Dominican Republic, Honduras, Indonesia, Kenya, the Philippines, and Senegal. The cases have been published by Kumarian Press in the book, *Seeking Solutions: Framework and Cases for Small Enterprise Development Programs.* The corresponding case notes have been published in a companion volume, *Case Leader's Guide*, also by Kumarian Press. A users' guide provides guidelines on the most effective use of these materials.

Credit Management. This is a "nuts and bolts" manual targeted to MSE project designers and implementers at the programming and operational levels. Its objective is to help MSE practitioners design, implement, and manage credit programs more effectively. This package addresses matters of practical relevance to successful credit project management, such as properly designed accounting and management information systems, evaluation and monitoring techniques, and commercial feasibility analyses of prospective borrowers. This package has been translated into Spanish and French.

Human Resource Management. This package is targeted to managers of institutions that implement MSE projects. It deals with staffing requirements of MSE programs, employee motivation, incentives, supervision, training needs, and performance evaluation, and it presents various personnel and staffing models practiced by successful programs. The package has been designed on the basis of a training needs assessment that included interviews with 75 MSE practitioners.

Entrepreneur Training: User's Guide. This package reviews the five most widely used entrepreneur training models. These five models reflect the state of the art of such training models and demonstrate the appropriateness of the various models under varying regional and program contexts. This document presents a comparative analysis of each prototype and guides trainers and MSE program designers on choosing appropriate models for various target groups within the MSE spectrum.

Training Needs Assessment Methodology. This manual provides a consistent methodology to conduct training needs analyses (TNA) prior to the development or recommendation of training programs, and it serves as a tool for intermediary institutions to assess the training needs of their institutions and of their MSE clients. It provides a step-by-step, hands-on methodology for both experienced analysts and people new to the process.

Key Issues in Designing Microenterprise Programs. This training package orients MSE program designers to the key strategic issues in the design of MSE assistance programs. Its contents include four case studies based on the actual experience of two A.I.D. Missions in developing their MSE programs. This package is designed to reinforce basic design and programming concepts through three parallel processes: a review of A.I.D. policy and knowledge in the microenterprise area, individual and collective analysis of cases that enable workshop participants to work through critical issues in MSE programming, and presentations by participants to broaden the exchange of views. The materials in this package constitute the core of a 2- to 5-day training workshop on microenterprise programming for A.I.D. Mission program and project design personnel.

Copies of these materials are available from A.I.D./APRE/SMIE, Washington, D.C., 20523 or upon request from Nathan Associates Inc., 1301 Pennsylvania Avenue, N.W., Suite 900, Washington, D.C. 20004.

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In Collaboration With • Appropriate Technology International • Control Data Corporation • Harvard Institute for International Development

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We would like to thank the ARIES Technical Officers, Ross Bigelow, Andrea Bauman, and Melody Bacha, for their patient hard work and insights that helped with all of the effort entailed in producing this and other ARIES products. Special thanks also go to Tullin Pulley and Mari Clark of WID for their active involvement with all of the ARIES activities. And not least, we wish to thank those who contributed pieces to various ARIES activities and attended and participated in them.

CREDIT MANAGEMENT

This "nuts and bolts" manual is designed to equip managers of MSE programs with the practical skills necessary to design, implement, and manage credit programs more effectively. It addresses practical topics for successful credit project management, such as properly designed accounting and management information systems, evaluation and monitoring techniques, and commercial feasibility analyses of prospective borrowers. The materials in this package provide the basis for a 3- to 5-day workshop in credit management. It has been used for six such workshops worldwide.

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1. CREDIT MANAGEMENT USER'S GUIDE

Introduction

The ARIES Credit Management Package is a "nuts and bolts" package for micro- and small enterprise (MSE) project designers and implementers. The basic course model was developed by Henry Jackelen in collaboration with Albert Mutua, Stephen Mirero, and E. Murcia of the A.I.D.-funded Rural Enterprise Project in Kenya. It has since been adapted and refined to its current format to make it more generically applicable to MSE credit programs worldwide. The package addresses matters of practical relevance to successful credit project management, such as properly designed accounting and management information systems, evaluation, and commercial feasibility analyses of prospective borrowers. It provides the basis for a 3- to 5- day workshop and has been used to teach six credit management workshops in various languages and adaptations worldwide.

Description of the Package

Objective

The objective of the package is to provide a useful framework and requisite skills to enable MSE practitioners to better design, implement, and manage credit programs more effectively. More specifically, it seeks to strengthen the skills of MSE institutional intermediaries and increase participants' understanding of the critical importance of (1) properly designed accounting and management information systems (MIS), (2) strong management policies and procedures in implementing credit programs, (3) issues involved in client selection, and (4) performing commercial feasibility analysis as a means of client selection and monitoring.

Contents

The package addresses key credit concepts such as designing a loan policy, setting interest rates, selecting credit delivery mechanisms, reducing arrears, and recovering costs. The package is divided into eight sessions and

contains materials designed to teach basic financial tools such as break-even analysis, cash-flow analysis, and balance sheet and income statement analysis. Each session contains a brief introduction that states the purpose of the session. A teaching approach based on previous experiences is suggested, and exercises and brief cases are included to permit participants to apply the theoretical knowledge acquired. The package also contains supplementary reading material on financial appraisal of MSE projects, commercial analysis of MSE projects, feasibility analysis, loan portfolio management, and material on integrating women borrowers into small credit programs. A sample workshop agenda, participant evaluation forms, and references to materials in French and Spanish are contained in the appendixes.

Target Audience

The package is designed for staff at the programming and operational levels—operational managers and loan officers of financial intermediaries, who deal with the hands-on aspects of MSE programs but have limited formal training in credit and financial management. Although the package has been adapted and taught to a wide variety of audiences, in its generic form it is most appropriately used with an audience that is relatively less-steeped in credit and financial management.

Guidelines for Planning and Conducting a Workshop on Credit Management

This subsection describes some of the lessons learned from the ARIES experience in using this package to conduct numerous credit management workshops around the developing world. It should be stressed that the success of any training event depends on many variables, and with careful planning from the outset common training pitfalls can be avoided.

Workshop Preparation

Sponsorship

It is essential to include all relevant parties at the planning and workshop design stage and to specify clearly the objectives and expected outcomes of the training sessions. For example, ARIES has co-sponsored its training events with representatives of the trainee group, the relevant USAID Mission or A.I.D. staff members, and the training institute, if one is involved.

Selection of Target Audience

Widely heterogenous participant skills, experiences, and professional training can lead to frustration on the part of the audience and the trainer. It is important to define and focus on a target group and address the needs

of that group. The Credit Management Package is better suited to operations managers and loan officers. It is important to encourage the participation of women, who often lack access to adequate training. This can be done by stipulating the number of women participants for a particular workshop, or by making gender focus explicit in selection criteria when announcing or publicizing the workshop.

Training Needs Assessment

Experience with ARIES has demonstrated the necessity of conducting training needs assessments (TNA) before designing and planning a training workshop. The TNA provides a basis for identifying and understanding the target audience and for tailoring workshop content, focus, and materials to address identified needs and constraints. For example, a TNA was not conducted before a credit management workshop in Tanzania; as a result, skilled senior loan officers attended what was originally planned as an elementary introductory course on credit management for private voluntary organization (PVO) practitioners. (The favorable evaluations attest to the trainers' skill in adapting content on short notice.)

The sophistication of a TNA can vary considerably, depending on the content that is being planned for the workshop. Ideally, a 1-week TNA should precede all training workshops. The TNA can be used to develop a training plan. The training plan should include a schedule and method for recruiting course facilitators and for preparing them to teach. The plan should also involve the staff of the trainee institutions, thus establishing a sense of ownership, responsibility, and commitment to the training process on the part of the trainees.

As part of its participation in ARIES, Control Data Corporation developed a manual, entitled *The Training Needs Analysis Manual* and accompanying workbook entitled *The Training Needs Analysis Workbook*,[1] which provide a step-by-step guide to conducting training needs assessments.

Trainer Selection and Preparation

The trainer is perhaps the most critical element that determines the success of a workshop. Individuals well versed in credit and financial management coupled with MSE field experience offer the best combination of abilities for effective training. Nathan Associates has developed a cadre of experienced trainers who are familiar with the Credit Management Package. It is important to select trainers who are sensitive to gender issues so that this crucial element can be given proper attention.

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1. Both volumes are available from PRE/SMIE A.I.D./Washington to USAID Missions and others and on payment from Nathan Associates Inc., 1301 Pennsylvania Avenue, N.W., Suite 900, Washington, D.C. 20004.

It is preferable that the ARIES case workshops be taught by local specialists, in collaboration with outside experts. The purpose is twofold. First, the association with local specialists should lead to institutional development in the training institutions, and second, their experience should enable the development of a group of experienced trainers who continue to provide support after a workshop. Experience has shown, however, that it is often worthwhile to provide an outside expert who is familiar with the materials and is experienced in teaching them.

If more than one trainer is to be involved, a minimum of 2 days should be set aside for trainers to plan and coordinate the workshop agenda, materials, and presentation, particularly if, as is often the case, they have not worked together. In this way, trainers can complement each other's technical abilities and training styles.

Integrating Gender Concerns

Gender concerns need to be addressed and discussed at the strategic planning level, before a teaching session is begun. The text on "Integrating Women Borrowers into Credit Programs" (3B of this package) orients trainers and planners to the issues involved in addressing women entrepreneur's concerns.

The sessions need to be structured so that women participate easily and their concerns are raised. Occasionally, sessions are held separately for female groups because of cultural inhibitions. Although separate groups are sometimes necessary, the goal must be to enable women to become active participants in the mixed economy and in society. In all societies, careful attention must be given to the gender composition of training groups, patterns of participation, and interactions between the group and the trainer.

Materials Selection

Materials must be selected strategically, on the basis of the TNA, and a training plan should be developed based on the objectives and desired outcomes of the workshop. Time and budget constraints often limit the amount of material that can be taught in the time allocated; therefore, the material most critical to the success of the workshop should be selected. This was done in Thailand for the credit management portion of the workshop, which had to be designed for one and 1½ days even though it is ideally taught in 1 week. In each case, selections from the basic model were made. In Senegal, a more elementary course outline based on the ARIES package was developed. In the Dominican Republic training session, most of the original materials were retained, but several elements were added.

Supplementary Materials

Appendix B contains a list of some of the additional material used in the Senegal and Dominican Republic training sessions. The additional materials used in the Dominican Republic training session include portfolio management, the roles of a loan officer, and exercises on different types of interest calculation.

ARIES has developed a more general piece, "A Systematic Approach to Loan Portfolio Management" (4C of this package), which should be introduced when senior managers of larger credit funds are participants in the training workshops.

The supplementary material used in Senegal reflected the additional topics addressed as well as the inclusion of specifically African materials. Obviously, a choice of additional materials has to be closely tied to the TNA.

Adaptation of Materials

The Credit Management Package as it exists is a useful and effective training tool. However, it should be emphasized that it exists in a generic form and is most effective when adapted to the unique specifications of each training workshop, which are generally identified in a TNA. For example, when conducted in Senegal, the TNA revealed that the credit management package in its unadapted form was too sophisticated for the participants' level of training, though it provided the basis for the overall design and framework for the workshop. Relevant sections were used directly, or adapted and combined with more elementary materials. Conversely, the package was discussed in depth in Tanzania, given the advanced training levels of the participants. Materials, as well as trainers, need to be sensitive to gender concerns, cultural peculiarities, and other unique characteristics of the environment in which the workshop is being conducted.

Length of Workshop

An almost universal concern stated in participant evaluations from all workshops is the limited time allocated to learning so much material. Apart from obvious financial and time constraints, a minimum of 5 days should be allowed for the optimal use of the package.

Workshop

Focus

Given time and budget constraints, it is tempting to try to address every topic in one training session. However, a training workshop that focuses on one subject and explores it in depth leads to more effective learning.

Adequate Class Size

A general rule for training workshops is to limit the session to fewer than 30 participants. Through experience, it has been determined that smaller groups facilitate participation and increase class dynamics. Smaller discussion groups should generally be limited to no more than five individuals.

Formal Presentations by Participants

Requesting formal presentations from selected participants is an effective way to broaden the participation of all those present at the workshop and to promote exchange on the issues which may vary considerably from institution to institution. Such presentations also serve to heighten the relevancy of issues to the participants because they can see how the issues are actually played out in the field. These participant presentations have always been featured in ARIES workshops.

Balancing Group Participation

Given the dynamic role played by participants, it is critical that participants from different countries, regional institutions, and programs be spread to the extent possible among the smaller discussion groups whenever there is a need to break a largely plenary session into smaller working groups. This allows for positive interaction within and among working groups.

Training Techniques

In almost all evaluations, participants have indicated that they prefer participative workshops, with the inclusion of a variety of training tools, such as case studies, group exercises, presentations, and field trips. Field trips were particularly appropriate for the Senegal group, which included many participants from organizations that were just beginning to take an interest in small credit programs. In sessions in which many institutions have more established programs, participants want to exchange information and learn from each other. It is important to design a workshop, including all or any combination of these techniques, to break the monotony of an exclusively lecture-like presentation.

After the Workshop

Workshop Evaluation

Evaluations are a critical component of every workshop, more from a project management point of view than for actual workshop success. Participant evaluations have been collected for every ARIES workshop to date and have proved to be valuable in assessing what works and what does not, in different contexts, and in providing feedback on the relevance of training materials. These evaluations have helped in refining the materials and approaches and in applying lessons learned to improve subsequent workshops. They have proved to be the "acid test" of measuring success. A sample evaluation form to be completed by participants of a credit management workshop is provided in Appendix C.

2. CREDIT MANAGEMENT COURSE OUTLINE

Henry Jackelen

Purpose

To provide a useful framework and requisite skills to enable participants to better design, implement, and manage credit programs.

Goals

- To understand the critical importance of a properly designed accounting and management information system.
- To appreciate the importance of strong management policies and procedures in implementing successful credit programs. and to become familiar with the procedures used in successful programs.
- To understand the issues involved with client selection and be able to perform a commercial feasibility analysis for prospective borrowers as a means for client selection and monitoring.

Session 2. Role of Credit in Development

Purpose: This introductory session's purpose is to highlight the characteristics that differentiate credit programs from other development programs (health, population) and to assess the role of credit in economic development. It serves to point out the different objectives, characteristics, and types (economic, community) of development projects, as well as the different objectives and characteristics of poverty alleviation and growth-oriented credit programs.

Suggested Teaching Methods: This should be a highly participative session, thus establishing the pattern for the rest of the workshop. Participant's can be asked their perceptions and thoughts on each of the key discussion areas in the package; the role of their own institutions in development; and the role of credit in their development activities, what they feel distinguishes credit programs from other development activities, and so forth.

PREAMBLE

- What is the role of your organization in development?
- What is the role of credit in your development activities?

COMMUNITY DEVELOPMENT vs ECONOMIC DEVELOPMENT

Project Type	COMMUNITY DEVELOPMENT projects address: Education Health Community services	ECONOMIC DEVELOPMENT projects address: Commercial income generation Small-scale enterprises
Characteristics	Highly subsidized activities justified by social benefits created Require field staff with skills in community organizing, outreach and promotion, sensitivity to local culture	Require analysis of relation between overheads (administrative costs) and impact (high subsidy no longer justified) Require field staff with business and related skills; existence of capital markets technology Require understanding of informal sector economics, outreach and promotion, sensitivity to local culture
Benefits	Better education, health, and services Increased community awareness of potential problems and solutions Increased community willingness and desire to undertake joint and/or individual activities	Increased material well-being of the community, which will in turn strengthen community development activities

CREDIT IN DEVELOPMENT

- Credit is one of the important *inputs* in assisting community enterprises.
- Credit is *not* an end in itself. It is only a means to an end.
- Other equally important inputs may be training and/or services in:
  - –Marketing
  - –Management
  - –Technology

FUNCTIONAL CATEGORIES OF ECONOMIC ACTIVITIES

PHASE I ACTIVITIES: Existing (traditional) activities

- Have low levels of:
  - Capital
  - Skills
  - Management
- Require low levels of inputs:
  - Credit
  - Marketing
  - Technology
  - Training
- Result in marginal increases in real income

PHASE II ACTIVITIES: New or expanded activities

- Require complex surveys and feasibility studies
- Require relatively higher levels of:
  - Capital
  - Technology
  - Technical assistance
  - Management training
  - Marketing
- Result in substantial increases in real income

THE TWO PHASES OF ECONOMIC DEVELOPMENT ACTIVITIES

	Phase I	Phase II
Level of Economic Activity	Upgrade of existing (traditional) economic activities	Introduction of new economic activities
Inputs	← Credit →	
	← Marketing →	
	← Technology →	
	Technical Assistance →	
	Management Training →	
	Surveys and Feasibility Studies →	
Results, if Successful	Marginal increase in real income (10%–20%)	Substantial increase in real income (+50%)

ADVANTAGES OF CREDIT INPUT FOR NGOs

Credit is a possible locomotive to bring in other inputs.

In small amounts, credit for Phase I-type activities may:

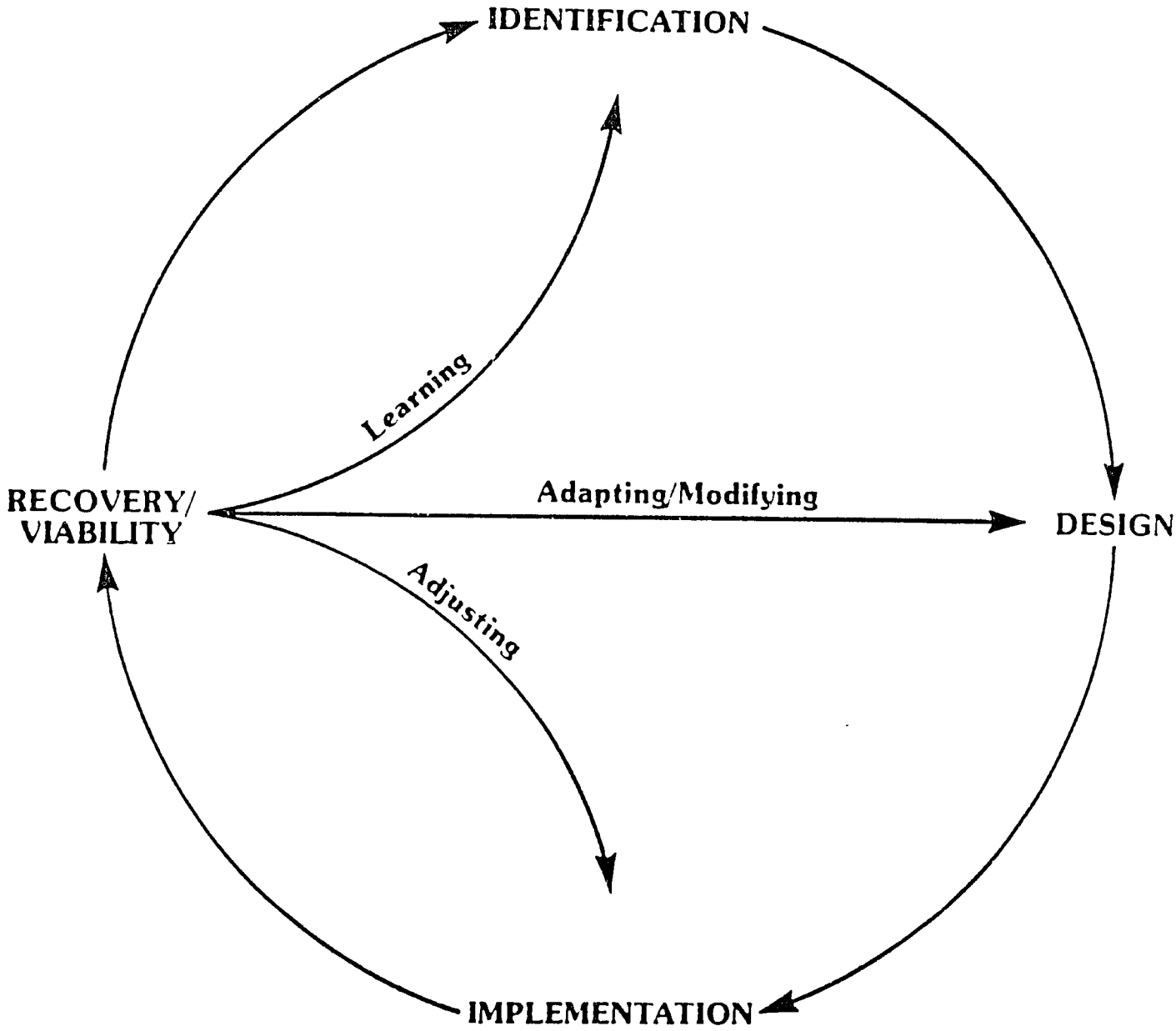
- Develop financial discipline of the community
- Strengthen the relationship between the NGO and the community (both trust and economic)
- Give the NGO an opportunity to learn about the economic realities of the community (informal sector)
- By promoting understanding of the economic realities of the community, help the NGO to better identify, design, and provide over time other inputs:
  - Technology
  - Technical assistance
  - Management training

Session 3. Credit Project Cycle

Purpose: The purpose of this session is to introduce participants to key strategic issues in credit program administration and in credit policy design. It provides a conceptual overview of the credit project cycle—identification, design, implementation, and recovery and viability—and allows participants to explore in depth the first stage of the cycle: identification. The other stages are addressed in the following sessions.

Suggested Teaching Method: Much of the material can be covered through presentation, following the suggested outline. Comments and information should be solicited from the participants. Participants can be asked to complete the chart on the key steps in designing a credit methodology (3-11), or can be asked to present their experiences in designing credit methodologies, to provide a broad range of experiences.

THE CREDIT PROJECT CYCLE



IDENTIFICATION STAGE

1. Understand the key issues:

   - Focus of your program in relation to the community to be assisted
   - Social and economic realities of the community (informal sector)
   - Characteristics of your intended clients
   - Inputs required
   - Analysis of NGO capabilities
   - Purpose of loans
   - Intended and expected results

2. Decide:

   - Short-term plan of action
   - Long-term plan of action

OVERVIEW OF THE IDENTIFICATION STAGE

Information	Program Focus	Informal Sector Realities	Client Characteristics	Inputs Required	Purpose of Loan
S U R V E Y ↓ Analysis	Who What Where Why	Economic: - monetized/nonmonetized - marketing/traditional middlemen - principal activities - who owns - how operated - type: farm/nonfarm activities Cultural: - guarantee groups - disbursement - collection	Experience with credit - Skills level - Level of assets - Literacy level - Experience in productive activities - Age, sex - Family - Years in productive activities - Years in farming ↓ Develop client profile	- Credit - Technology - Training ·skills ·management - Technology - Survey/feasibility studies ↓ Phasing of inputs	Agricultural or productive activities loans a) Working capital (short-term) and/or b) Fixed capital (long-term) - equipment purchase - existing activities - new activities ↓ Preliminary list of activities to be financed ↓ Range of requirements

DESIGNING A LOAN POLICY

1. Factors to Consider
2. Delivery Mechanism: Logistics
3. Delivery Mechanism: Capacity
4. Development of a Credit Methodology
5. Role of the Bank

1. FACTORS TO CONSIDER

- Target audience
  - Who is eligible?
  - How will they be selected?

- Level of activity
  - Loans for Phase I, Phase II, or both?

- Purpose of loans
  - To finance working capital, fixed capital, or both?

- Loan terms
  - Secured or unsecured by tangible assets?
  - If yes, what will the security be?
  - If no, what type of guarantee mechanism?
  - Will loans be in cash, kind, or both?
  - What will the interest rate(s) be? Will they be uniform for all types of loans? How will the interest be calculated?
  - What will frequency of repayments be (weekly, monthly, quarterly)?
  - Will repayment be in cash or kind?
  - How and to whom will repayments be made?

- Loan process
  - What will be the process for approving credit?
  - How will loans be disbursed?

- Savings mobilization
  - Group or individual savings accounts
  - Special funds (e.g., community, emergency)

Setting Interest Rates

Primary considerations:

- Viability
  - Need to cover costs
  - Probable loan size, default rate, term
  - Avoidance of fund decapitalization
- Affordability
  - Borrowers' ability to pay
- Legal requirements
  - Consider service charges or other fees where usury limits too low

AGING OF PAST-DUE LOANS
(Kept by Extension Worker)

Date _____

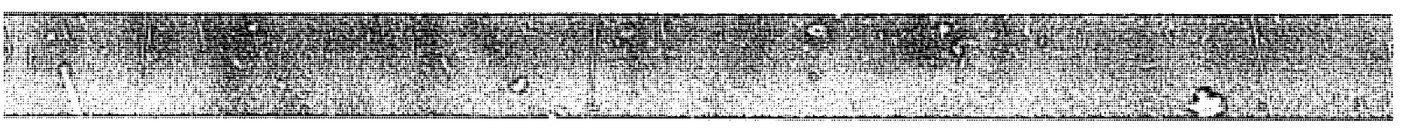
Ext.Worker _____

				Age Analysis

FORCED SAVINGS/SAVINGS MOBILIZATION

- Purposes
  - Protection in emergencies
  - Provide for future credit needs
  - Provide for equity build-up
  - Teach the benefits of savings
  - Provide for special needs

- Approaches
  - Personal savings
  - Equity savings
  - Group savings
  - Community funds



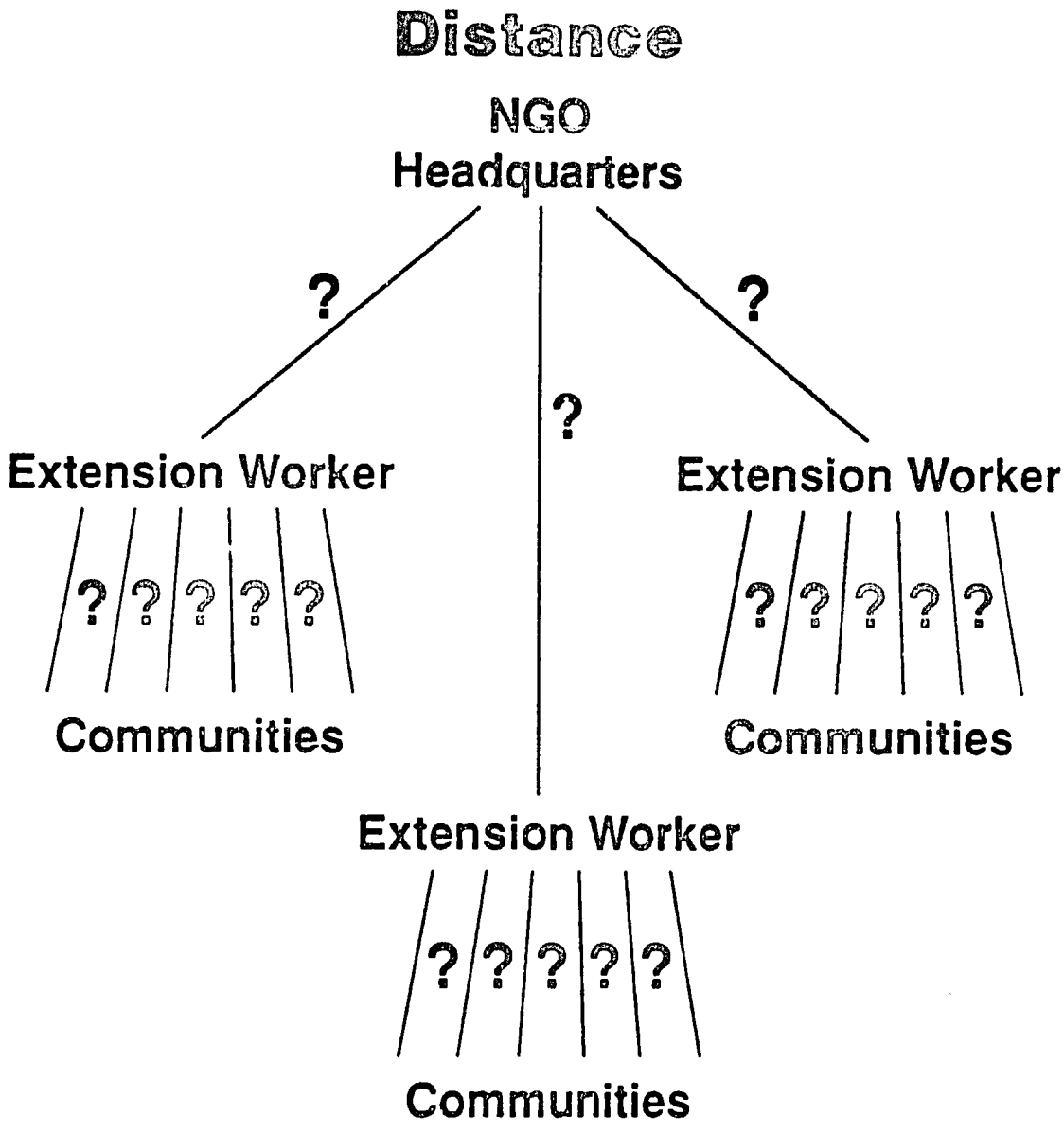
QUARTERLY RECOVERY RATE REPORT

Date _____

Ext.Worker _____

Area _____

2. DELIVERY MECHANISM: LOGISTICS



Considerations:

- **Distance from headquarters to clients**
- **Where extension worker(s) reside(s)**
- **Mode of transportation**
- **Quality of infrastructure**

3. DELIVERY MECHANISM: CAPACITY

Considerations for Delivery

Per Supervisor	Per Extension Worker
• Size of area	• Number of communities
• Number of extension workers	• Number of clients
• Number of clients	• Types of inputs
	• Frequency of visits
	• Time per visit
	• Hours per day extension worker will work

4. DEVELOPMENT OF A CREDIT METHODOLOGY

'or each credit activity:

- Identify the tasks to be performed
- Determine the methods you will use to accomplish those tasks

'ake into consideration:

- Functional categories of economic activities to be financed (i.e., Phase I, Phase II)
- Understanding gained at the Identification Stage
- Loan policy
- Delivery mechanisms: logistics and capacity
- Role of the bank

emember, before determining the *methods* you 'ill use, identify the *tasks* to be performed.

CREDIT METHODOLOGY

Steps to Be Planned

CREDIT ACTIVITIES	TASKS TO BE ACCOMPLISHED (What)	METHODOLOGY (How)	RESPONSIBILITY (Who)
1. OUTREACH AND PROMOTION			
2. CLIENT SELECTION			
3. LOAN APPRAISAL			
4. LOAN APPROVAL			
5. DISBURSEMENT			
6. SUPERVISION			
7. COLLECTION			
8. TECHNICAL ASSISTANCE/ AFTER-LOAN CARE			

5. ROLE OF THE BANK

- Banks as loan-fund administrators
- Banks as active participants
- Why NGO clients and banks are usually incompatible:
  - Risk
  - Cost
  - Attitude

Session 4. Implementing a Credit Administration Accounting and Information System

Purpose: This session's purpose is to introduce participants to the practical benefits of maintaining a credit administration accounting and information system, and to equip them with practical, simple tools to develop one. It also aims to educate participants on interest rate policies, structures, and calculations.

Suggested Teaching Method: This is a practical, "hands-on" session and is best taught by demonstrating the use of the sample record forms, such as the client control book, the client ledger, the aging of past-due loans, and the recovery rate report, included in the package. The session on interest rate calculations is most effectively taught by explaining the theory and then having the participants apply the tools in practical exercises. In previous teachings, additional interest rate structures have been introduced, such as charging interest on the absolute amount versus the declining balance, charging a commission or fee, and other strategies to increase the effective rate of interest charged. On some occasions participants have been asked to present their institution's interest rate policies and structures. In high-inflationary environments, this topic is expanded to include sessions on the time value of money and maintaining the real value of money to reverse inflationary erosion. Some useful exercises are included to help participants practice the concepts of this session.

IMPLEMENTING A CREDIT ADMINISTRATION ACCOUNTING AND INFORMATION SYSTEM

1. Reasons for Setting Up a System
2. Credit Administration Accounting and Information System
3. Sample Documents
   - Client Passbook
   - Client Control Book
   - Client Ledger
   - Aging of Past-Due Loans
   - Recovery Rate Report
4. Two Methods of Calculating Interest
   - Traditional Banking Method
   - Simplified Method
5. Examples

1. REASONS FOR SETTING UP A SYSTEM

- Legal requirement

- Control

  Money can lead to trouble and temptation, but if community, extension workers, banks know there is real supervision, these can be minimized.

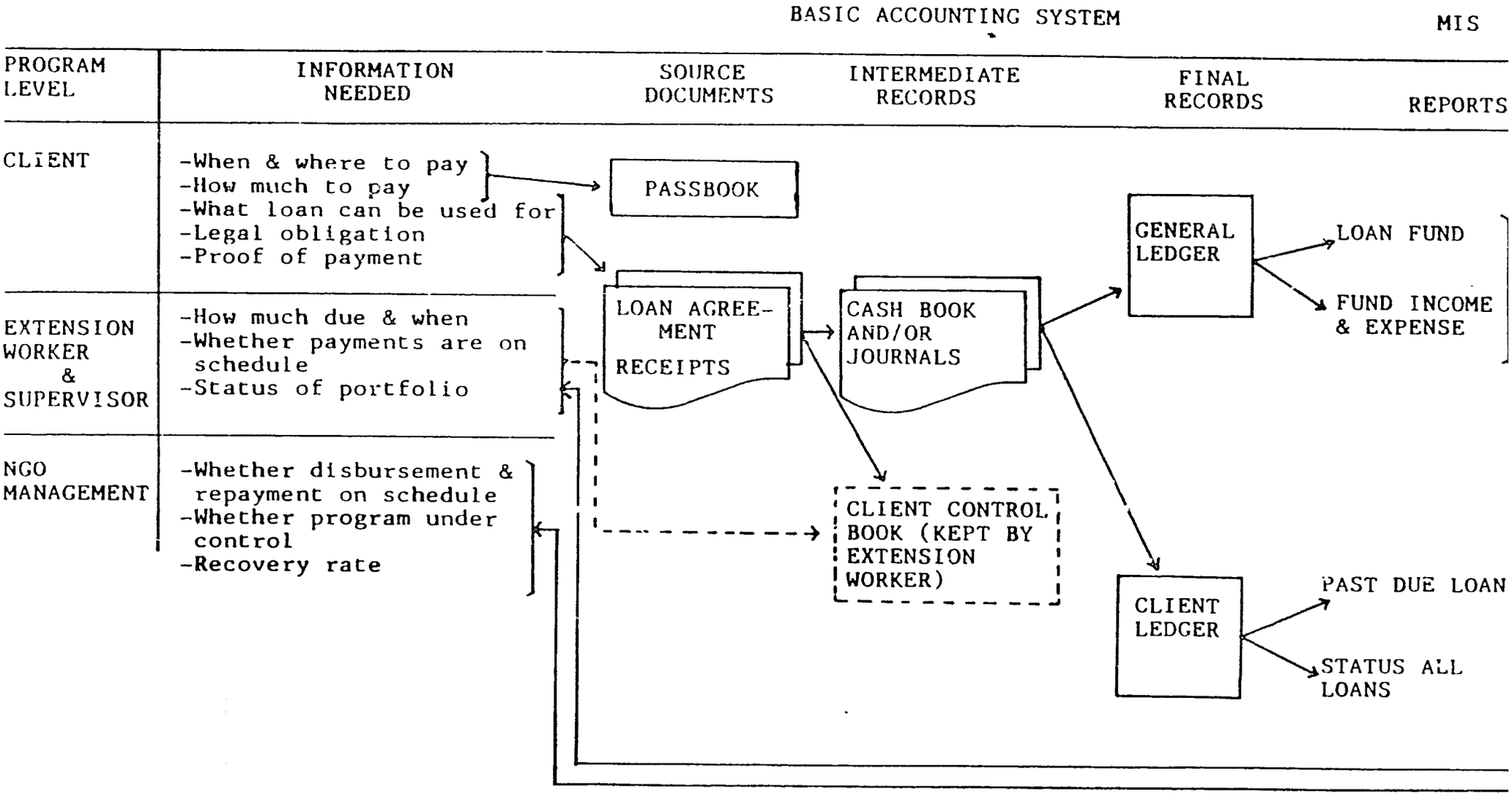
- Management information

  All levels (community, extension workers, supervisors, NGO management) need information. Without it, management of the credit program becomes "the blind leading the blind."

  Note: It is especially important for staff to keep accurate records if an incentive pay system is used.

- An advantage of a credit program: It is self-evaluating.

2. Credit Administration Accounting and Information System



CLIENT PASSBOOK

NAME _____

ADDRESS _____

_____

EXT.WORKER _____

LOAN AMOUNT _____

GUARANTEE/SECURITY _____

_____

INTEREST _____

MATURITY _____

PAYMENT SCHEDULE			
DATE	AMOUNT		TOTAL
	P*	I**	

*Principal
**Interest

PAYMENT RECORD			
DATE	AMOUNT	BALANCE DUE	SIG/ STAMP

CLIENT CONTROL BOOK
(Kept by Extension Worker)

Client name _____ Activity _____ Area/Ext.Wkr _____

Address _____ Type of loan _____ Security _____

CREDIT INFORMATION	Disbursement Date	Maturity Date	Loan Amount	Interest Rate	Method of Int. Calcuiation	Repymt Frqcy	P I T	Total	Inst.Pymts

REPAYMENT SCHEDULE

Date	Projected Amount	Actual Amount

CLIENT VISIT RECORD

Code	Purpose of Visit
1	Loan supervision
2	Past-due loan flw-up
3	Mgmt assistance
4	Client perf. report*

*NGO should predetermine at least 3 key indicators to show client performance.

Date	Purpose	Comments

LOAN REPAYMENT RECORD

Date	Particulars	Debit	Credit	Balance

CLIENT LEDGER
(Kept by NGO Management)

Client name _____ Activity _____ Area/Ext.Wkr _____

Address _____ Type of loan _____ Security _____

CREDIT INFORMATION	Disbursement Date	Maturity Date	Loan Amount	Interest Rate	Method of Int. Calculation	Repymt Frqcy	Install-ments	P I T

RECOVERY RECORD

Quarter		1	2	3	4	5	6	7	8	9	10	11	12
Projected Amount Outstanding	P I												
Actual Amount Outstanding	P I												
Recovery Rate *													

LOAN REPAYMENT RECORD

Date	Particulars	Folio	Debit	Credit	Balanc

*Calculated 15 days after quarter end.

AGING OF PAST-DUE LOANS
(Kept by Extension Worker)

Date _____

Ext.Worker _____

Client Name	Loan Amount (P)	Repymt to Date (I)+(P)	Princi-pal Overdue	Age Analysis (Days)				
				0 – 30	31 – 90	91 – 120	121 – 180	180+

QUARTERLY RECOVERY RATE REPORT

Date _____

Ext.Worker _____

Area _____

Name of Client/Group	Disb. Date	Loan Amt.	A		B		C	
			Amt. due to Date		Amt. Paid to Date		Amt. Outstdg to Date	
			P	I	P	I	P	I
			Total A		Total B			
TOTALS (P) + (I)								

Total B _____ - Total A _____ x 100 = _____

Recovery Rate this period

TRADITIONAL BANKING METHOD
(Example from Bangladesh)

TABLE 3: SUB SHEET LOAN LEDGER (BANK)
LOAN (or LEFT) SIDE: DETAIL OF BOTTOM

8) Interest is determined by: a) finding the Product; and b) looking up in a Bank table (or Ready Reckoner the corresponding interest amount. The addition of all these amounts will equal the total interest charg Interest calculations will only be done once- at the end of the loan.

7) Product is the multiplication of the Principal Balance by number of Days outstanding

6) Days between last debit or credit of loan; this number is used for calculating interest charges.

5) Balance of principal due after payments and interest charges

2) Description of entry 4) Credits (deposits, interest earned)

3) Debit column (disbursements and interest charges,

1) Dates of disbursement, and payments (every Jan. 1; April 1; July 1 and Oct.) the UERC will send a payment advice to the Bank -QPA).

1	2	3	4	5	6	7	8
Date	PARTICULARS	Dr.	Cr.	BALANCE	Days	Products	Interest

Simplified Method

EXAMPLE

Amount: $100

Period: 1 year, equal quarterly payments

Nominal interest: 10%

Method of calculation:

	Dollars	Percentages
Principal	100	90.9
Interest	10	9.1
Total	110	100.0

Quarterly payment: $27.50

($25.00 P + $2.50 I)

Effective rate of interest: **15.7%**

SIMPLIFIED METHOD

Example

Amount: $100

Period: 1 year, equal quarterly payments

Nominal interest: 10%

Method of calculation:

		Percentages
Principal:	$100	90.9%
Interest	10	9.1%
Total	110	100.0%

Quarterly payment: $27.50 ($25 P + $2.50 I)

Effective rate of interest: 15.7%

This system would not be acceptable to a bank as such because it is unorthodox. However, NGO's are not banks and do not usually intend to become banks. Equally, the intended clients (borrowers) are not bank clients and many may not graduate to the banking system. This clientele does, however, understand credit through their own informal systems. As a result, the concepts of time, principal, and interest are substantially different from those practiced by traditional banking systems.

Rationale for using the simplified method:

1. Successful programs have demonstrated that regardless of payment frequency (weekly, monthly, quarterly, etc.), it is critical that payments be of equal installments and include all charges: in order to ensure discipline, borrowers need to know exact amounts.

2. To use effective or real interest rate calculations and still maintain equal installments increases the complexity of the accounting system immeasurably (this is true of mortgage or installment loans in the U.S. or anywhere else). The declining-balance method requires multiple calculations and is extremely hard to explain to borrowers.

3. Allows for flexibility in late payments when causes are justified.

4. In the case where borrower makes partial payments (exceptional cases), fixed percentages allow for easy determination of principal and interest.

Example

Borrower's installments have been set up as follows:

		Percentages of payment
Principal:	$25.00	90.9%
Interest:	2.50	9.1%
Total:	27.50	100.0%

But borrower pays only $20. The same payment percentages apply to the lower amount:

		Percentages of payment
Principal:	$18.20	90.9%
Interest:	1.80	9.1%
Total:	20.00	100.0%

An additional, penalty interest rate can be assessed against the past-due balance ($7.50).

CLIENT PASSBOOK

NAME Geraldo Smith

ADDRESS La Palomba

EXT.WORKER Juan

LOAN AMOUNT 100

GUARANTEE/SECURITY Group

INTEREST 10%

MATURITY 31/12/87

PAYMENT SCHEDULE			
DATE	AMOUNT		TOTAL
	P*	I**	
31/3/87	25	2.50	27.50
30/6/87	25	2.50	27.50
30/9/87	25	2.50	27.50
31/12/87	25	2.50	27.50
Total	100	10	110

*Principal
**Interest

PAYMENT RECORD

DATE	AMOUNT	BALANCE DUE	SIG/ STAMP
1/1/87		110	
31/3/87	27.50	82.50	
31/7/87	20.00	62.50	
31/9/87	30.00	32.50	
31/12/87	32.50	-0-	

CLIENT CONTROL BOOK
(Kept by Extension Worker)

Client name Geraldo Smith Activity Carpentry Area/Ext.Wkr Juan

Address La Palomba Type of loan Working Capital Security Group

CREDIT INFORMATION

Disbursement Date	Maturity Date	Loan Amount	Interest Rate	Method of Int. Calculation	Repymt Frqcy
1/1/87	31/12/87	100	10%	Fixed 909/9.1	Qtr.

	Total	Inst.Pymts
P	100	25
I	10	2.50
T	110	27.50

REPAYMENT SCHEDULE

Date	Projected Amount	Actual Amount
31/3/87	27.50	27.50
30/6/87	27.50	20.00 (July)
30/9/87	27.50	30.00
31/12/87	27.50	32.50

CLIENT VISIT RECORD

Code	Purpose of Visit
1	Loan supervision
2	Past-due loan flw-up
3	Mgmt assistance
4	Client perf. report*

*NGO should predetermine at least 3 key indicators to show client performance.

Date	Purpose	Comments
15/1/87	1	
21/4/87	1	
15/7/87	2	Flood in house. Negotiated payment of 20 in July, larger payments 30/9 and 31/12.
15/4/87	2	Checked to see if payment Schedule could be met.

LOAN REPAYMENT RECORD

Date	Particulars	Debit	Credit	Balance
1/1/87	Loan Disbursement	100		110
31/3/87	PMT		27.50	82.50
31/7/87	PMT		20.00	62.50
30/9/87	PMT		30.00	32.50
31/12/87	PMT. FINAL		32.50	-0-

CLIENT LEDGER
(Kept by NGO Management)

Client name Geraldo Smith Activity Carpentry Area/Ext.Wkr Juan

Address La Palomba Type of loan Working Capital Security Group

CREDIT INFORMATION	Disbursement Date	Maturity Date	Loan Amount	Interest Rate	Method of Int. Calculation	Repymt Frqcy	Install-ments	
	1/1/87	31/12/87	100	10%	Fixed % 90.9/9.1	Qtr.		P 25 I 2.50 T 27.50

RECOVERY RECORD

Quarter		1	2	3	4	5	6	7	8	9	10	11	12
Projected Amount Outstanding	P	75	50	25	-0-								
	I												
Actual Amount Outstanding	P	75	75	29.55	-0-								
	I												
Recovery Rate *		100%	67%	85%	100%								

LOAN REPAYMENT RECORD

Date	Particulars			Folio	Debit	Credit	Balanc
1/1/87	Disbursement				100		100
31/3/87	Installment	27.50	P 90.1% I 9.1%			25 2.50	75
31/7/87	Installment	20.00	P 90.1% I 9.1%			18.18 1.82	56.82
30/9/87	Installment	30.00	" "			27.27 2.73	29.55
31/12/87	Installment	32.50	" "			29.55 2.96	-0-

*Calculated 15 days after quarter end.

AGING OF PAST-DUE LOANS
(Kept by Extension Worker)

Date 30/6/87

Ext.Worker Juan

Client Name	Loan Amount (P)	Repymt to Date (I)+(P)	Princi-pal Overdue	Age Analysis (Days)				
				0 – 30	31 – 90	91 – 120	121 – 180	180+
Geraldo Smith	100	27.50	25	25				
						30/9/87		
Geraldo Smith	100	80	5.23		5.23			

QUARTERLY RECOVERY RATE REPORT

Date 30/6/87

Ext.Worker Juan

Area

Name of Client/Group	Disb. Date	Loan Amt.	A		B		C	
			Amt. due to Date		Amt. Paid to Date		Amt. Outstdg to Date	
			P	I	P	I	P	I
Geraldo Smith	1/1/87	100	50	5	25	2.50	75	7.50

	Total A	Total B	
TOTALS (P) + (I)	55	27.50	

Total B 27.50 ÷ Total A 55 x 100 = 50%

Recovery Rate this period

QUARTERLY RECOVERY RATE REPORT

A

Date 30/6/88

Ext. Worker Anibal

Area

Name of Client/Group	Disb. Date	Loan Amt.	A Amt. due to Date		B Amt. Paid to Date		C Amt. Outstdg to Date	
			P	I	P	I	P	I
Group 1	30/6/87	100	100	10	100	10	0	0
" 2	30/6/87	100	100	10	100	10	0	0
" 3	30/6/87	100	100	10	100	10	0	0
" 4	30/9/87	100	75	7.50	68.18	6.82	31.82	3.18
" 5	"	100	75	7.50	59.09	5.91	40.91	4.09
" 6	"	100	75	7.50	59.09	5.91	40.91	4.09
" 7	"	100	75	7.50	43.18	4.32	56.82	5.68
" 8	31/12/87	100	50	5.00	13.65	1.35	86.35	8.65
" 9	"	100	50	5.00	13.65	1.35	86.35	8.65
" 10	"	100	50	5.00	13.65	1.35	86.35	8.65
		1000	750	75	570.49	57.01	429.51	42.99
			Total A		Total B			
TOTALS (P) + (I)			825		627.50		472.50	

Total B 627.50 ÷ Total A 825 x 100 = 76%

Recovery Rate this period

QUARTERLY RECOVERY RATE REPORT

B

Date 30/6/88

Ext. Worker Bertrando

Area

Name of Client/Group	Disb. Date	Loan Amt.	A Amt. due to Date		B Amt. Paid to Date		C Amt. Outstdg to Date	
			P	I	P	I	P	I
Group 1	30/6/87	100	100	10	—	—	100	10
2	"	100	100	10	—	—	100	10
3	"	100	100	10	—	—	100	10
4	30/9/87	100	75	7.50	75	7.50	25	2.50
5	"	100	75	7.50	75	7.50	25	2.50
6	"	100	75	7.50	75	7.50	25	2.50
7	"	100	75	7.50	75	7.50	25	2.50
8	31/12/87	100	50	5	50	5	50	5
9	"	100	50	5	50	5	50	5
10	"	100	50	5	50	5	50	5
		1000	750	75	450	45	550	55

	Total A	Total B	
TOTALS (P) + (I)	825	495	605

Total B 495 ÷ Total A 825 x 100 = 60%

Recovery Rate this period

A

AGING OF PAST-DUE LOANS
(Kept by Extension Worker)

Date 30/6/88

Ext.Worker Anibal

Client Name	Loan Amount (P)	Repymt to Date (I)+(P)	Princi-pal Overdue	Age Analysis (Days)				
				0 – 30	31 – 90	91 – 120	121 – 180	180+
Group 4	100	75	6.82	6.82				
Group 5	100	65	15.91	15.91				
Group 6	100	65	15.91	15.91				
Group 7	100	47.50	31.82	20.45	11.37			
Group 8	100	15	36.35	15.90	20.45			
Group 9	100	15	36.35	15.90	20.45			
Group 10	100	15	36.35	15.90	20.45			
TOTAL	700		179.51	116.79	72.72			
			100%	59.5%	40.5%			

B

AGING OF PAST-DUE LOANS

(Kept by Extension Worker)

Date 30/6/88

Ext.Worker Bertrando

Client Name	Loan Amount (P)	Repymt to Date (I)+(P)	Princi-pal Overdue	Age Analysis (Days)				
				0 – 30	31 – 90	91 – 120	121 – 180	180+
Group 1	100	0	100					100
Group 2	100	0	100					100
Group 3	100	0	100					100
TOTAL	300		300					300
			100%					100%

ANALYZING FUND PERFORMANCE EXERCISE

It is June 30, 1988. NGO management has just learned a problem exists with one of their teams of extension workers. It has been reliably informed that one of the extension workers has found a way to make fake loans, essentially pocketing the money.

The program was initiated on an experimental basis in June 1987. Different methodologies were used for different field staff to test for the most effective.

In reviewing the performance of field staff, NGO management has narrowed its field of suspects to two extension workers, Anibal (A) and Bertrando (B). Which one do you think is the culprit and why?

QUARTERLY RECOVERY RATE REPORT

A

Date 30/6/88

Ext. Worker Anibal

Area

Name of Client/Group	Disb. Date	Loan Amt.	A Amt. due to Date		B Amt. Paid to Date		C Amt. Outstdg to Date	
			P	I	P	I	P	I
Groups 1	30/6/87	100	100	10	100	10	0	0
" 2	30/6/87	100	100	10	100	10	0	0
" 3	30/6/87	100	100	10	100	10	0	0
" 4	30/9/87	100	75	7.50	68.18	6.82	31.82	3.18
" 5	"	100	75	7.50	59.09	5.91	40.91	4.09
" 6	"	100	75	7.50	59.09	5.91	40.91	4.09
" 7	"	100	75	7.50	43.18	4.32	56.82	5.68
" 8	31/12/87	100	50	5.00	13.65	1.35	86.35	8.65
" 9	"	100	50	5.00	13.65	1.35	86.35	8.65
" 10	"	100	50	5.00	13.65	1.35	86.35	8.65
		1000	750	75	570.49	57.01	429.51	42.99
			Total A		Total B			
TOTALS (P) + (I)			825		627.50		472.50	

Total B 627.50 ÷ Total A 825 x 100 = 76%

Recovery Rate this period

QUARTERLY RECOVERY RATE REPORT

B

Date 30/6/88

Ext. Worker Bertrando

Area

Name of Client/Group	Disb. Date	Loan Amt.	A Amt. due to Date		B Amt. Paid to Date		C Amt. Outstdg to Date	
			P	I	P	I	P	I
Group 1	30/6/87	100	100	10	—	—	100	10
2	"	100	100	10	—	—	100	10
3	"	100	100	10	—	—	100	10
4	30/9/87	100	75	7.50	75	7.50	25	2.50
5	"	100	75	7.50	75	7.50	25	2.50
6	"	100	75	7.50	75	7.50	25	2.50
7	"	100	75	7.50	75	7.50	25	2.50
8	31/12/87	100	50	5	50	5	50	5
9	"	100	50	5	50	5	50	5
10	"	100	50	5	50	5	50	5
		1000	750	75	450	45	550	55

	Total A	Total B	
TOTALS (P) + (I)	825	495	605

Total B 495 ÷ Total A 825 x 100 = 60%

Recovery Rate this period

A

AGING OF PAST-DUE LOANS
(Kept by Extension Worker)

Date 30/6/88

Ext.Worker Anibal

Client Name	Loan Amount (P)	Repymt to Date (I)+(P)	Princi-pal Overdue	Age Analysis (Days)				
				0 - 30	31 - 90	91 - 120	121 - 180	180+
Group 4	100	75	6.82	6.82				
Group 5	100	65	15.91	15.91				
Group 6	100	65	15.91	15.91				
Group 7	100	47.50	31.82	20.45	11.37			
Group 8	100	15	36.35	15.90	20.45			
Group 9	100	15	36.35	15.90	20.45			
Group 10	100	15	36.35	15.90	20.45			
TOTAL	700		179.51	106.79	72.72			
			100%	59.5%	40.5%			

B

AGING OF PAST-DUE LOANS

(Kept by Extension Worker)

Date 30/6/88

Ext.Worker Bertrando

Client Name	Loan Amount (P)	Repymt to Date (I)+(P)	Princi-pal Overdue	Age Analysis (Days)				
				0 – 30	31 – 90	91 – 120	121 – 180	180+
Group 1	100	0	100					100
Group 2	100	0	100					100
Group 3	100	0	100					100
TOTAL	300		300					300
			100%					100%

Session 5. Recovery and Viability

Purpose: The objective of this session is to assist participants to measure outcomes, such as recovery rates, coverage (number of borrowers served), cost-effectiveness, and savings mobilization, against targets established at the design stage, in order to measure the program's success. It also seeks to increase knowledge on the importance of reporting and monitoring project performance, and auditing results.

Suggested Teaching Methods: This session can be taught through presentation and group discussion. Participants can be asked to give their opinions on measuring and defining program success and to present their current methods of establishing performance indicators, reporting, monitoring, and auditing.

RECOVERY/VIABILITY

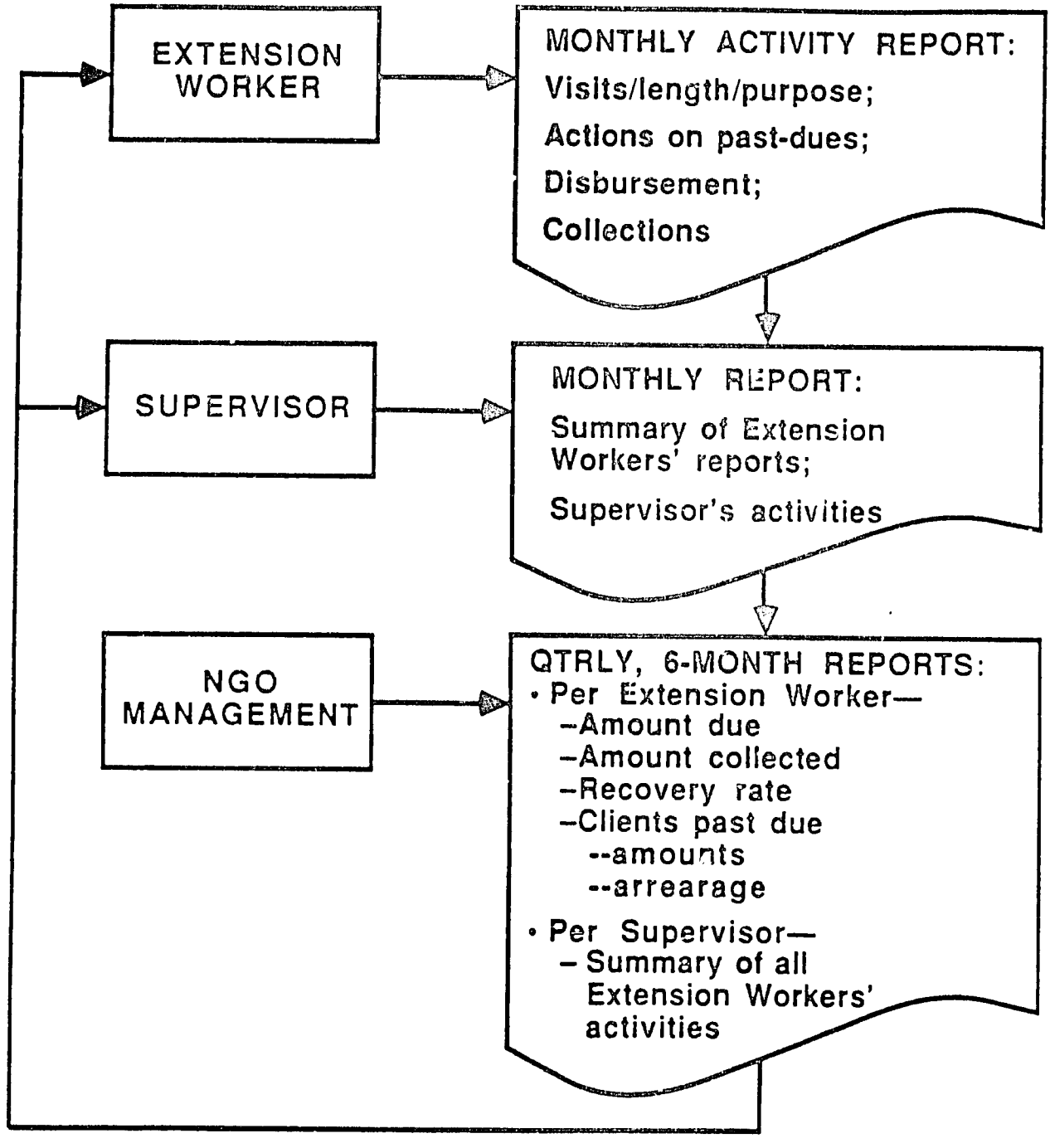
1. Defining a Successful Program
2. Reporting and Monitoring
3. Auditing
4. Recovery/Viability Process

1. DEFINING A SUCCESSFUL PROGRAM

Measuring outcomes against targets established at design stage:

- Recovery rate
- Coverage (number of borrowers served)
- Cost effectiveness
- Savings mobilization

2. REPORTING AND MONITORING



All reports based on:

- Loan appraisals, agreement forms
- Copies of disbursement documents, payment receipts
- Individual loan ledgers

3. AUDITING

- **PURPOSE—To cross-check and reconcile:**
  - Client passbook
  - Disbursement
  - Repayment receipts
  - NGO ledgers
  - Bank records
  - Extension worker records
  - Supervisor records

- Every credit program should have a 6-month or annual audit

- Can be conducted by outside firm or by NGO staff

- Can be detailed, comprehensive, or a selected sample

- Surprise audits are *easy* and *extremely effective*

4. RECOVERY/VIABILITY PROCESS

- Learning more about clients
- Adapting and modifying design on basis of experience
- Adjusting implementation

Session 6. Loan Appraisal

Purpose: This session seeks to inform participants about the types of risk inherent in small enterprise lending, and imparts risk analysis tools to minimize the risk exposure of the lending institution.

Suggested Teaching Method: This session lends itself to basic presentation.

LOAN APPRAISAL

1. Credit and Risk
2. Information Gathering

One-Time Costs

CAPITAI

- Costs to acquire, build, and install all elements of production unit, e.g.:

1. CREDIT AND RISK

Three Cs of Credit:

- Credit (financial analysis)
- Collateral (guarantee)
- Character (knowledge of client)

Understanding the Three Cs of Credit allows you to understand *risk*.

Three types of risk:

- Silly
- Brave
- Calculated

Three requirements for taking a calculated risk:

- Good information (financial records)
- Full cooperation of intended clients
- Well-trained and experienced staff

Meeting these requirements permits good loan appraisal.

SMALL ENTERPRISE RISK ASSESSMENT

Size of Enterprise	Characteristics	Tools for Loan Appraisal
Individual Micro	No financial records Limited capability to guarantee loan (no collateral)	Develop means of analysis Character-based guarantee
Small-scale		
Medium-scale	Written records Collateral Credit history	Balance sheet Income statement Financial ratios

2. INFORMATION GATHERING

How to get the information?

INTERVIEW

- Information is in the experience and the head of your client
- Remember: Each client is a gold mine of information

TWO APPROACHES TO INTERVIEWING:

1. Survey specialist—you think you know the answers before asking the questions.
2. You don't know anything, and you want to learn about the entrepreneur's work.

OUTCOMES:

1. Survey specialist's approach conveys a paternalistic attitude. Questions and data gathered may be unrelated to what is really happening ——→ entrepreneur becomes suspicious, annoyed, frustrated, unwilling to talk.

2. Genuine interest in and understanding of all steps in entrepreneur's work ——→ more complete information (or at least a means to verify the data you collect), more client trust and willingness to cooperate.*

*Note: Avoid asking about money or costs until relationship of trust has been established.

Loan appraisal should be a *process* in which:

- NGO staff *learn* by doing
- Clients *develop trust* in NGO staff ability to assist economic activity
- Financial information is gathered by *understanding* the economic activity and *respecting* the knowledge of the client

Session 7. Understanding Costs and Production

Purpose: The purpose of this session is to increase participants' knowledge of MSE production processes and cost structures, in order for them to relate production and cost analyses to feasibility studies of MSEs.

Suggested Teaching Methods: The session can be taught by combining presentation with the practical exercises provided at the end of the session.

UNDERSTANDING COSTS AND PRODUCTION

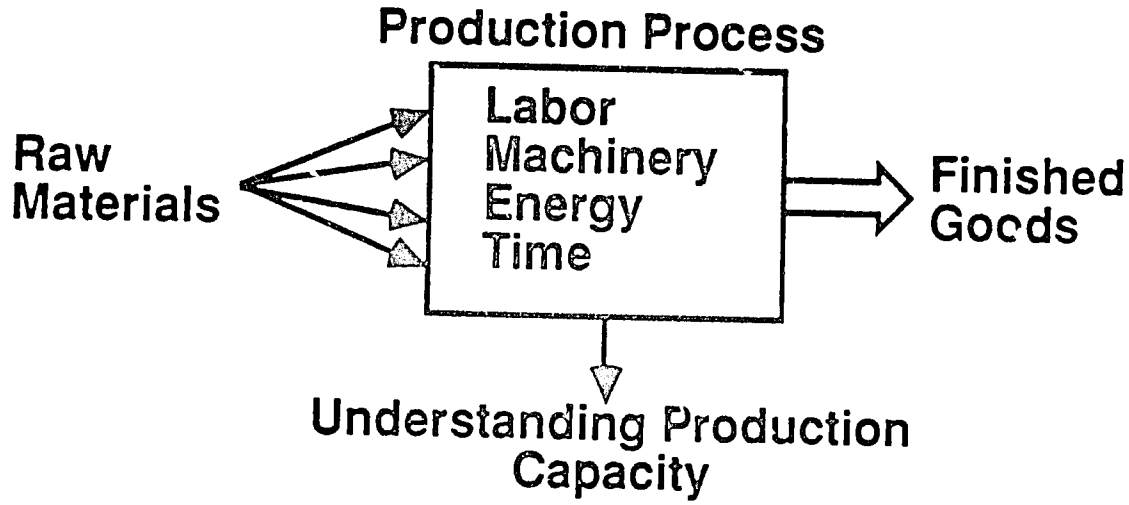
1. The Production Process
2. Costs
3. Relating Costs and Production to Feasibility

1. THE PRODUCTION PROCESS

Why start with the production process?

- **This is what the client knows (or should know) best**
- **Establishes relationship of equals (information easier to get if you show real interest in what client does and how it's done)**

Understand *in detail* how raw materials become finished products:



WHAT TO ASK:

1. What is produced?
2. How is it produced?
3. How much is produced?
4. What raw materials are needed?
5. How much raw material is needed?
6. How long does it take to produce?
7. How many people does it take?

UNDERSTANDING PRODUCTION CAPACITY

- Analysis (or appraisal) is only as good as the assumptions of information used
- Analysis requires that the principal assumptions used concern production capacity

2. COSTS

The importance of organizing and categorizing costs:

- Just knowing costs is useless
- Principal cost categories are:
  - One-time costs (capital and start-up)
  - Recurring costs (fixed and variable)

One-Time Costs

CAPITAL

- Costs to acquire, build, and install all elements of production unit, e.g.:
  - Equipment
  - Machinery
  - Land
  - Building

START-UP

- One-time costs specifically related to start-up, e.g.:
  - Legal fees
  - Feasibility studies
  - Engineering fees
  - Training

Recurring Costs

FIXED

- Costs incurred to operate every month regardless of level of output, e.g.:
  - Financing
  - Depreciation
  - Maintenance and repair
  - Salaries
  - Insurance, fees, etc.

VARIABLE

- Costs directly related to production, e.g.:
  - Raw materials
  - Direct labor
  - Energy
  - Transportation
  - Commissions

Fixed and Variable Costs

Some costs are difficult to determine because they may be fixed *or* variable.

Expenditures	Variable Cost	Fixed Cost
Raw material	X	
Labor	X	X
Transportation	X	X
Selling (commissions)	X	
Energy	X	X
Financing		X
Depreciation		X

The rule for determining variable costs:

Costs ↑ when production ↑

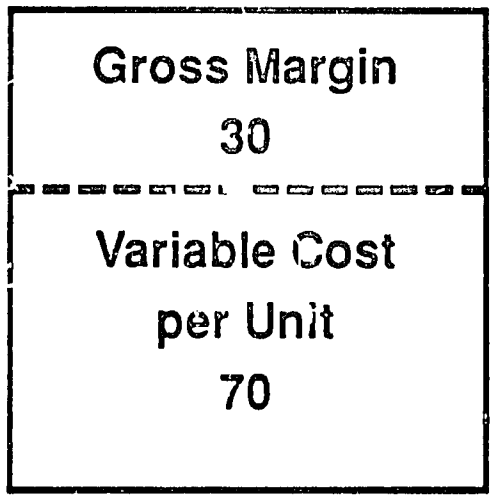
Costs ↓ when production ↓

Variable costs are those that increase with increased production and decrease with decreased production.

Gross Margin

Price	–	Variable Cost per Unit	=	Gross Margin
100	–	70	=	30

Price = 100



3. RELATING COSTS AND PRODUCTION TO FEASIBILITY

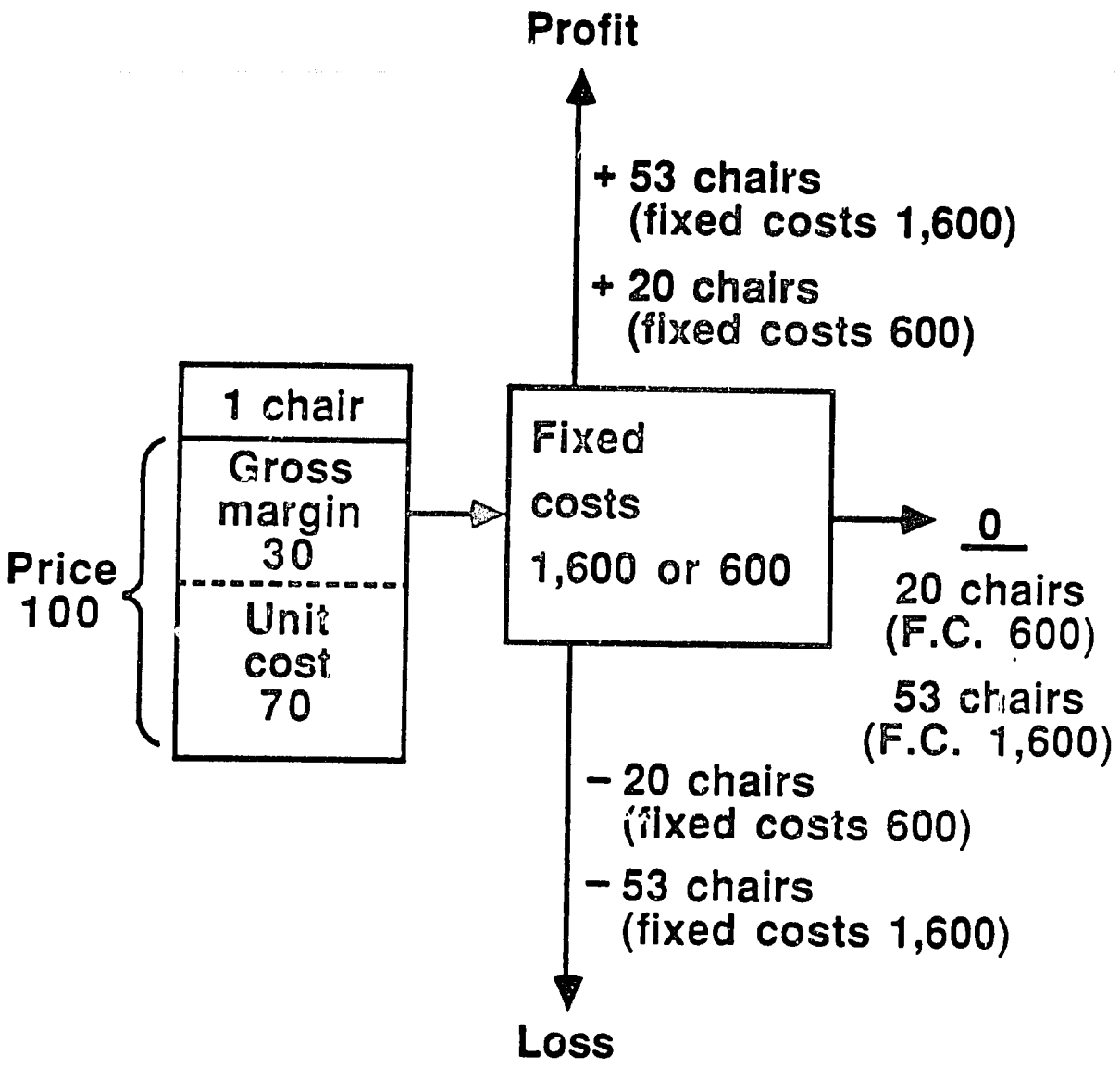
A. Calculating Unit Cost

Raw Materials	Amount (Sh)		Units Produced		Unit Cost
1. Wood	1,500	=	30 chairs	=	50
2. Nails	20	=	4 chairs	=	5
3. Paint	100	=	10 chairs	=	10
4. Varnish	50	=	10 chairs	=	5
			Total unit cost		70

B. Fixed Costs (per Month)

Rent	Sh	300
Financing		300
Labor*		1,000
	Sh	1,600 per month

*If carpenter plans to pay himself a set salary.


Profit
+ 53 chairs
(fixed costs 1,600)
+ 20 chairs
(fixed costs 600)
1 chair
Gross
margin
30
Unit
cost
70
Price
100
Fixed
costs
1,600 or 600
0
20 chairs
(F.C. 600)
53 chairs
(F.C. 1,600)
– 20 chairs
(fixed costs 600)
– 53 chairs
(fixed costs 1,600)
Loss

C. CHAIR MAKER SUMMARY (per Month)

No. of chairs	Sales (chairs x 100)	-	Variable costs (chairs x 70)	=	Gross margin	-	Fixed costs	=	Profit (Loss)
30	3,000	-	2,100	=	900	-	1,600	=	(700)
50	5,000	-	3,500	=	1,500	-	1,600	=	(100)
72	7,200	-	5,040	=	2,160	-	1,600	=	560
80*	8,000	-	5,600	=	2,400	-	1,600	=	800
120	12,000	-	8,400	=	3,600	-	1,600	=	2,000

*Production capacity expanded because carpenter's son begins making chairs. He is not paid a salary.

CHAIR MAKER EXERCISE

A village carpenter makes 3 chairs per day. Working 6 days per week, he produces 18 chairs per week. If his son, who can make 2 chairs per day (or 12 chairs per week), works with him, together they can produce 30 chairs per week, or 72 chairs per month.

Unit costs are determined by the raw materials used:

Wood
Nails
Paint
Varnish

Objective: To gather enough information, by asking the right questions, to establish the variable cost per unit (VCU).

Instructions to participants:

You will play the role of extension workers; the facilitator will play the role of the carpenter. Ask the facilitator/carpenter the questions you would ask a carpenter to determine the VCU.

For example:

How often do you buy wood?

How many chairs can you make with that amount?

Relating Costs and Production to Feasibility

Calculating Unit Cost

Raw materials	Amount (Sh)	Units Produced	Unit Cost
1. Wood	=	=	
2. Nails	=	=	
3. Paint	=	=	
4. Varnish	=	=	

Total unit cost =

Fixed Costs (per month)

Rent Shs _____

Financing _____

Labor* _____

_____

Shs _____ per month

*If carpenter plans to pay himself a set salary.

Session 8. Four Basic Tools for Enterprise Analysis

Purpose: This session aims to teach participants useful and practical tools for enterprise analysis: break-even, cash-flow, balance sheet, and income statement.

Suggested Teaching Aproach: This session can be taught by presenting the basic concepts behind each type of analysis, drawing on the examples presented in the manual, and then having the participants conduct practical exercises provided in the package. The exercises at the end of this session permit participants to draw on all of the analytical tools discussed in the workshop and apply them to specific situations.

THE FOUR BASIC TOOLS FOR ENTERPRISE ANALYSIS

1. Break-Even Analysis
2. Cash-Flow Analysis
3. Balance Sheets
4. Income Statement

1. BREAK-EVEN ANALYSIS

Questions answered by break-even analysis:

- At what level of production will the project be able to cover all its expenses?
- What is the minimum product price needed for the project to be viable at different levels of production?
- What happens if financial assumptions of costs or prices are changed?
- What are the best, worst, and probable scenarios for the project?

Three Steps to Break-Even Analysis

Step 1: Figure Gross Margin

P – VCU = GM

Price – Variable Cost per Unit = Gross Margin

Step 2: Calculate Break-Even Units

$$\frac{FC}{GM} = B/E \text{ Units}$$

Fixed Costs ÷ Gross Margin = Number of units needed to break even

Step 3: Calculate Break-Even Percent

$$\frac{B/E \text{ Units}}{\text{Number of Units at Full Capacity}} (x\ 100) = B/E\%$$

Number of units to break even ÷ Number of units at full capacity = Percentage of production capacity needed to break even

Break-Even Analysis of Chair Maker

B/E Analysis (per month)

* Price	Shs	100
* Unit Cost (VCU)	"	70
* Gross Margin	"	30
* Capacity		120 chairs per month
* Fixed Costs	Shs	1,600

Best-Case Scenario

P	VCU	GM	FC	Capacity
100	70	30	1,600	120

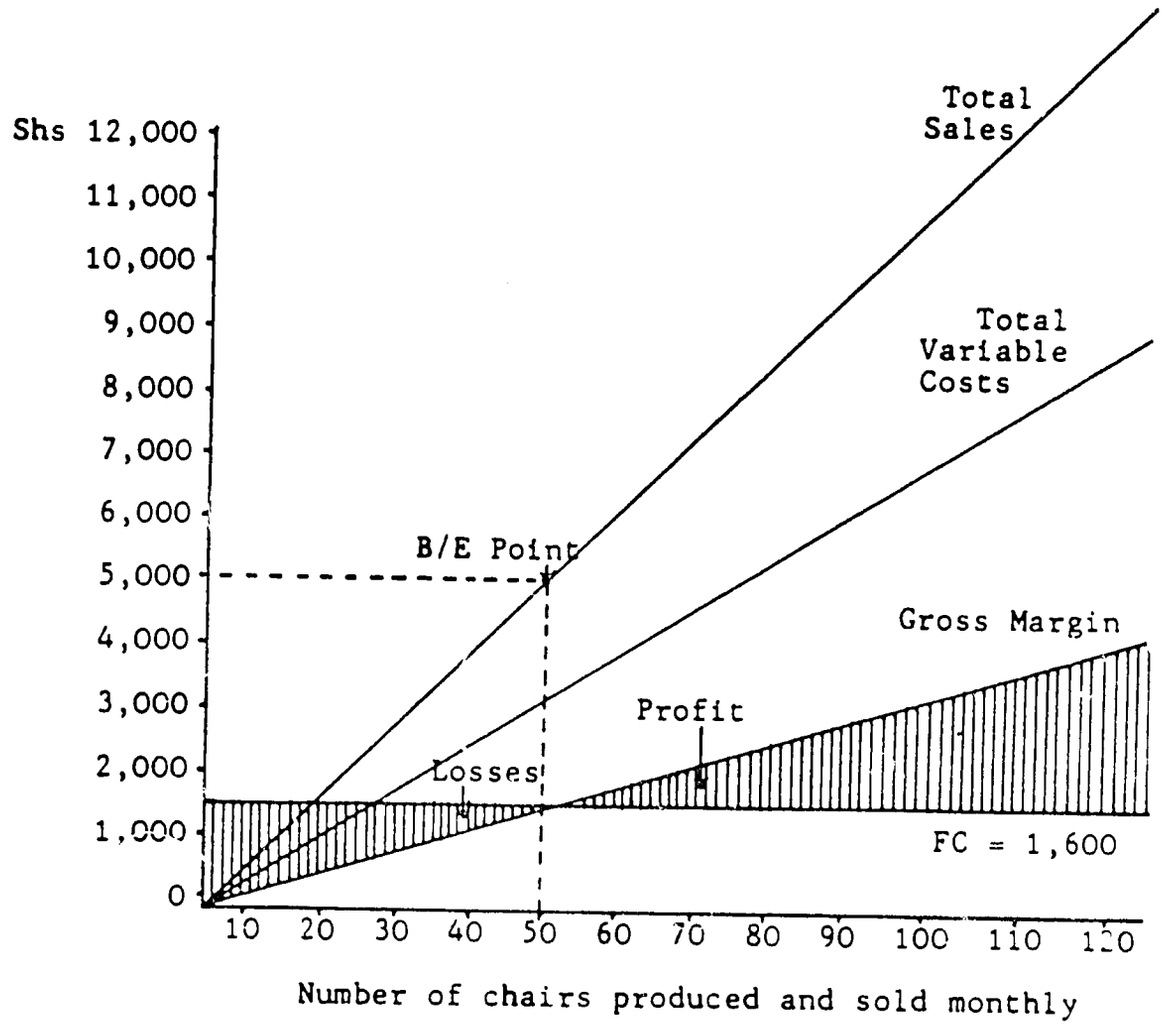
FC ÷ GM = number of units to break even

1,600 ÷ 30 = 53 chairs

53 ÷ 120 = .44 x 100 = 44% of capacity to B/E = Excellent risk

But we may be wrong in our assumptions! Need to do worst-case and probable-case scenarios.

BREAK-EVEN AND PROFITABILITY ANALYSIS



2. CASH-FLOW ANALYSIS

Project outflows (costs) are compared to the inflows (income) over a period of time to determine when the project generates sufficient revenues to cover monthly operating expenses and is therefore no longer dependent on outside sources of financing.

CASH FLOW FORMAT

	1ST QTR	2ND QTR	3RD QTR	4TH QTR	5TH QTR	6TH QTR	7TH QTR	8TH QTR	TOTAL YEAR 2
A. OUTFLOWS 1. Capital Costs 2. Start-up Costs 3. Variable Costs= 4. Fixed Costs TOTAL									
B. INFLOWS 1. Sales 2. Other TOTAL									
C. CASH FLOW 1. Net (Inflow-Outflow) 2. Cumulative									
D. Grants Loans									
E. Net Cash Flow Cumulative									
F. Hypothetical Financing Costs=									
G. Production Capacity (Per Quarter)									

CARPENTER'S CASH FLOW

CASH FLOW FORMAT

	1ST QTR	2ND QTR	3RD QTR	4TH QTR	5TH QTR
A. OUTFLOWS					
1. Capital Costs					
2. Start-up Costs					
3. Variable Costs*	10,500	15,750	16,800	18,900	21,000
4. Fixed Costs	4,800	5,763	5,763	5,763	5,763
TOTAL	15,300	21,513	22,563	24,663	26,763
B. INFLOWS					
1. Sales	15,000	22,500	24,000	27,000	30,000
2. Other					
TOTAL	15,000	22,500	24,000	27,000	30,000
C. CASH FLOW					
1. Net (Inflow-Outflow)	(300)	987	1,437	2,337	3,237
2. Cumulative					
D. Grants					
Loans	3,500				
E. Net Cash Flow	3,200	987	1,437	2,337	3,237
Cumulative	3,200	4,187	5,624	7,961	11,198
F. Hypothetical Financing Cost**		963	963	963	963
G. Production Capacity (Per Quarter)	150	225	240	270	300

* Based on production capacity

** 3,500 loan for working capital (3,500 + 10% ÷ 12 = 321 x 3 = 963)

Variable Cost = 70 per chair
Price = 100 per chair
Fixed Cost = 4,800 per quarter, 5,763 per quarter after loan

3. BALANCE SHEETS

- What is a balance sheet?
  - A snapshot of the enterprise's financial condition at a given point
  - An indication of sources and uses of funds
- What information is contained on a balance sheet?
  - Assets (uses of funds)
  - Liabilities (sources of funds)
- Why is it important to keep balance sheets?
  - To organize debts according to source
  - To provide an overall view of the financial situation
  - To demonstrate the origin of financing
  - To provide information on short-term and long-term nature of assets and debts

BALANCE SHEET

Chair Maker

Assets	Liabilities

4. INCOME STATEMENT

An account showing net profit (or loss) over a given period:

	Revenues
–	Variable cost per unit
=	Gross margin
–	Fixed costs and other expenses
=	Net profit (or loss)

INCOME STATEMENT

for the period _____ to _____

REVENUES		_____
– COST OF GOODS SOLD		_____
Materials	_____	
Direct Labor	_____	
= GROSS MARGIN		_____
– OTHER EXPENSES		_____
Indirect Labor	_____	
Rent	_____	
Electricity	_____	
Transport	_____	
Financing	_____	
Other	_____	
= NET PROFIT (OR LOSS)		_____

BREAK-EVEN POINT ANALYSIS EXERCISE*

In a nearby agricultural area, there is a farmer who is considering planting cotton on three hectares of land that have been unused for the last year. He has already collected some information on costs, prices, and likely yields per hectare from his neighbors and agricultural extension workers and would like you to help him determine if the idea is sound from a business viewpoint.

The information he has collected is as follows:

Fixed Costs will amount to $30.00 whether he plants one or more hectares of cotton. This would cover the purchase of shovels, hoes, water buckets, and other necessary implements that he does 15t have at the moment.

Yields per hectare can vary between 40 bales and 50 bales, depending on the rainfall, soil preparation, weeding, the incidence of disease, and other factors.

Variable Costs will cover inputs such as fertilizer, insecticides, seeds, etc. The agricultural extensionists and his neighbors estimate that it will cost the farmer $4.80 per hectare for a yield of between 40 and 50 bales.

Price per bale of cotton is set by the Government Marketing Board and currently stands at $ 0.24 per bale. Government trucks come to the farm to pick up the bales, so there is no transportation or packaging expense for the farmer.

SITUATION 1

The farmer would like to know if he will break even if the yield is 40 bales per hectare. Since his understanding of mathematics is not too good, he would like you to explain the answer in a picture (graph) as well as in numerical terms.

SITUATION 2

The farmer knows that he will have to spend more on fertilizer and some of the other inputs if the rains turn out to be good and the yield turns out to be 50 bales per hectare. He estimates that it will cost $5.00 per hectare in Variable Costs under those conditions. Based on the information the farmer has already provided, he would like to know if he will break even if the yield turns out to be 50 bales per hectare.

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*Source: Excerpted from Small Enterprise Development:Pre-Service Training Manual, Peace Corps Training Manual NO. T-42, July 1986.

SITUATION 3

The government has decided that it would like to stimulate the production of cotton in the area. For this reason, the Government Marketing Board has raised the price of a bale of cotton to $0.40, and the farmer wants to know if this will affect your decision on whether he should plant cotton or not. Since the rains were disappointing last year, he would like you to assume that the rains will be good this year (so the yield per hectare should be 50 bales in your calculations).

BALANCE SHEET EXERCISE*

1. A new transport business bought a bus for $7,500 on July 1. The owner used $2,500 from his savings and $5,000 from a bank loan to purchase the vehicle.
(Prepare a balance sheet.)

2. At the end of the year, a shopkeeper writes down everything he owns and owes and comes up with the following list:

Owns		Owes	
Cash	$250	Loan from Bank	$3,000
Bank Account	300	Owed to Suppliers	300
Stock	1,000		
Vehicle Value	800		
Building Value	4,000		

He had originally invested $2,000 in the business and has reinvested a portion of the profits every year since the business has operated. (Prepare a balance sheet.)

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*Source: Excerpted from Small Enterprise Development; Pre-Service Training Manual, Peace Corps Training Manual NO. T-42, July 1986.

INCOME STATEMENT EXERCISE

Using the data from the cash flow statement for the chairmaker's business, prepare an annual income statement for the first year recorded.

You may record figures by quarter. with a year-end total, or just figure the annual totals.

CASE STUDY EXERCISE

Project

Mwendo Mikate Women's Group
(25 members)

Staff

Bookkeeper:	A volunteer paid by church
3 Bakers:	Full-time bakery employees at Shs 500/month each
Others:	Members assist from time to time in order to learn bakery business (purpose of project); no cost

General Information

Population:	Present - 5,000 families Potential - 11, 000 families
Interest:	Prevailing market rate is 14% per annum
From NGOs:	10% per annum; loan amount = Shs 20,000 for 5-year term
Average per capita income:	Shs 2,400 per annum

A. PRODUCTION PROCESS

1. Products:
   a) Bread
   b) Scones
   c) Dinner rolls

2. Production Steps

		Time Required
a)	Warm water	10 min
b)	Dissolve yeast in warm water	10 min
c)	Measure raw materials: flour, sugar, salt, cooking fat	30 min
d)	Prepare dough	20 min
e)	Measure dough for pans	30 min
f)	Put measured dough into pans	15 min
g)	Let dough rise	1 hour
h)	Put pans into preheated oven to bake	30 min
i)	Remove baked products from oven	5 min
j)	Pack	10 min
		3 hrs 40 min

3. 3 bakers are required at each step in the production process.

4. 11 person-hours are required to complete one production cycle.

5. There are no marketable by-products.

B. PRODUCTION CAPACITY

1. a) 40 loaves of bread are produced in one production cycle (bread only)

   b) 60 scones are produced in one production cycle

   c) 60 dinner rolls are produced in one production cycle*

   Note: Full production per day: 120 loaves (no other product)
   Average production: 60 loaves + 60 scones
   Without orders, only 40 loaves are baked daily; with orders, 80 loaves are produced.

2. There are 9 production hours per day (7 a.m. to 4 p.m.).

   Note: When there are substantial orders, production is extended to 11 hours (7 a.m. to 6 p.m.).

3. Enterprise is in operation 6 days per week, 7 a.m. to 4 p.m. daily.

*This product is produced only on order.

4. Enterprise is in operation 52 weeks per year.

Note: For this exercise, assume 12 4-week months per year, no holidays.

5.

Product	No. of units per production cycle	Maximum no. of cycles per day	No. of units at full capacity/month
Bread	40	3	2,880
Scones	60	3	4,320
Dinner rolls	60	3	4,320

C. PRODUCTION INPUTS

1. Raw materials required in one production cycle:

a) Bread, 40 loaves

Materials	Quantity
flour	12 kg
sugar	1/2 kg
yeast	100 gm
salt	100 gm
cooking fat	1/2 kg
packing bags	40 bags

b) Scones, 60 scones

Materials	Quantity
flour	6 kg
sugar	250 gm
yeast	50 gm
salt	50 gm
cooking fat	250 gm
packing bags	10 bags

c) Dinner rolls, 60 rolls

Materials	Quantity
flour	9 kg
sugar	375 gm
yeast	75 gm
salt	95 gm
cooking fat	375 gm
packing bags	10 bags

2. Amounts in which raw materials are obtained:

Materials	Amount	Bulk Price
flour	24 kg	Shs 171 (includin transpor
sugar	1 kg	7.60
yeast	1 kg	84.10
salt	1/2 kg	2.00
cooking fat	12 kg	240
packing bags	100 bags	24.00

Note: There are no raw materials constraints. All raw materials are available in Nairobi or around the bakery.

3. Number of production cycles (full capacity):

Bread - 3 production cycles per day (with orders)

Other products - It depends.

4. Labor requirements:

a) 3 people needed for production

b) 3 hours, 40 minutes required for 3 people to complete one production cycle

c) 3 full-time people are employed

d) given physical aspects of the production facility, only 3 people can work at one time

D. OTHER COSTS

1. Capital costs:

a) Land and building

- land	Free plot
- building construction	
raw materials	Shs 6,000
labor	400
	Shs 6,400

b) Equipment and machinery

- equipment (see Detail of Equipment Costs below)	Shs 15,100
- delivery charges and transportation	700
	Shs 15,800
Grand total	Shs 22,200

Detail of Equipment Costs (in Shs)

Equipment	Required No.	Cost/Unit	Total Cost
Oven	1	3,500	3,500
Bicycle	1	6,000	6,000
Heater	1	1,500	1,500
Baking pans	40	40	1,600
Sufurias	3	150	450
Trays	5	150	750
Weighing scale	1	700	700
Table	2	250	500
Form	1	100	100
			15,100

2. Fixed Costs (per month):

a)	Depreciation	Depreciate equipment and machinery category only; assume equipment life of 5 years
b)	Labor	All labor treated as fixed cost
c)	Fuel	4 bags of charcoal used per week at Shs 65/bag
d)	Hypothetical financing cost (see Conversion Factors below)	Loan of Shs 20,00 at 10% per annum

---

Conversion Factors for Calculating Financing Costs

For the sake of analysis, a list of conversion factors is provided below for different interest rates for one type of financing:

Term	5 years
Grace period	3 months
Repayments	Equal monthly installments

To obtain monthly amount for financing costs, multiply net capital requirements by the conversion factor for the interest rate prevalent in the location in question. To simplify the analysis, the conversion factor yields equal monthly payments (installment loan).

Example: A project in Mauritania has total capital requirements of 150,000. The project will raise 50,000 locally and needs 100,000 from an outside source. In this example, a monthly financing cost is estimated based on 10%, the prevalent interest rate in Mauritania.

Capital Requirements (Loan)	x	Conversion Factor	=	Monthly Payment
100,000	x	.022111	=	2,211

Annual Interest Rate	Conversion Factor
10%	.022111
15%	.025570
20%	.028701
25%	.032061
30%	.035647
35%	.039458
40%	.043488
45%	.047734
50%	.052182

E. SELLING PRICES

Bread	Shs 3.60 per loaf
Scones	2.00 per scone
Dinner rolls	2.50 per roll

CASE STUDY EXERCISE INSTRUCTIONS

Determine the break-even point and percent of full capacity in the following instances:

I. If only bread is produced

II. If only scones are produced

III. If in every product cycle 30 loaves of bread and 15 scones are produced

Do this exercise both with and without hypothetical financing costs.

EXERCISE WORKSHEETS

Fixed Costs per Month

			Shs
1.	Depreciation		
	Equipment	=	
	Transportation	=	
	Depreciation per month	=	_____
2.	Labor (direct labor only)	=	
3.	Fuel	=	
	Total monthly fixed costs (without hypothetical financing cost)	=	_____
4.	Hypothetical Financing Cost	=	_____
	Total monthly fixed costs (with hypothetical financing cost)	=	

Variable Cost Per Production Cycle for Bread (40 Loaves)

Raw Materials	Amount Req. per Production Cycle	Bulk Price and Unit Price	Total Cost
Flour Sugar Yeast Salt Fat Packing bags			
		TOTAL	

Unit cost =

Variable Cost Per Production Cycle for Scones (60 Scones)

Raw Materials	Amount Req. per Production Cycle	Bulk Price and Unit Price	Total Cost
Flour Sugar Yeast Salt Fat Packing bags			
		TOTAL	

Unit cost =

Variable Cost Per Production Cycle for Dinner Rolls (60 Rolls)

Raw Materials	Amount Req. per Production Cycle	Bulk Price and Unit Price	Total Cost
Flour			
Sugar			
Yeast			
Salt			
Fat			
Packing bags			
		TOTAL	

Unit cost =

3. TEXTS FOR CREDIT MANAGEMENT COURSE

3A. COMMERCIAL ANALYSIS OF SMALL-SCALE PROJECTS

Henry Jackelen, Albert Mutua, and E. Murcia

INTRODUCTION

For a project to be financially self-sufficient, it is often necessary for the project to survive in an unfavorable economic environment. A project requiring financing must be analyzed to determine whether it has a chance to survive and how long it will need outside assistance before it can "stand on its own two feet."

The method of analysis outlined here is based on a standard commercial analysis that a bank might use to determine the creditworthiness of a prospective client. The analysis is simplified for the purpose of analyzing small projects.

There are some differences between this analysis and the more prevalent cost-benefit analysis. The cost-benefit method attempts to quantify all direct and indirect benefits over time, to compare these to the costs, and to determine whether the benefits justify the costs. This includes an opportunity cost of capital that the project must cover with its benefits.

The method presented here is much simpler than the cost benefit method. It is also less complete in terms of understanding the economic impact of a project. It is, however, more valid in one crucial aspect--in determining the financial viability of an enterprise. The method asks the basic question, "Can a project produce goods at a competitive price and sell enough of the product to stay in business?"

The best analysis would first look at a project from the standpoint of commercial viability and then estimate its economic impact with a cost-benefit analysis. Combining both types of analysis permits more informed decisions about small-scall projects.

The initial purpose and design of this manual was for A.T. International staff. Subsequently, based on the positive feedback from institutions collaborating with ATI, it was decided to disseminate the manual to a wider audience in hopes of providing information to a wide variety of institutions that work with small-scale projects in the developed and the developing world.

*Source: Adapted from Manual for Commercial Analysis of Small-Scale Projects, by Henry R. Jackelen, AT International, November 1983.

The manual is organized into a section on the concepts involved in this modified commercial analysis, and a section on the tools that may be used in the analysis. The sections are broken into corresponding parts, as follows:

	Concepts	Tools
I.	The Production Process	General Information & Attachment A
II.	Costs	Attachment B
III.	Calculating Total Capital Requ	Attachment C
IV.	Price, Distribution, and Marke	Attachment D
V.	Break-Even Point	Attachment E
VI.	Cash Flow Analysis	Attachment F

Since it is often the case that a project will not generate the data required for analysis in an organized fashion, this manual and the tools were both designed with an interview format in mind.

The first three sections--dealing with the process, the costs, and the capital requirements--are primarily interviewing tools to be used for data collection. The final three sections are designed to analyze the data collected during the interview process.

The tools are systematically organized, and, for the most part, each section builds upon the preceding one. There will, however, be times when you need to skip back and forth between the sections to get information, since some calculations are interrelated.

CONCEPTS

I. THE PRODUCTION PROCESS

The starting point in this analysis is, <u>in all cases</u>, the production process. You must understand this process in order to ask the questions that will produce the data for commercial analysis. You need to understand not the technical aspects of production, but the actual steps involved in processing raw materials into finished products.

The production process, as illustrated in Figure 1, involves the actual steps that have to be completed after the inputs of raw materials and labor are in place. They are the steps that lead to the completion of a finished product for sale.

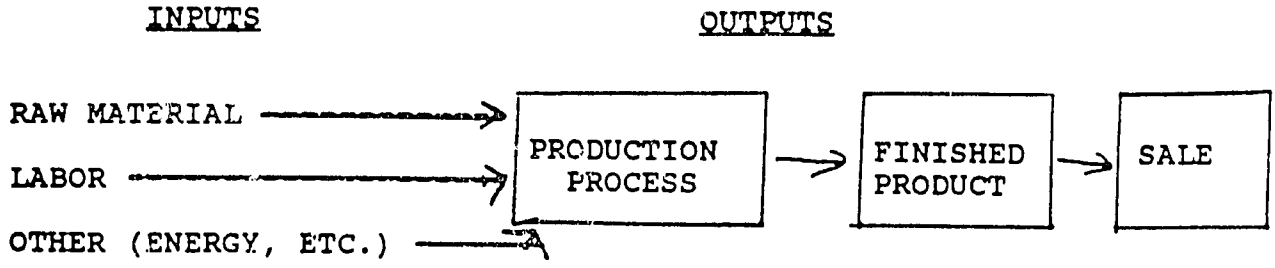

Figure 1.

For example, the production process for a brickmaker would include the following steps:

1. Gathering sand and clay
2. Mixing the sand and clay
3. Forming the bricks
4. Drying the bricks
5. Firing the bricks
6. Cooling the bricks

Data collection tools have been designed to give you a clear understanding of the production process (see Attachment A). The understanding of the process is important because several analyses will use this data. An analysis is only as good as its underlying assumptions, so production data, organized around assumed categories of activity, will determine the quality of the final analysis.

There are no costs included in this part of the analysis--only the production process. Once this information is complete, several different estimates of costs can be "plugged in" to analyze commercial viability of the project.

The data collection tool dealing with the production process is designed to answer the following questions:

1. What is produced?
2. How is it produced?
3. How much is produced?
4. What raw materials are needed?
5. How much raw materials are needed?
6. How long does it take to produce?
7. How many people does it take?
8. How long does it take these people to produce the product?

In asking these questions about the production process, you must be careful to communicate effectively so that every step is recorded. In a vast majority of cases, project holders have never put these steps down on paper. Nonetheless, they do know

how to make the product and can supply accurate information, if you can make sure that the step-by-step logic is followed. The best approach is to start with the raw materials and observe or ask what happens in each step until you are satisfied you understand how the raw materials become finished products--again, not in a technical sense, but in terms of a process.

These tools are designed with flexibility in mind. You will find that people involved in production projects think in different time frames. The objective in this process is to calculate monthly estimates of costs. If, however, the producer thinks in daily, weekly, or monthly units you must note this down. Using the example of the brickmaker, he or she may think in terms of 10 days to make bricks:

1 day to gather sand and clay
2 days to mix sand and clay
2 days to form the bricks
2 days to dry the bricks
2 days to fire the bricks
1 day to cool the bricks
10 days

If the brickmaker produces 1,000 bricks in a 10-day production cycle, he or she will think in terms of the costs of those 1,000 bricks. To use this analysis method, you would need to compile the 10-day production costs and then convert to a 30-day cycle (i.e., multiply by 3).

In many cases, there will be more than one product. It is important to differentiate between separate products and by-products. In the case of by-products, it is best to consider them part of the main product. Separate products require separate production sheets.

Finally, many projects will utilize or propose the use of production technology that differs from an existing traditional technology. It then becomes important to map out that traditional technology in the same step-by-step fashion as the "new" process. The purpose is to establish a baseline for evaluating the effects of the proposed technology. This helps answer questions such as, "What is the impact of the proposed technology on the traditional process?" and, "Does it increase yield, or reduce production time?"

II. COSTS

Once you understand the process, you're ready to investigate the costs. This is by far the most difficult portion of the analysis, for there are many hidden traps caused by differences in perceptions between you and the interviewee. The "Costs" section of the analysis will help you obtain the basic data needed to determine the level of production the proposed

enterprise needs to be self-sufficient (break-even point). It also helps to obtain the data needed to calculate the costs involved in making a single product (unit cost).

Many project holders will already have an estimate of break-even and unit cost. The objective of this section is to get you and the project holder to think all of the costs out together in a step-by-step fashion to make sure all bases have been covered. (Unit-cost and break-even analysis are covered in greater detail in another section.)

The Four Basic Categories of Costs

This section categorizes costs. A general listing of costs is literally of no use for the analysis. Costs must be differentiated. Don't mix apples with oranges. The data-collection tools found in Attachments BI-BIV are designed to assist in differentiating all costs into the following categories:

- Capital costs
- Fixed costs
- Variable costs
- Start-up costs

Capital Costs

Capital costs are the costs of acquiring, building, and installing all elements of the production unit to insure that it is fully commissioned and ready to start production. (See Attachment BI, Capital Costs.) They cover all physical installations, equipment, and machinery. Also included in the capital costs category are the land required to support the project, the labor to build installations, and transportation costs for the equipment and machinery.

Fixed and Variable Costs

Once you have estimated the capital costs of the project, you can proceed to the sometimes confusing area of fixed and variable costs. You might ask, "Why bother with this differentiation? After all, a cost is a cost; let's just list all costs of production together."

Actually, you would be right, if you could assume that all projects would produce at full capacity; but, as you know, this hardly ever happens. You need to know the possible "what ifs"--the things that are involved when a project doesn't produce as expected, for whatever reason. The analysis has to

ask the question, "If production is only at 40%, 50%, or 60% of planned capacity, is the project viable?" or, better still, "At what level of production is the project viable?"

What does capacity have to do with fixed and variable costs? If you have a project that is expected to produce 1,000 units and, instead it produces 600 units, the fixed costs remain the same while variable costs decrease. It is necessary to segregate these costs for separate analysis. The fixed costs are the overhead, while the variable costs determine unit costs. These two categories of costs are used to perform one of the prinicipal calculations in this method, a break-even analysis.

Fixed Costs

Fixed costs are the costs of operating the production unit regardless of the level of production. There are several costs that an enterprise will incur regardless of the level of production. Chief among them are:

1. Financing Costs: Assuming that production projects should pay for themselves over time, the analysis must consider the capital necessary to begin production (total capital requirement). These funds will come from loans and whatever capital the project may own. This loan must be repaid on a scheduled basis. Thus, regardless of the level of production, the project will have to make loan payments on a regular basis. You will have to estimate this amount on your own. (This calculation follows your estimate of net capital requirements, a procedure discussed later in this manual.)

2. Depreciation Costs: Depreciation is a tricky concept. It is best understood as a cost of production; without it, the total cost or doing business would not be accurately reflected. For the purposes of this process, we will assign a fixed useful life of five years to equipment (vehicles, tools, carts, etc.) and 10 years to machinery (presses, lathes, heavier machines), with no salvage value. Thus, the cost of the machinery is charged to the units produced as a cost of production during the useful life of the machinery. In cases where the useful life exceeds these terms, use 10 years as the measure.

3. Maintenance and Repair: In addition to depreciation, all projects should estimate some provision for adequate maintenance and repair of machinery, equipment, and the physical plant.

4. Rental or Lease Fees: If the project rents facilities, equipment, or machinery, these costs should also be included in fixed costs. Rental is an excellent example of fixed costs that continue regardless of production.

5. Salaries: The role of employees and how they will be paid generally determines how salaries are charged. The salaries of the project manager, accountant and secretary should be considered fixed costs. If the project intends to pay workers a fixed monthly salary, regardless of production, these salaries should be considered as a fixed cost. Other wage-related costs are variable costs.

6. Miscellaneous Costs: There will be a number of other costs that will vary from project to project, such as insurance and licensing fees.

Variable Costs

Variable costs are costs directly related to the level of production--principally raw materials and labor. The easiest way to understand these costs is to take whatever is produced and ask two simple questions:

- How much raw material did it take to produce this?
- How much labor did it take to produce this?

There are two levels of analysis of variable costs--the estimated total variable costs (assuming full production) and the variable cost per unit produced (unit cost). In other words, the first level of variable costing involves calculating the costs for all raw materials and labor if production is at full capacity. The second level is easy, once you have completed the first part. You simply divide the total variable costs by the total number of units to be produced at full capacity.

The types of variable costs this method of commercial analysis utilizes include:

1. Raw Materials Costs: This includes the costs of all the raw materials required to produce the finished product. Calculating raw material costs can be tricky, because the quantities may vary with the number of units that can be produced. The chairmaker, for example, needs wood, nails, and varnish to make a chair. While it is possible to purchase wood and nails in quantities small enough for one chair, a minimum quantity of varnish may be sufficient for five chairs. (The cost of gathering and transporting these materials should also be included.)

2. Labor Costs: This includes the costs for all salaries/wages that are not considered fixed costs. For the sake of analysis, all direct labor in production should be considered as a variable cost. In general, you'll find three ways project holders use to define how they pay labor:

   (a) They pay a piece rate per unit produced, which is a variable cost.

   (b) They plan to hire "x" workers and pay them a fixed weekly wage, which is a fixed cost.

   (c) The project holders talk about paying a daily salary or hiring workers as needed. Labor then should be considered a variable cost, as the project holder intends to employ as needed, not on a fixed basis.

3. Other Costs: There are a number of other variable costs, which will differ from project to project.

   (a) Energy - This includes costs for energy--oil, gas, electricity, wood--needed for operation of production equipment and machines.

   (b) Transportation - This item includes the costs involved in getting the finished product to the market, whether to a wholesaler, a retailer, or a consumer.

   (c) Marketing - This item includes commissions to sales agents.

Start-up Costs

Start-up costs are one-time costs associated with getting started in business. They are costs not already covered by capital costs. Examples of start-up costs include legal fees, feasibility studies, engineering fees, licensing and registration fees, training fees, and other locally relevant items.

III. CALCULATING TOTAL CAPITAL REQUIREMENTS AND FINANCING COSTS

Once you have a good idea of the total costs of the enterprise, you can proceed to answer a fundamental question asked by this analysis, "How much capital will be required to get the proposed project established and in operation?" The total capital requirement is the sum of three components:

- Capital costs
- Start-up costs
- Working capital provision

It is unrealistic to expect any project to become self-sufficient financially when it begins production. Thus, there must be a provision for carrying the project for a period of time. This gives the project some "breathing room" until production problems are ironed out, sufficient stocks of finished goods are completed, and most importantly, until enough funds are on hand to buy raw materials for the initial stages of production. This means that all costs of operation (fixed and variable) should be covered for a period of time. This total amount is the working capital provision.

For the purpose of the analysis, a good rule of thumb is to use three months of <u>total</u> costs of production as the working capital provision.* These funds will give the project the liquidity to operate in a stable fashion.

Many times this provision is overlooked in project planning. The viability of projects is affected when plant and equipment are installed without the capital to actually get into production. The working capital provision cannot be determined until you have listed the fixed and variable costs, including financing costs.

Financing Costs

Once you have determined the total capital required (refer to Attachment CI), two questions become crucial to determining the commercial viability of a proposed project:

(1) How much capital can the project holders raise locally as risk capital?

(2) How much capital is needed from outside sources?

---

*This period may vary from project to project, but this analysis will use the three month figure for purposes of standardization.

GENERAL COUNTRY INFORMATION

1. Population

Total:

In development projects, the capital from outside sources will generally be covered by grant-giving organizations, banks, and the like. A cost must be attributed to this capital. Even though funds may be in the form of a grant, a cost must be attributed to the funds so that you know that the project can pay for itself over time. The cost and amortization of capital will form a major part of the fixed costs of the project.

The net-capital requirement enables you to calculate the financing cost. You may have noted a discrepancy here--the calculation of total capital requirement requires the inclusion of three months of fixed costs, yet you cannot calculate fixed costs until you have determined financing costs. The solution to this dilemma is to have two types of fixed costs:

- Fixed costs without costs of financing
- Fixed costs including costs of financing

The fixed costs <u>including</u> costs of financing will be the most important and crucial for this analysis. The fixed costs <u>without</u> costs of financing will be used to calculate a provision for working capital to complete the capital requirements section.

With these modifications, all information necessary to calculate total capital requirements and financing costs has been obtained. The principle behind using financing costs is that, for projects to be viable, they must show an ability to become financially self-sufficient. To do this, they must be able to function within their local contexts and become credit-worthy enterprises. For this to occur, it is necessary to apply a very strict rule, "<u>Over time, a project must be able to demonstrate that it can obtain and repay capital from local sources</u>."

Determining the financing costs requires a good estimate of the interest-rate structure from financial institutions where the project is located. Alternative forms of financing (money lenders) should not be used to determine the cost of financing.

In many cases, the only financing available to development projects will be alternative credit, so one of the main objectives is to get these projects to become bankable. The best way to insure access to credit from established sources is to have an operating enterprise that has demonstrated its ability to cover its costs and repay loan capital.

IV. PRICE, DISTRIBUTION, AND MARKETING

After you have a grounding in the production process, in the costs for the project, and in the total capital requirements, you can move to the next part of the analysis--projected income for the project. Income will depend on three factors:

- Price - How much do you charge for your finished products?
- Distribution - How do you get the products to the market?
- Marketing - Who is the target consumer?

The project holder's perception of the price that will be obtained for the product must be examined until you're convinced that all bases are covered. A number of questions must be asked, including:

- Who will be the final salesperson?
- What commission will be paid, and what impact will that have on the final price the intended consumer will pay?

Most cases will be simple, involving a product already available in the market. However, there are often complicating factors which can only be ascertained by asking additional questions.

- Will the project depend on a traditional network of middlemen?
- Will products be sold on credit or for cash?
- Will there be different prices for individual products and bulk quantities?
- Is the product a cheaper alternative to existing products?
- Will the product bring some other benefits to the purchasers?
- Who can afford to pay for the product at the price at which the project can afford to sell it?

There are two ways to determine price--an analysis of the costs of production or an assessment of the market. For this analysis, both methods should be used. Obviously, the market is the final determinant; however, there will be cases, especially with new products, in which there is no basis for comparison in the local market. If that is the case, you can approximate the selling price by using the formula found in Attachment DIII, "Estimating Price Using Production Costs."

Let's use the chair manufacturing example, once again, to illustrate the method of estimating price based on costs. The chairmaker estimated unit costs (or variable cost per unit) at $10. Fixed costs are estimated at $2,000. If all goes well, the chairmaker will be able to make 1,000 chairs in a month. What price does the chairmaker charge for each chair to make a profit? We know that $10 per chair would not cover the fixed costs. The best rule of thumb is to take fixed costs and divide by 50% of the units to be produced in a month. In that way, the project is reasonably guaranteed to cover its fixed costs, and, if it produces 70-80% of estimates, it has a reasonable profit. Thus, a reasonable price for the chairs is:

$$\$10 \text{ (unit cost)} + \$4\left(\frac{\$2,000 \text{ (fixed costs)}}{50\% \text{ of } 1000\text{-chair capacity } (500)}\right) = \$14$$

Estimating market value will entail more questions and interviewing, with results that are more narrative than fill-in-the-blank (See Attachments DI-III). Try to ask about the middlemen in the area. Many times it may be possible to investigate alternative means to get goods to market. The middlemen could be selling goods at two to three times the price the project receives. You will find some difficulty in getting this information, but a reasonable attempt may contribute an important element in the assessment of your project.

V. BREAK-EVEN POINT

At this stage of the analysis, the information you have gathered and calculated may be organized and analyzed to answer the following questions:

- At what level of production will the project be able to cover all its expenses?
- What is the minimum price needed for the project to be viable at differerent levels of production?
- What happens if financial assumptions of costs or prices are changed?
- What are the best, worst, and probable scenarios for the project?

These questions can be answered with break-even analysis. A break-even analysis determines the level of production at which the product will cover all its fixed and variable costs. This is the break-even point--the point where the project neither loses nor makes money.

In the previous sections four important pieces of information have been estimated: production capacity; fixed costs; variable

costs or unit costs of production; and price. One more piece of information is needed before you can proceed to actual break-even analysis--gross margin.

Gross Margin

You have seen that the costs directly related to production (principally labor and raw materials) are variable costs. Based on these costs, you were able to determine unit costs of production. If you know the unit price and the unit costs of production, you will be able to determine the gross margin. The gross margin (GM) is simply the difference between the price (P) and the variable cost per unit (VCU) of production.

Price - Variable Cost Per Unit = Gross Margin

Price then has two components--variable costs (or unit cost of production) and gross margin.

If you have a project that produces chairs, for example, and the analysis shows that the cost to produce each chair is $10 and the price for which the chairs can be sold is $14, the gross margin will be $4.

$14 price - $10 variable cost per unit = $4 gross margin

- or -

$14 price = $4 gross margin + $10 variable cost per unit

The gross margin is the contribution of each unit of production to cover the fixed costs of the project and, eventually, the margin of its profits.

Break-Even Analysis

You now have enough information to try your hand at doing break-even analysis. There are three steps to determine break-even.

Step 1: P - VCU = GM

Price - Variable Cost Per Unit = Gross Margin

Step 2: $\frac{\text{F.C.}}{\text{GM}}$ = BE Units

$\frac{\text{Fixed costs}}{\text{Gross Margin}}$ = Number of units needed to break even

Step 3: $\frac{\text{BE Units}}{\text{Full Capacity}}$ = BE %

Number of units to break-even / Full capacity = Percentage of production capacity needed to break even

Sample Break-Even Analysis

Appropriate Widgets, Inc. has the capacity to produce 1,000 widgets per month. Each widget sells for 100 pesos. The variable costs per unit are 60 pesos per month. The fixed costs for AWI are 20,000 pesos.

The question: What is the break-even point for AWI?

If you know unit price (100) and per unit variable cost (60), then you know what the gross margin is.

Step 1: Price - Variable Costs Per Unit = Gross Margin

(P) 100 - (VCU) 60 = (GM) 40

The only other costs you need to know are the fixed costs (20,000). If you have each unit yielding a gross margin of 40 to cover fixed costs, then:

Step 2: Fixed Costs / Gross Margin Per Unit = Number of Units needed to break-even

(FC) 20,000 ÷ (GM) 40 = (BE Units) 500 units

With this information you can proceed to the next step.

Step 3: Number of units to break-even / Full Capacity = Percentage of production capacity needed for break-even

(BE Units) 500 ÷ 1000 Units (Full Capacity) = (BE %) 50%

The hard part of the break-even analysis is compiling the costs and the price, which you will have already completed when you reach this point. The actual analysis is easy, as you have seen. The formula is found in Attachments EI-II.

Application 1: Multiple Products

The break-even analysis has been relatively easy up to now, as you have considered only one product. However, what happens if you have a project that intends to produce more than one product?

Let's return to the example of Appropriate Widgets, Inc. to see how this is handled. The interview reveals that the project intends to produce four products--widgets, mini-widgets, gadgets and mini-gadgets. The following table shows estimated sales of the products at full production:

Product	Quantity	×	Unit Price	=	Total Estimated Sales
Widgets	500		100		50,000
Mini-Widgets	500		50		25,000
Gadgets	500		40		20,000
Mini-Gadgets	500		10		5,000
	Total Estimated Sales				100,000

The following table shows the percentage of sales that each product represents at full capacity:

Product	Estimated Monthly Sales	÷	Total Monthly Sales	=	% of Sales
Widgets	50,000		100,000		50%
Mini-widgets	25,000		100,000		25%
Gadgets	20,000		100,000		20%
Mini-gadgets	5,000		100,000		5%

If you know that AWI's fixed costs are at 20,000 per month, then you can determine the proportional share each product should contribute to fixed costs by using the percentage each contributes to monthly sale:

Product	% of Monthly Sales	x	Fixed Costs (FC)	=	FC Per Month
Widgets	50%		20,000		10,000
Mini-widgets	25%		20,000		5,000
Gadgets	20%		20,000		4,000
Mini-gadgets	5%		20,000		1,000
					20,000

Now that you know fixed costs per product, you can proceed to estimate a break-even point for each product using the information in Attachments EI and EII. Let's say you have established variable costs per unit and can calculate gross margin as follows.

	Price	-	VCU	=	GM
Widgets	100	-	60	=	40
Mini-widgets	50	-	25	=	25
Gadgets	40	-	20	=	20
Mini-gadgets	10	-	5	=	5

You can then do a product-by-product break-even analysis as shown below.

Break-Even Analysis

	$\frac{FC}{GM}$ = BE Units ÷ Full Production = BE% Per Product	
Widgets	$\frac{10,000}{40}$ = 250 Units ÷ 500 Units =	50%
Mini-widgets	$\frac{5,000}{25}$ = 200 Units ÷ 500 Units =	40%
Gadgets	$\frac{4,000}{20}$ = 200 Units ÷ 500 Units =	40%
Mini-gadgets	$\frac{1,000}{5}$ = 200 Units ÷ 500 Units =	40%

You can conclude that if the project produces only 50% of its widgets, and 40% of all other products, it will break even.

Application 2: Estimating Profitability

Look again at AWI, now producing only one product.

Fixed Costs: 20,000

Price of Widget: 100

Variable Cost Per Widget: 60

Full Capacity: 1,000 widgets

You have already calculated the break-even point at 500 widgets. Now you should be able to determine AWI's profit if 1,000 widgets are produced.

If you haven't figured it out, stop a moment and think:

- Do you know the break-even point?

  Yes. 500 units.

- What does the break-even point mean?

  Level of production where the project will be able to cover all its fixed costs.

- What profits are made at the break-even point?

  Zero.

- So what happens when the project produces 501 units? Is it profitable?

  Yes. If you produce 501 units the additional unit over the break-even point will give you a profit. In this case, a profit of 40, or the gross margin of one unit.

Remember that unit prices are composed of two categories:

(1) Variable Cost Per Unit: Those costs of raw material, labor, and other factors directly attributable to production.

(2) Gross Margin: The amount each unit contributes toward the overhead costs or fixed costs and, once those are covered, the profits.

If the VCU is 60, and the price 100, the gross margin must be 40. If the break-even point is 50%, and capacity is 1,000 per month, profits will be as follows:

1,000 full capacity - 500 units (BE point) = 500 units

500 (units) x 40 (gross margin per unit) = 20,000

Application 3: What if some of the data you collected is wrong?

There will always be errors, so why bother? Because this tool allows you to figure in "fudge factors" for errors caused by God, Man, or Technology by always doing a best-case and a worst-case scenario, assuming the probable case lies between.

This part of the analysis asks you to act on your "gut" feelings. When you collect data, you will no doubt form impressions. For example, "They really seem to have a good grasp of the start-up costs." At this point you then build in an error factor to accommodate your perception. The amount of the error factor is arbitrary. You can try 50% increases to cover the possible differential between estimated costs and

actual costs and see what happens. (This should come under worst-case scenario.)

Best-Case Scenario:

Let's say the AWI example is the best case scenario:

Full Capacity	1,000 widgets
Fixed Costs	20,000
Price	100
Variable Cost Per Unit	60
Gross Margin	40
BE Point	500 units or 50% capacity

Worst-Case Scenario (1):

If fixed costs are increased by 50% to 30,000 to compensate for possible errors, the new BE point would be:

$$\frac{30{,}000\ (FC)}{40\ (GM)} = 750 \text{ units}$$

This is equal to:

$$\frac{750 \text{ actual units}}{1000 \text{ full production units}} = 75\% \text{ of capacity}$$

Worst-Case Scenario (2):

If everything in the best-case scenario remains the same, except variable costs per unit are increased by 50% to 90, what effects would this have on the analysis?

P - VCU = GM

100 - 90 = 10

The new break-even point would be:

$$\frac{20{,}000}{10} = 2{,}000 \text{ units}$$

Guess what? You just put the project out of business! But wait. Did they really check out their prices? Go back to the project. If the price was set too low, then the benefits may justify a sales price of 150 for the product.

So, back to the books. If the price is 150, what happens with these variable costs?

P - VCU = GM

150 - 90 = 60

Break-even point:

$\frac{20,000}{60}$ = 33.3% of capacity

This situation is not as crazy as you might think. There are many cases when groups, wishing to maximize benefits to the buyers, set prices too low. This jeopardizes project viability, when, if the proper price was charged, the project could actually produce at a small profit.

The tools for BE analysis enable you to work with the variables of price, cost, and production levels and to adjust the analysis according to your judgment and the quality of the information available.

A Final Word on Break-Even Analysis

As you know, expectations and reality diverge greatly. This analysis allows you to determine objectively the viability of a project. If you discover that a project will have to operate at 70-80% of capacity, you might conclude that the project may not cover its costs. If the analysis shows that the project will break even at 40-50% of capacity, the chances are much greater that the project will be viable.

VI. CASH FLOW ANALYSIS*

A critical aspect of project analysis is time phasing. It is not enough to know capacity, price, and break-even point. It is equally important to estimate how long it will take to get the project operational and, once in operation, how much time is required for the project to reach its break-even point.

The pre-production phase of projects differs greatly. It is important to map out these costs (primary capital and start-up costs) in a realistic time frame. You will need to know if start-up will take three months, six months, or a year. You also need to ask, "Once in production, how long will it take the project to reach full capacity?", since it is rare for a project to begin production and reach full capacity immediately.

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*Discounted cash flow methods are not used because they add a measure of complexity inconsistent with the analytical needs of small scale projects.

It may take several months before all of the complexities of production are properly worked out. Another set of complexities that also has to be addressed are those involved in the marketing of the products.

For these reasons, a cash flow analysis is important to any project. It is a simple exercise whereby the outflows (costs) are matched to the inflows (income) of the project over a period of time. This information is then used to determine when the project will be generating sufficient revenues to cover its monthly operating expenses and, therefore, will no longer be dependent upon outside sources of financing. (See Attachment F.)

Outflows (Costs)

To figure the outflow portion of the cash flow on a quarterly basis, take the estimated costs and apportion them on a realistic basis. The first items should be capital and start-up costs. Fixed costs should be apportioned according to when they are incurred, and variable costs will depend on the level of production.

If the project secures debt financing, the service of this debt will be included in the fixed costs category, so no separate debt service will be included. This should not be confused with hypothetical financing costs, also included in the cash flow format. This category shows how the cash flow picture would be affected, if the project had to secure debt financing instead of grant financing.

Inflows (Incomes)

In this category, do not confuse the amount produced with the amount sold. In may cases, it may be the same amount. Remember that sales will depend on marketing, and seasonal fluctuations should be taken into account.

This section presents the interviewing and analysis tools to be used in this method of commercial analysis for small-scale projects.

The tools are grouped as follows:

- General Country Information
- Attachment A - Production Process
- Attachment B - Cost
- Attachment C - Total Capital Requirement and Financing Costs
- Attachment D - Price Distribution and Marketing
- Attachment E - Break-Even Analysis
- Attachment F - Cash Flow Analysis

GENERAL COUNTRY INFORMATION

1. Population

   Total:

   % rural:

   % urban:

2. Literacy Rate:

3. Inflation current year and previous 3 years:

   19___ =

   19___ =

   19___ =

   19___ =

4. Interest Rates

   (i) Prevailing commercial rates:

   (ii) Possible interest rate project can receive from a bank:

   (iii) Middleman/moneylender rates:

5. Minimum Wage

   Rural:

   Urban:

6. Per Capita Income

   Estimated average per capita income in area where project is located: _____

7. Seasonality

   Will the project operate for less than 1 year?

   If so, how many months?

ATTACHMENT A - PRODUCTION

AI - PRODUCTION PROCESS

1. What is the product? _____

2. What are the steps in the production process?

3. How much time is required to complete each step in the production process?

4. How many people are required at each step in the production process?

5. How many person hours are required at each step in the production process?

6. Are there marketable by-products? If so, what are they?

_____

_____

7. Explain in one paragraph what is produced and how it is produced.

8. Use a step-by-step approach to describe how raw materials are collected and processed.

STEP	DESCRIPTION
1.	

STEP	DESCRIPTION

AII - TRADITIONAL TECHNOLOGY AFFECTED OR CHANGED BY THE PROJECT

1.) Describe the traditional process:

STEP	DAY	NO. OF PEOPLE	HOURS PER PERSON	TOTAL PERSON HOURS
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				

2.) Describe changes which will occur due to project.
(Increased productivity, time savings, better quality, etc.)

AIII - PRODUCTION CAPACITY

Interview Questions

A. Product

1. What is the product?
2. What are the marketable by-products?

B. Production Capacity

1. How long does it take to process the raw materials into a finished product (i.e. production cycle)?

   _____ hours/days/weeks/months

2. How much can be produced in the production cycle?

   _____ units

3. How many hours in a day will the enterprise be in operation?

   _____ hours/days

4. How many days in a week will the enterprise be in operation?

   _____ days/weeks

5. How many weeks in a year will the enterprise be in operation?

   _____ weeks/years

C. Production Inputs

1. Raw Material Requirements (Enter inofrmation in Chart I)

   (a) What are all the raw materials required to complete one production cycle?

   (b) In what amounts will the raw materials be obtained?

   (c) How many units can be produced from the raw materials obtained?

D. **Number of Production Cycles**

1. Per Day
2. Per Week
3. Per Month
4. Per Year

E. **Labor Requirements**

1. How many people does it take to produce the product?
2. How long does it take them to complete one production?
3. How many people will be employed?

   _____ full time

   _____ part time

   _____ casual

4. Given the production facility, is there a limit to the number of people that can be employed? _____

   If so, which is the maximum number of employees? _____

AIII - PRODUCTION CAPACITY

Summary Worksheet

Product _____

By-products _____

_____

_____

A. PER PRODUCTION CYCLE:

1. How long does it take to complete one production cycle?

   _____ hours/days/week

2. What is the quantity produced per production cycle:

   Product:

   By-products:

B. RAW MATERIAL CONSIDERATIONS:

1. Are there any raw material constraints in terms of supply? If so, what are they?

2. What raw materials are available:

   Local _____

   Domestic _____

   Imported _____

C. ANNUAL/MONTHLY CAPACITY ESTIMATES:

1. How many hours a day will the enterprise operate? _____

2. How many days a week? _____

3. How many weeks per month? _____

4. How many months per year? _____

AIII - PRODUCTION CAPACITY

Chart I - Raw Materials Required

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

AIII - PRODUCTION CAPACITY

Chart II - Raw Material Per Production Cycle

RAW MATERIAL	Step Requiring Raw Material	Quantity Required per Step	Units of Production Required

AIII - PRODUCTION CAPACITY

Chart III - Labor and Overall Time Estimated Per Cycle

LABOR AND OVERALL TIME ESTIMATES FOR 1 PRODUCTION CYCLE

Product: _____

By-products: _____

_____

_____

STEP (Description)	Estimated time per step	No. of people required	Hours per person	Total hrs. per person

ATTACHMENT B - COSTS

BI - CAPITAL COSTS

BI(a) - Equipment List

The Equipment List includes those items (such as tools, vehicles, etc.), which are less durable, and have a useful life of 5 years or less.

Type	No. Required	Cost/Unit	Total Cost	Where Purchased

BI(b) - Machinery List

This list is for the heavier, more durable machinery (such as presses, mixers, lathes, etc.) with a useful life of 10 years or more.

Type	No. Required	Cost/Unit	Total Cost	Where Purchased

BI - CAPITAL COSTS

BI(c) - Capacity/Characteristics

This list should include the capacity and characteristics of the equipment and machinery listed in BI(a) and BI(b).

Type	Producer's Estimated Capacity	Characteristics*

*To include name of manufacturer, model and year, where produced.

BI - CAPITAL COSTS

Summary Worksheet

On this worksheet, you will record actual or estimated costs required to purchase land, construct the production facility, purchase equipment and machinery, and other costs directly related to the above.

A. Land, Buildings

1. Land Purchase _____

2. Building Construction

a) Raw Materials _____

b) Labor _____

Total _____

B. Equipment, Machinery

1. Equipment (enter totals from B-I(a))

_____

2. Machinery (enter totals from B-I(b))

_____

Total _____

C. Other

1. Delivery Charges _____

2. _____

3. _____

Total _____

Grand Total _____

BII - FIXED COSTS

Summary Worksheet

On this sheet, you will record all fixed costs calculated on a monthly basis. If the enterprise operates on a different basis, stipulate the time period used (i.e., daily, weekly) and then extrapolate to reach monthly figures. (Fixed costs cannot be completed until the total capital requirements are calculated in section CI.)

1. Depreciation

   (a) Equipment: Monthly depreciation change =

   total from B-I(a) ÷ 5 years ÷ 12 months _____

   (b) Machinery: Monthly depreciation change =

   total from B-I(b) ÷ 10 years ÷ 12 months _____

   Total Monthly Depreciation _____

2. Maintenance and Repair: (project holders estimates or monthly depreciation charge ÷ 2)

   (a) Equipment: _____

   (b) Machinery: _____

   Total Monthly Maintenance and Repair _____

3. Rentals

   (a) Equipment _____

   (b) Buildings _____

   (c) Other _____

   Total Monthly Rentals _____

4. Salaries

(a) Manager/Owner _____

(b) Clerical Staff _____

(c) Direct Labor _____

(d) Taxes and Benefits _____

Total Monthly Salaries _____

5. Other

(a) Transportation _____

(b) Supplies _____

(c) Utilities (electricity, fuel, etc.) _____

(d) License Fees _____

Total Other _____

Total Monthly Fixed Costs without financing costs _____

6. Financing Costs (To be Completed After Capital Requirements Section)

7. Total Monthly Fixed Costs with financing costs _____

BIII - VARIABLE COSTS

BIII(a) - Raw Material/Bulk

List all materials needed for production, along with the bulk quantities and bulk cost paid for them.

RAW MATERIAL	BULK QUANTITY PURCHASED	BULK PRICE

BIII - VARIABLE COSTS

BIII(b) - Raw Material/Cycle

Use this worksheet to calculate raw material costs per one production cycle.

Production Cycle: Daily/Weekly/Monthly _____

Number of Units Produced per Cycle _____

Production Cycles per Month _____

Raw Material Required per Production Cycle

	A Type of Raw Material	B Est. Requirement per Production Cycle	C Bulk Price from B-III(a)	D Cost (B x C)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

Total Cost of Raw Materials per One Production Cycle _____

BIII - VARIABLE COSTS

BIII(c) - Labor

Production Cycle: Daily/Weekly/Monthly _____

Number of Units Produced per Cycle _____

Production Cycles per Month _____

Labor Requirement per Production Cycle:

(If you are satisfied with the information in AIII, you may skip the detail and go to the bottom of the page.)

Production Step	Type of Labor	Man Days/Hours

Total Labor per Production Cycle _____

What is estimated labor wage paid per days or hours _____

BIII - VARIABLE COSTS

BIII(d) - Other Costs

The following types of costs should also be estimated in terms of production cycles:

Fuel: Do they use wood/oil/kerosene/gasoline/coal, etc.? How much per production cycle?

Transportation: Do they pay a fee for bringing in Raw Materials or fuel? Do they have to pay to transport their finished goods?

Commission: Do they have to pay a commission to whoever sells their product?

Per Production Cycle

TYPE	AMOUNT

Total Other Variable Costs per Production Cycle: _____

BIII - VARIABLE COSTS

Summary Worksheet

1. How long is the production cycle? _____

2. How much can be produced in one production cycle? _____

3. How many production cycles/month? _____

4. What are the variable costs/production cycle? _____

   (a) Raw Material
   (Enter from B-III(b)) _____

   (b) Labor
   (Enter from B-III(c)) _____

   (c) Other
   (Enter from B-III(d)) _____

   (d) Total _____

5. What are the total variable costs/month?

Total Costs per Production Cycle		No. of Production Cycles/mth.		Total Monthly Variable Costs
_____	X	_____	=	_____

---

*The data collection worksheets in this section will accomplish two tasks:
- Determine the estimated variable costs with the project producing at full capacity.
- Determine the variable costs per unit of production or unit costs.

Our objective is to calculate monthly estimates of variable costs. The worksheets include a provision to calculate monthly costs based on the production cycle.

BIV - UNIT COST

1. Cost of Raw Material for one Production Cycle _____
2. Cost of Labor for one Production Cycle _____
3. Other Cost - for one Production Cycle _____

Total Costs per Production Cycle _____

Number of Units per Production Cycle _____

Total Cost per Production Cycle		Number of Units per Production Cycle		Unit Cost
_____	÷	_____	=	_____

BV - START-UP COSTS

List one-time expenses related to putting the project on line.

(Legal, engineering, feasibility studies, etc.)

	TYPE	COST
A.		
B.		
C.		
D.		
E.		
F.		

TOTAL: _____

ATTACHMENT C - TOTAL CAPITAL REQUIREMENTS AND FINANCING COSTS

CI - Total Capital Requirements and Financing Costs

CI - TOTAL CAPITAL REQUIREMENTS AND FINANCING COSTS

CI(a) - Working Capital Provision (3 months)

1. Total Monthly Fixed Costs (Section BII) _____

2. Total Monthly Variable Costs (Section BIII) _____

3. Total Monthly Variable & Fixed Costs (Line 1 + Line 2) _____

4. Working Capital Provision:

Total Monthly Variable and Fixed Costs (Line 3)		3 Months		Working Capital Provision
_____	X	_____	=	_____

CI - TOTAL CAPITAL REQUIREMENTS AND FINANCING COSTS

CI(b) - Conversion Factors for Calculating Financing Costs

For the sake of analysis, a list of conversion factors is provided below for different interest rates for one type of financing:

Term:	5 years
Grace Period:	3 months
Repayments:	Equal monthly installments

To obtain monthly amount for financing costs, multiply net capital requirements (Line 7 of CI-Summary Worksheet) by the conversion factor for the interest rate prevalent in the location in question. To simplify the analysis, the conversion factor yields equal monthly payments (installment loan).

EXAMPLE:

A project in Mauritania has total capital requirements of 150,000. The project will raise 50,000 locally and needs 100,000 from an outside source. In this example, a monthly financing cost is estimated based on 10%--the prevalent interest rate in Mauritania.

Capital Requirements	X	Conversion Factor	=	Monthly Payment
100,000	X	.022111	=	2,211

Conversion Factors

Annual Interest Rate	Conversion Factor
10%	.022111
15%	.025570
20%	.028701
25%	.032061
30%	.035647
35%	.039458
40%	.043488
45%	.047734
50%	.052182

CI - TOTAL CAPITAL REQUIREMENTS AND FINANCING COSTS

Summary Worksheet

1. Capital Costs (See BI) _____

2. Start-Up Costs (See BV) _____

3. Working Capital (See CI(a)) _____

4. Total Capital Requirements (Line 1 + Line 2 + Line 3) _____

5. Capital Provided by Project _____

6. Net Capital Requirement (Line 4 - Line 5) _____

7. Monthly Financing Costs:

Net Capital Requirement		Conversion Factor		Financing Costs Monthly*
_____	X	_____	=	_____

* This total should then be transferred to BII - Fixed Costs.

ATTACHMENT D - PRICE

DI - PRICE

Product or Products: (1)

(2)

(3)

1. What price do you expect for your product?

	(1)	(2)	(3)
Single item	_____	_____	_____
Quantity (specify)	_____	_____	_____

2. Do you intend to sell with credit terms?

3. How long (30/60/90 days)? _____

4. What percentage of production? _____

5. How did you estimate this price?

_____

_____

_____

_____

_____

_____

6. Other observations:

_____

_____

_____

_____

_____

DII - DISTRIBUTION/MARKETING

1. Who will be the final buyers of your product (excluding middlemen)?

   _____

   _____

2. What do you estimate their average monthly income to be?

   _____

3. Where are they located?

   _____

4. If not in the immediate vicinity, how far?

   _____

   (a) How will you get these goods to the market?

   _____

   _____

5. How much of your production will you sell directly?

   _____

6. Will you depend on traditional middlemen to sell your product?

   _____

   (a) How much of your production will you sell this way?

   _____

   (b) At what price? _____

7. Try to get an idea of the role of the middleman in the area:

   How many are there, roughly? _____

   Do they provide loans and at what rate? _____

   Do they have stores in the area? _____

DIII - ESTIMATING PRICE USING PRODUCTION COSTS

1. Data Needed:

   (a) Monthly fixed costs: _____

   (b) Variable cost per unit: _____

   (c) Units produced monthly at full capacity: _____

2. Formula

   Price = [Fixed costs + 50% of full capacity] + variable cost/unit

   P = [FC + 50% full capacity] + V.C.U.

ATTACHMENT E - BREAK-EVEN ANALYSIS

EI - SUMMARY OF BREAK-EVEN FORMULAS

The break-even point will be referred to as "breakeven" in this attachment.

1. P - V.C.U. = G.M.

   Price - Variable Cost per Unit = Gross Margin

2. $\frac{\text{F.C.}}{\text{G.M.}}$ = B/E Units

   $\frac{\text{Fixed Costs}}{\text{Gross Margin}}$ = Number of Units Needed to Breakeven

3. $\frac{\text{B/E Units}}{\text{Full Capacity}}$ = B/E%

   $\frac{\text{Number of Units to Breakeven}}{\text{Full Capacity}}$ = Percentage of Production Capacity needed to Breakeven

4. Units Produced - B/E Units X G.M. = Profit

   Number of Units Produced - B/E Units X Gross Margin = Profit

EII - BREAK-EVEN ANALYSIS

1. Data Needed:

   Price _____

   Variable Cost per Unit _____

   Fixed Costs _____

   Full Capacity _____

2. Calculations: Breakeven

   (a) P - V.C.U. = G.M.

   ____ - _____ = ____

   (b) $\frac{\text{F.C.}}{\text{G.M.}}$ = B/E Units

   F.C. ÷ G.M. = B/E Units

   ____ ÷ ____ = _____

   (c) $\frac{\text{B/E Units}}{\text{Full Capacity}}$ = B/E%

   B/E Units ÷ Full Capacity = B/E%

   _____ ÷ _____ = ____

3. Calculations: Profitability

   [Units Produced] - [B/E Units] X [G.M.] = Profit

   (a) [40% of Capacity] - [B/E Units] X [G.M.] = Profit

   _____ - _____ X _____ = _____

   (b) [50% of Capacity] - [B/E Units] X [G.M.] = Profit

   _____ - _____ X _____ = _____

   (c) [60% of Capacity] - [B/E Units] X [G.M.] = Profit

   _____ - _____ X _____ = _____

   (d) [% of Capacity] - [B/E Units] X [G.M.] = Profit

   _____ - _____ X _____ = _____

ATTACHMENT F - CASH FLOW FORMAT

CASH FLOW FORMAT

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	5th Quarter	6th Quarter	7th Quarter	8th Quarter	Total Year 2
A: Outflows									
1. Capital Costs									
2. Start-up Costs									
3. Variable Costs									
4. Fixed Costs									
TOTAL									
B: Inflows									
1. Sales									
2. Other									
TOTAL									
C: Cash Flow									
1. Net (InFlow-Outflow)									
2. Cumulative									
D: Grants									
Loans									
E: Hypothetical Financing Cost									
F: Net Cash Flow-Hypothetical Financing Cost									
G: Production Capacity									

3B. INTEGRATING WOMEN BORROWERS INTO CREDIT PROGRAMS

Paola Lang, Nathan Associates Inc.

Introduction

Recognition of the contribution of women to the development process and overall production has grown rapidly in the past decade. In addition to the increasing visibility of women in the labor force and as heads of households, economists, policy analysts, and program implementors have noted the high level of participation of women in small-scale activities within the informal sector.

The tendency of women to generate jobs for themselves within the informal sector is explained by two sets of factors. First, paid employment opportunities for women in the formal economy tend to be marginal jobs with low wages, little chance for advancement, few or no fringe benefits, and poor and inflexible working conditions. Second, self-generated jobs within the informal economy can be tailored to meet individual abilities and needs, and they permit rapid changes in activities and hours, according to market conditions, availability of inputs, and demands on productive time.

Studies of informal sector activities confirm the dual role assumed by women entrepreneurs, as homemakers and providers trying to raise overall household production levels, as well as homemakers and mothers trying to satisfy the consumption requirements of the family. The studies indicate little separation for women entrepreneurs between business maintenance (a production function) and household maintenance (a consumption function). They also show a concentration of women in garment-making, food production, the sale of perishable foods, and other occupations that are extensions of women's domestic role in the household.

This link between production and consumption as focused on the household is the most important characteristic of women entrepreneurs. Other characteristics include low literacy rates, limited access to the factors of production, and little spare time to upgrade skills or learn new ones.

These characteristics have important implications for credit programs. Just as it was found that interventions in the informal sector should be based on characteristics (i.e., type and size) of the subsectoral activity, credit programs must address ability and willingness of women to apply for credit. This section seeks to highlight potential constraints on women's participation in credit programs and to offer some insights into how these constraints might be overcome.

The Informal Sector and Women Entrepreneurs

The informal sector is considered to be the segment of the economy that operates outside of the legal and regulatory framework established by public sector policy makers. As a result, the informal sector permits the evolution of loosely structured businesses that bypass many of the expensive and time-consuming licensing requirements of the formal sector.

For women, the informal sector also presents other advantages. Home- and marketplace-oriented production and selling skills can be transferred to a new enterprise, thereby overcoming the lack of education and vocational skills demanded by jobs in the formal sector. Work sites in the home or on the street can ease the balancing of household maintenance and income-earning responsibilities, as well as surmount general overhead and initial capitalization costs.

Women's enterprises tend to cluster in retail services with accessible sales markets and supplies of basic inputs, simple technology, and low potential for economies of scale. Enterprises in manufacturing and other subsectors in industry are less appealing to women because, though such ventures tend to earn higher returns, they also carry higher risks and start-up costs, owing primarily to competition from existing, relatively large-scale, capital-intensive units.

Women starting enterprises generally rely on traditional economic activities: street vending in a fixed location, itinerant street hawking, beer brewing, baking, and other forms of elementary food processing and selling that usually result in marginal increases in real income. Success in these activities sometimes leads to their expansion or to the initiation of other economic activities requiring higher levels of capital, more sophisticated technologies, and stronger management and marketing skills. Examples include high-volume trading and other businesses requiring a fixed location and more than one or two employees. Such business ventures may result in substantial increases in real income.

The majority of women-owned enterprises, however, fall into the lowest income category. Women are restricted to the smallest and simplest

entrepreneurial activities because of limited access to the factors of production—an access that changes only marginally when entrepreneurial activities are tied to the need for additional income within the household. Frequently, too, poverty reinforces traditional social and economic mores that prevent women from gaining control over productive resources and from developing enterprises with strong cash flow and income levels. As a result, many female entrepreneurs are more concerned with subsistence than enterprise growth issues.

The implications for credit programs seeking to integrate women borrowers among their clients are as follows:

- Women fare poorly compared with men in acquiring education, commercial work skills, and other attainments generally regarded as prerequisites for successful entry into business ventures. Also, they often do not have formal control over material assets that can be capitalized for business start-ups or expansions. As a result, they own and operate the smallest businesses, often one-person enterprises, with small credit needs and uneven income streams. Credit programs must be willing to lend in small amounts and to develop a repayment option for small, frequent payments.

- Women tend to balance income generating and home activities, leaving very little leisure time for completing lengthy loan applications and training courses. Credit programs must be willing to tailor their content to minimize the opportunity costs of women interested in obtaining loans.

- Married women are sometimes denied the legal right to hold property in their own name and often lose their inheritance of property to men because of ignorance. Credit programs must be willing to accept other forms of collateral or to develop surrogates for land titles.

- Women are often illiterate, especially in rural areas. Credit programs must move away from application procedures with extensive written responses.

Mechanisms for Integrating Women into Credit Programs

A flexible approach to credit delivery has been tried by a number of credit programs—from those targeting only women borrowers, to those focused on the participants of a particular subsector or trade, to those concerned with the inability of the smallest and often most needy entrepreneurs to obtain credit from formal sources.

Policies and procedures promoting credit delivery to women can be developed without sacrificing basic credit principles and a strong management stance. Examples include

Informal Communication Channels

Informal communication channels for promotion of program services can be used to take advantage of the informal contacts through which most women obtain information.

Tying the local female figure of authority, such as the village or community midwife, into the program's communication network is an effective way of introducing women to the array of services offered by a program. Such figures have contact with a wide female audience and routinely advise members of their audience on important matters.

Another means of informal advertisement is using female loan officers and extension agents to encourage both formal and informal interaction between program staff and women, since women often find it easier to communicate with other women. Sometimes, however, working conditions (such as using mopeds to travel from office to office) or cultural overtones effectively prevent employing female staff members to this end. The use of male extension agents and loan officers may be made more effective by sending them to the marketplace where women are used to gathering market intelligence and initiating business transactions.

Simplified Application Forms

Simple application forms supplemented by interviews can reduce the reluctance of women to approach the institution for assistance.

Keeping application forms short and relying on community-based referrals or interviews to complement the forms enables credit programs to render the application process less formidable and more personalized, and to encourage women to participate in organizational activities frequently perceived as being exclusively male.

Group Support

Promoting group formation among borrowers, collectively and individually responsible for loan repayment, can obviate the need for collateral and guarantees.

By assessing group attitudes to determine creditworthiness, credit programs bypass the difficult and time consuming traditional loan analysis based on financial statements and the ability to provide collateral. In this system, an individual's reputation in the community—and not financial statements or title to houses, land, and other property (all of which rarely exist)—becomes the basis for admission into groups of women from the community; the groups are then responsible to the program for loan repayment, with peer pressure minimizing the risk of default. Such groups operate best if self-initiated from within the same trade or activity because they have common problems, objectives, and loan purpose. Other mechanisms for encouraging loan repayment are tying access to future credit to prompt repayment and tying loans to a minimum savings requirement.

Decentralized Services

Favoring decentralized loan extension services or few mandatory home office visits can minimize the amount of time female borrowers must spend away from their households.

A decentralized credit program, with program staff setting up (part-time) offices near women's businesses or homes, or even using mobile vans to visit set locations on a regular basis, can cut down the loan transaction time for female borrowers. Decentralization is also an effective way to overcome cultural constraints, especially strong in Asia, against women circulating beyond their home village or community.

Specialized Loans

Loan types should be developed that account for the specialized needs of women in commerce (especially retail services).

Credit programs can respond to the short-term, generally low-volume credit needs of women in commerce activities (where they tend to predominate) by allowing access to both working capital and fixed capital loans. Simultaneously, incentives have to be developed to encourage women in commerce to move into new, possibly more productive areas.

Training in Business Procedures

Standard training in accounting and business management before loan disbursement and in conjunction with the loan disbursement-repayment

process can increase the self-confidence of women with respect to business matters.

Not all credit programs feel the need to offer more than credit (generally known as the minimal credit approach). If a program considers offering more than credit (i.e., training), then the training should be packaged in a manner that complements the loan application and repayment cycle, and increases the ability of women borrowers to ascertain market forces, move out of low-paying activities, and increase access to supply and sale markets. Care should be taken, however, that such training be offered at times that do not interfere with the schedules imposed by household maintenance tasks. Care must also be taken to tailor the training to a group of generally illiterate borrowers, and to develop training modules that seek to overcome the doubts of women trying to penetrate markets typically operated by people more literate than themselves.

Rarely are all of the policies and procedures mentioned above integrated into one program. A variety of country-specific factors—such as cultural and societal norms, institutional and regulatory requirements, and economic developments—can affect program parameters and render implementation of such polices and procedures difficult. It is important, however, to explore the degree to which women can be encouraged to participate in credit programs and to eliminate program elements inherently biased against women, sometimes unknowingly.

The best time to consider integrating women in credit programs is at the program's inception. Good programs can and should be refined over time to remain responsive to changes in the economy and the overall social and political environment, but major modifications in program design are difficult to implement mid-stream because they usually demand organizational, as distinguished from operational and procedural, changes.

Women and Credit: Institutional Considerations

Organizational Purpose

The credit management training package suggests that credit programs ascertain their organizational purpose because this has a notable impact on program content and client selection. Credit programs generally fall into one of two broad categories: those interested in community development and those that seek to foster economic development.

Programs concerned primarily with community development, poverty alleviation, and income generation tend to promote educational services (including financial management and production skills), community services

(including group administration), and other services of concern to all community members, both men and women. Such programs use promotion and extension techniques that touch on a number of cultural and social sensitivities. They almost automatically target the illiterate, those with low skill levels, vulnerable households, and other groups where women have been found to predominate.

On the other hand, programs focused on economic development tend to emphasize economic benefits and try to increase the material well-being of the community. Promotion and extension efforts are apt to focus on productive activities with high rates of return. Unless special criteria are established for client selection with respect to sex and subsectoral activity, most clients (if not all clients of such programs) are likely to be men.

One way of encouraging women's participation in programs run by commercially- or economically-oriented institutions consists of placing women in key professional positions within the organization, especially in central decision-making positions affecting the scope and type of organizational activities pursued and in extension-level positions affecting the nature of the organization's transactions at the community level. The goals of these programs need not be gender-specific, but the delivery and outreach components of the program must take into account the characteristics of women entrepreneurs so that they are encouraged to participate.

Organizational Procedures

Credit programs must also be careful not to limit the scope of women's participation by modeling themselves too closely on the credit operations of formal financial institutions. A critical barrier is overreliance on standard operating policies and procedures that emphasize lengthy, written loan applications; material resources, such as buildings and land, as collateral or security for loan repayment; and long intervals between loan application and funds disbursements. Many women simply cannot comply with the requirements for literacy, capital, and time inherent in such rigid credit operations.

Another barrier to women's participation in credit programs is limiting employment of loan funds to a select number of activities or type of borrower. Narrow definitions of eligible activities and borrowers tend to focus on business ventures immediately perceived as being highly remunerative, such as large-scale manufacturing units where there are very few women, or on loan uses expected to have high returns, such as construction, acquisition of capital goods, major infusions of working capital, and other large-scale credit needs often beyond the scope of women.

Generally speaking, while services may be limited by credit programs to a narrow range, clients should not be. The best way to prevent biases

against women from creeping into the operations of credit programs is to assess the market; target a community, sector, or subsector for operations; and develop illustrative client profiles prior to program start-up.

The best credit programs (the most successful in terms of impact) are those that study the environment in which they will work before actually initiating credit operations. The focus of such studies are twofold: to better understand (1) the players and (2) the economic elements of the environment. The players cover the gamut from public and private institutions, political authorities, buyers, sellers, producers, and any other entity or group which may have a direct or indirect impact on, or role, in the targeted community, sector, or subsector. The economic elements cover market structure and dynamics. By studying the environment in this manner, the best credit programs ascertain the composition of their potential client base, the role of the client base within the local economy, the immediate needs of the client base, and the best ways to help the client base overcome constraints to production. If women represent a significant percentage of the activity in the trade, sector, or subsector targeted by the credit program, then these programs tailor their interventions and outreach efforts to meet the needs of the client base, taking care to develop procedures that respond to the particular requirements of women.

Examples of Specific Institutional Credit Delivery Systems

As mentioned earlier, institutions vary in the degree to which they tailor their credit programs to women. The first three institutions mentioned below have targeted either the smallest businesses or women, and women consequently represent a majority of their borrowers. The last institution highlighted below never consciously targeted women, and gradually even oriented its credit toward large manufacturing enterprises. Despite the focus on units with higher potential for income and employment generation, this institution continued to serve women according to the proportion they represent within the manufacturing subsector.

Grameen Bank

The Grameen Bank, founded in 1976, provides loans to the landless poor in rural areas of Bangladesh. Loans are disbursed only to self-initiated groups of five, and only after attendance at a week-long course tailored more to ensure an understanding of the loan repayment process than to upgrade business skills. Loan amounts have a ceiling of no more than $50 per person. Repayment rates are high, approximately 94 percent. Bank operations are decentralized, with branch staff members living near the branch.

Grameen Bank targets very poor borrowers, and 70 percent of its borrowers are women—many of whom never engaged in income-generating activities prior to the loan. For various reasons, it has recruited almost exclusively women borrowers in recent years because of good repayment experience and explicit preference. Many design features contribute to the success of the Grameen Bank in reaching women: group formation overcoming the need for collateral; female staff members as much or possibly more than men conveying programmatic information both formally and informally; and standard, simple training increasing the self-confidence of women. In addition, Grameen Bank has an explicit policy that at least half of its loans are to be for women.

PROGRESO

PROGRESO, a credit program started in 1982 by Accion Comunitaria del Peru, operates in the barrios on the outskirts of Lima. PROGRESO serves the microenterprise sector and has delineated two client groups within the sector: manufacturing- and service-oriented microentrepreneurs with an established place of work, and itinerant street and market vendors with changing work locations. Initially, PROGRESO employed different loan procedures for each group. In the case of microentrepreneurs with businesses at least 2 years old, individual loans were made subsequent to interviews and an on-site visit by a PROGRESO staff member. With respect to market and street vendors, loans were made to self-selected groups of five to eight people (solidarity groups) collectively responsible for loan repayment.

In 1985, the solidarity group methodology was tested among microentrepreneurs because of its inherent cost-effectiveness and potential for facilitating PROGRESO's outreach. The success of the tests encouraged PROGRESO to reorganize its program around solidarity groups. By 1986, only 29 borrowers received individual loans. The loan repayment rate for all borrowers averaged 97 percent.

Women account for 50 percent of the microentrepreneurs and 80 percent of itinerant workers assisted. PROGRESO has been able to maintain high levels of women participants by situating PROGRESO offices in the barrios; imposing no collateral requirements (a co-signer guarantees repayment when microentrepreneurs default, and the solidarity group insures repayment among market vendors); requiring few office visits (a total of three preloan, and monthly postloan visits); offering small initial loans with automatic borrowing privileges for slightly larger loans after the first one is repaid; and extending training in bookkeeping and business management throughout the loan disbursement-repayment process.

OEF Intr ational

The Overseas Education Fund International (OEF), a U.S.-based private voluntary organization initially formed under the auspices of the U.S. League of Women Voters, implements credit programs for women worldwide, with a preponderance of programs in Central America and West Africa. In each country, OEF works in partnership with indigenous public and private sector organizations with well-established histories of serving women, a strong presence in rural areas, and well-developed but decentralized operations. By linking itself to existing networks, OEF bypasses high start-up costs and entry barriers and is able to concentrate on strengthening the outreach capacity of its affiliates. OEF's efforts include training male agents (promoters) to work with women; tying external public and private extension services to those provided by the organization through collaborative contracts; and developing revolving loans structures and credit guarantee schemes to allow women access to formal sector funds.

OEF favors the extension of credit in conjunction with training and technical assistance designed to help rural women transform traditional subsistence activities into productive business operations. OEF's credit program consists of three distinct elements: women approaching OEF with business concepts; OEF teaching these women the mechanics of undertaking feasibility studies, complete with market analysis, to ascertain the viability of the business concept; and credit in a variety of forms depending on the results of the feasibility studies.

Most of OEF's services are demand-driven. OEF developed its ongoing credit program 7 years ago based on repeated requests by women seeking to strengthen their economic roles with respect to income generation and family welfare. OEF is currently considering the integration of child care into the credit program as a means of overcoming the obstacles it poses to expanding entrepreneurial activities.

Asociacion Para el Desarrollo de Microempressa, Inc.

Asociacion Para el Desarrollo de Microempressa, Inc. (ADEMI), a private nonprofit organization established in 1983 with financing from local Dominican leaders and technical assistance from ACCION/AITEC, has three objectives to its credit program: (1) to increase the income stream of microentrepreneurs, (2) to create new employment, and (3) to strengthen the viability of jobs within the informal sector. ADEMI's original credit program had two components, one for microentrepreneurs with fixed assets and business histories providing sufficient information for credit analysis, and one for itinerant vendors and the like who would band together in groups of five to eight members to ensure loan repayment. In 1984, to better focus on program objectives, and given the presence of several other credit programs

serving the smallest enterprises through group mechanisms, ADEMI began to phase-out service to groups, 43 percent of which were composed of women. By 1987, all services were targeted to individual microentrepreneurs. Throughout this transition, ADEMI was able to sustain a growing number of women clients within the microentrepreneur class, from 14 percent in 1984, to 28 percent from 1985 to 1987, to 36 percent in 1988. The reasons for this are ingrained in ADEMI's operating procedures: the initial loan size is small, averaging $25 to $50; initial loan terms are flexible, generally from 2 to 3 months; the initial loan is restricted to working capital; and technical assistance is not a loan requirement.

This success was achieved despite the fact that all field workers are male, a conscious decision made because of the rough slum areas in which ADEMI operates.

4. SUPPLEMENTARY TEXTS FOR CREDIT MANAGEMENT COURSE

4A. FINANCIAL APPRAISAL

Hugh Allen

The purpose of a financial appraisal is to answer the question: "Should this business be started or not?," and the means of making this decision is to find out if, given a market survey, a raw material survey, a technical survey, and knowledge of available personnel, it will make or lose money. It is not possible to carry out this analysis until the previous questions have been answered, as all of these factors will affect the financial costs of the business.

Two methods of financial appraisal are used in this paper: the first for larger projects (in excess of K. Shs** 10,000) and the second for smaller projects below this limit. The reasons for this are as follows.

In large projects various ratios are used to determine the viability of the business. For example, a simple rate of return tells an investor what percentage return he will get on his capital over a year. He can compare this with what he will get from other investments, such as a savings account, and make a decision as to whether or not to go ahead by choosing arithmetically between a range of options.

A small project, however, is different, usually because the investor is different. A small investor will be looking to make a living from the activity. He is not usually looking at financial investments or at getting his money to work for him in activities he does not control, so what matters to him is how much profit income he can get that will enable him to live day by day. What matters here is how much he will get per period of labor, and we look therefore at how much his earnings will be for every hour of labor he puts into the business. This will enable him to decide if he can get more money from the business than, say, from agricultural laboring.

In other words, these two approaches to financial analysis are determined in the main by how the investor looks at the business: as a pure financial investment, or as an alternative to other forms of employment. Very often, for example, a small investor breeding rabbits might make a 200% return on his capital every year, which would be a wonderful rate of return for conventional investors in large businesses (25% is considered very good in these cases). But if his original investment was K. Shs 200, this would only mean a total income of K. Shs 600 per year, and laboring would bring him more income.

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* Source: Excerpted from "How To Do a Simple Commercial Appraisal," Seminar Paper for CARE, Kenya (November 1986). Written by Hugh Allen, Regional Technical Advisor, East Africa Region, Small Enterprise Development Sector. Used with permission.

** Kenyan shillings

In this section we will be looking at two sample appraisals, one for a large business, and one for a small business. The example of a posho mill is undertaken for the large business, and is appraised using conventional financial analysis. The example of jiko making is used to illustrate the appraisal methods for very small (or micro) businesses.

CONVENTIONAL FINANCIAL ANALYSIS

The financial analysis performed for a business over K. Shs 10,000 investment is the type of analysis described in numerous conventional texts on feasibility studies. This conventional analysis is discussed first, as a number of the ideas are critical for understanding financial analysis of micro business as well. It is important, however, not to look at financial analysis as a Bible, or as an inflexible guide to decide whether or not to go ahead with an investment. Very often, if the results of analysis show that a business will make a loss, examination of the figures will show you what accounts for the losses, and provides you with the chance to re-design the project, perhaps changing the scale, or the amount of investment in non-productive things. In other words, it helps you to truly analyze a project and find out its strengths and weaknesses so that you have the chance to do something about them on paper before the first brick is laid. It is useless if you just look at it as a magic guide to profit or loss.

For the larger rural industry a standard financial appraisal should contain the following information:

Data:

a. Production capacity
b. Capital and start-up costs
c. Fixed costs
d. Variable costs per production cycle
e. Total capital requirements (including working capital)
f. Selling price

Key Financial Indicators:

a. Net profit
b. Simple rate of return on investment
c. Break-even point
d. Payback period

The data is information that must be both gathered and, once having been gathered, used to come up with raw financial numbers. By themselves they do not help you arrive at a decision, except perhaps in the case where it is immediately apparent that the capital required is beyond the means of the investor. The key financial indicators help you to decide if the investment is good or bad when compared with other activities.

What then do each of these things mean?

Data

Production Capacity

Production capacity refers to the AMOUNT of goods or services that can be made or deployed in a given period of time. For example, a posho mill will have an approximate ability to grind 200 Kgs of maize per hour. In an average 8-hour working day, it can grind 200 x 8 = 1,600 Kgs of maize IF IT IS WORKING NON-STOP. It has a capacity of 1,600 Kgs of maize per day, but we know that very often it is stopped, waiting for customers. We therefore have to estimate, in making a commercial appraisal, how many hours it normally works, including down-time for maintenance, and allowing for seasonal variations in demand. It is realistic in most cases to expect that such a machine will operate for about 4 hours per day, or at 50% of capacity.

The period of time that is used to make a product is called a production cycle or, if we are in the business of retailing or service industry, we can call it a sales cycle. We can select whatever period of time we please to define this cycle, but it will vary from activity to activity. In the case of a posho mill, a convenient production cycle time will be an hour or a day; in the case of a farm, it will be at least six months, but more commonly a year. The production cycle time selected in financial analysis is that period of time which covers at least the entire process from start to finish, but which makes for mathematical convenience in the calculations. Usually these are days, weeks, months, and years. It is useful to remember that there are on average 8 working hours in a day, 5 working days in a week, and 4.33 working weeks in the average month. This works out at approximately 22 working days in a month, and the case studies use these figures. In cases where these do not apply do not forget to make appropriate adjustments.

Capital and Start-up Costs

Capital costs refer usually to the items of equipment, buildings, tools, and furniture that must be bought in order to get into production. It may be the case that the building for our posho mill costs K. Shs 25,000, and the machine costs K. Shs 103,000, while tools cost an additional K. Shs 3,000. These are known as the FIXED ASSETS, not because they are bolted down, but because they are permanently present in the factory site and are not consumed in production. A car which is used in a project is still part of fixed assets. Start-up costs refer to such things as legal fees and technical assistance fees which are a one-time cost--never required again in the life of the business. Because they are paid for, they are part of the value of the project.

Fixed Costs

Fixed costs are those costs, usually recorded monthly, which must be paid regardless of whether or not there is any production or sales going on. Examples of fixed costs are: depreciation of machinery and buildings, repairs, rent, the cost of salaried office staff and supervisory labor (usually called indirect labor because they do not get involved in production, supplies (toilet paper, stationary, etc.), licence fees, telephone, etc.

Variable Costs

Variable costs are those costs which change strictly according to the amount of production. Examples of these costs are, of course, raw materials, which vary according to the amount of goods produced, labor used in production (you will hire more labor to make more, and let it go when there is no demand for the product), energy such as fuel oil used in production, transport of raw materials or of goods to market, and water and electricity.

Total Capital Requirements

Total capital requirements are different from capital and start-up costs. Total capital requirements INCLUDE capital and start-up costs, but in addition they include working capital. Working capital is the money that you need to run the factory or shop or office until such time as sales begin and cover the costs. For example, if you install a posho mill, you will need to have a few drums of fuel on hand so that you can grind the first customers' maize, but usually the working capital requirement will be very low in this case. If on the other hand you are running a farm, it could be up to six months before you get a single shilling for sales. In this case you will need extra money to pay for labor, seeds, fuel, fertilizers, and pesticides. The money you use for this purpose is working capital, because it keeps you working before there is any income.

Product Selling Price

Product selling price is the price that you intend to sell the goods for. This is usually arrived at by taking the price that is common among your competitors, or perhaps a bit lower to help in getting a market. It is included in the analysis to work out the total amount of projected income. In the case of a new product, however, you will have to guess what you have to sell the product for, and the analysis can often be used to work out what price you must sell at in order to cover your costs and also to make a profit. If the analysis shows that you have to sell at a higher price than your competitors in order to stay in business, this tells you that the project is either badly designed or is not viable.

Key Financial Indicators

Net Profit

The net profit of a company is the amount of money that is left over after ALL costs (fixed and variable) have been deducted and tax has been paid. Where the goal of the investor is to achieve maximum income, net profit is the measure to use in comparing alternative investments.

Simple Rate of Return on Investment

This is the second most important measure of viability. It is the ratio of annual net profits to business investment. ROI is a very popular financial indicator that is used to decide whether or not to invest. Since alternative forms of investment such as bank deposits are known to generate a rate of return of about 6%, the investor can compare the rate of return with that of a bank: in other words, it is a simple way of finding out if the owner can make more money from the business than from other businesses or financial investments. It is important to remember that investment in this case refers to the amount of money actually put up by an investor, and not the total capital invested. An investor may borrow a proportion of the capital required from the bank, but he is less interested in the total return on capital than he is in how much profit he will get out of the amount of his own cash he laid out on the business.

Break-Even Point

This is the minimum level of production required to cover fixed AND variable costs. It is the point at which the business is neither making money nor losing money. If it sells less than this number it will lose; if it sells more, it will make a profit. A business with very low fixed costs has a low break-even point, but one with high fixed costs has a high break-even point. This is obvious if you take the case of jua kali. A jua kali artisan has NO fixed costs. If he stops making jikos it costs him nothing (although he has to eat), and if he makes jikos then he will make money: even one. On the other hand, Firestone factory has a large number of employees who work on administration, the factory has to be maintained, rates and ground rent paid, and bank loans have got to be met, regardless of whether or not they are selling a single tire. In this case they have to operate at a high volume of sales in order to cover these regular costs before they begin to cover the variable costs of production, and start to make a profit.

Payback Period

This is the final important calculation that investors like to refer to in deciding whether or not to invest in a particular business. Simply stated, it is the time period over which at normal levels of production the amount of net profit would equal the investment cost. For the purposes of this calculation, net

profit is defined as net income plus interest, plus depreciation charges. Investors look at this very carefully when weighing the risks of an investment because they want to know how long conditions must stay favorable for them to at least recover their money. If, for example, I am thinking of building a factory to make bricks, and I know that in five years there is a plan to build a huge blockmaking factory in my neighborhood, I would want to be sure that I had at least recovered my money by that time, after which I may not be able to sell as many bricks.

It is important to always remember that the key financial indicators do not mean anything at all in themselves. They are only tools to be used in order to COMPARE one investment with another.

FINANCIAL APPRAISAL OF MICRO-INDUSTRIES

A large number of rural businesses require little or no capital investment, and those requiring less than K. Shs 10,000 we will refer to as micro-enterprises. Beekeeping, wood-carving, tire repair, local brewing, petty trading, and pottery are all examples of rural industries that need very little money to start.

As I have explained earlier, we have to assess the financial viability differently because rates of return may be very high, but actual cash income much lower than just routine daily laboring. The issue here is how much cash goes into the pocket of the investor, and in the case of Kenyan projects under CARE, this is likely to be the key issue.

Since labor is more plentiful than capital in these micro-enterprises, and there are usually no fixed costs to be covered, maximum income is achieved when earnings per unit of labor are the highest. Earnings per labor hour can be calculated as follows:

$$\frac{\text{(revenue - non labor costs)}}{\text{hours of labor}}$$

This measure of viability describes the rate at which labor generates income.

In addition to earnings per labor hour, net profit can be used, but earning per labor hour is preferable as a financial indicator at this level of capitalization because it is a measure which is inextricably linked to the activity itself, and it does not matter who is conducting the business.

CASE STUDIES

Financial appraisal of medium scale business: Posho mill

THE DATA

Production capacity per Month at Full Capacity

1.	Input per Production Cycle (1 day)	1,600 Kg *
2.	Output per Production Cycle	1,600 Kg
3.	Days Required per Production Cycle	1
4.	Production Cycles per Month	22
	Maximum potential output per month	35,200 Kg

Capital and Start-up Costs

1.	Land	-
2.	Buildings	25,000
3.	Posho Mill and Diesel Engine	103,000
4.	Tools	3,000
5.	Start-up Costs	
	a. Legal	2,000
	Total Capital & Start-up Costs	133,000

Fixed Costs per Month

1.	Depreciation:	
	a. Building @ 10 years	208
	b. Engine & Mill @ 5 years	1,717
2.	Maintenance & Repair	1,000
5.	Supplies (Lubricating Oil)	150
6.	Financing Cost per month (From Capital Requirements, below)	1,530
	Total Fixed Costs	4,605

---

* It is useful to record this figure. In a maize mill input equals output, but in most processing and manufacturing operations some materials are lost. A carpenter may buy 1 tonne of wood and end up selling furniture which makes use of 900 Kg, losing 100 Kg in the process, WHICH HE STILL HAS TO PAY FOR.

Variable Cost per Production Cycle and per Unit

1.	Raw Material per Day	-
2.	Direct Labour per Day	40
3.	Energy (Diesel Fuel)	120
	Total Variable Costs per Production Cycle (Day)	160
	Production Cycles per Month	22
	Total Monthly Variable Costs	3,520
	Variable Cost per Unit	.100

Capital Requirements (Including Working Capital)

1.	Capital Costs	131,000
2.	Start-up Costs	2,000
3.	Working Capital (Fuel in Stock)	2,000
4.	Investor's contribution (Equity)	33,000
	Net Capital Required	102,000
	Financing Cost per Month (102,000 @ 18%)	1,530

Product Selling Price

Price

1.	Based on Market Assessment (@ 5/- per 15 Kg debbe)	.333/- Kg
2.	Based on Production Cost	.362/- Kg

$$\text{Price} = \frac{\text{(Fixed Costs/Month)}}{\text{(50\% Production Capacity/Month)}} + \text{Variable Cost/Unit}$$

KEY FINANCIAL INDICATORS

Break Even Point

The formula for this is as follows:

Price - Variable Cost per Unit = Gross Margin

$$\frac{\text{Fixed Costs per Month}}{\text{Gross Margin}} = \text{Number of Break-Even Units}$$

$$\frac{\text{(Break Even Units)}}{\text{(Number of Units at Full Capacity)}} \times 100 = \text{Break Even \%}$$

In this case the figures are as follows:

Gross Margin	=	.333	-	.1	=	.233
Break-Even Units	=	$\frac{4,605}{.234}$			=	19,679
Break-Even Percentage	=	$\frac{(19,679)}{(35,200)} \times 100$			=	55.9%

It is useful for us to know also what profit will be made at different levels of capacity utilisation. The formula for this is as follows:

(Units produced - break even units) x Gross Margin = profit

In the case of our posho mill we will calculate profit at different levels of capacity: 50% 75% and 100%

Percent	(Units Produced	-	Break-even Units)	x	Gross Margin	=	Profit Per Month
50	(17,600	-	19,679)	x	.233	=	- 484
75	(26,400	-	19,679)	x	.233	=	1,566
100	(35,200	-	19,679)	x	.233	=	3,616

This type of analysis is called a Sensitivity Analysis because it shows to what extent profit is sensitive to different levels

of capacity utilization.

Since we have already said that the project should expect to operate at no more than 50% of capacity, it will be seen that at this level it will lose about 500/- per month. This will tell the owner that he must either raise his price per unit milled, or (and) he must locate the mill in an area of very high demand, where there is no competition from other millers. Since this analysis only shows him paying interest on his loan, and nothing off the principal, it is probably not a viable project, given the normal market price for milling posho.

NET PROFIT

Revenue per annum (@ 100%)	140,659
- Costs	97,500
Gross Profit	43,159
- Taxes	8,632
Net Profit	34,527

SIMPLE RATE OF RETURN

= Net Profit/Investor's Original Investment Outlay

$$\text{Net Profit} \quad \frac{34,527}{33,000} = 104\%$$

Investors Original Outlay

PAYBACK PERIOD

$$\frac{\text{Total Investment}}{\text{(Annual Net Profit + Interest + Depreciation)}}$$

$$= \frac{135,000}{(34,527 + 1,530 + 208 + 1,717)} = 3.554 \text{ Years}$$

Fixed Assets

Tools	1,560
Storage drums	600
Contingency	340
Total fixed assets	2,500

Depreciation per Annum

Tools @ 3 years	520
Drums @ 2 years	300
Total depreciation	820

Income Statement for Jiko Unit

a. Costs per year

i. Variable Costs

Raw material (Scrap for 1,000 Jikos)	10,000
Rivets	750
Ceramic Liners	13,500
Total	24,250

ii. Fixed Costs per Year

Depreciation	820
	25,070

b. Revenue per year

1,000 jikos @ 45/-	45,000

Earnings per Labour Hour

(45,000 - 25,070)/2,400 hours per year 8.304/hour

It will be seen that this rate of income will translate into 1,726 shillings a month, which is a good rate of income for an unemployed school-leaver, who could otherwise only hope to make about 500 - 700 shillings a month, and the project would be worth supporting.

As with larger industries, the procedure in doing the financial appraisal is to determine the investment cost and depreciation charge and to prepare a profit statement. There is no point in doing a sensitivity analysis, because there are so few fixed costs, and at almost any level of operation there will be a charge on tools if the artisan is not making jikos, because his equipment will not depreciate or wear out. Depreciation is put in as a fixed charge in order to be cautious of the need for replacement of equipment.

This concludes the discussion of micro-business analysis.

CONCLUSION

In closing, it must be emphasized that discretion will have to be used in determining how sophisticated an appraisal should be done in each instance. Some business operations will require very detailed and careful studies, while others can be abbreviated and handled very quickly. The time spent on the proposal will vary according to the size of the proposed operation and the ease with which the information can be obtained.

Wherever possible, the potential investor should be the one to do the feasibility study, but in the case of relatively unsophisticated groups and individuals, while it may be the case that you do the actual appraisal, you should require the beneficiaries to provide you with the necessary information.

In the attached annexes there are two standard formats for the preparation of the financial analyses, and both apply to larger projects. The first form is for pre-feasibility appraisal, when you are taking a rapid first look at a project. It will enable you to conclude quickly whether or not it is worth further study. If it turns out that the project has an apparently good potential for profit, then you should use the longer second form and ensure that there is more detail.

Preliminary Form

Production Capacity Per _____

1. Input per production cycle _____
2. Output per production cycle _____
3. Days required per production cycle _____
4. Production cycles per month _____
5. Total monthly production capacity _____

Capital and Start-up Costs

1. Land _____
2. Buildings _____
3. Equipment and tools _____
4. Furnishings _____
5. Other _____
6. Start-up costs _____

Total Capital and Start-up Costs _____

Fixed Costs per _____

1. Depreciation _____
2. Maintenance and repair _____
3. Rent _____
4. Salaried staff _____
5. Supplies _____
6. Licence fees (annual/ ?) _____
7. Transport _____
8. Telephone _____
9. Electricity and water _____
10. Other _____
11. Financing cost per _____ _____

Total Fixed Costs _____

Variable Costs per Production Cycle

1. Raw material _____
2. Direct labour _____
3. Energy _____
4. Transport _____
5. Water and electricity _____
6. Other _____

Total Variable Costs per Production Cycle _____

Production Cycles per Month/Year _____

Total Monthly/Annual Variable Costs _____

Variable Cost per Unit _____

Capital Requirements

1. Capital Costs _____
2. Start-up costs _____
3. Working capital (? months x (fixed costs + variable costs) _____
4. Less Investor's contribution _____
5. Net capital required _____
6. Periodic interest (Financing) charges _____

Product Selling Price

Price:

a. Based on Market Assessment _____
b. Based on Production Cost _____

$$\text{Price} = \frac{\text{Fixed costs per month}}{(?\ \%\ \text{Production Capacity per month})} + \text{Variable Cost/Unit}$$

Break-Even Point

Price - Variable Cost Per Unit = Gross Margin

$$\frac{\text{Fixed Costs}}{\text{Gross Margin}} = \text{Break-Even Units}$$

$$\frac{\text{(Break-Even Units)}}{\text{Full Capacity}} \times 100 = \text{Break-Even Percentage}$$

Break-Even (Sensitivity) Analysis

(Units Produced - Break Even Units) x Gross Margin = Profits

Percent	(Units	-	BEU)	x	GM	=	Profits
25							
50							
60							
75							
80							

REMEMBER: NO PROJECT WILL EVER OPERATE AT 100% CAPACITY: BE REALISTIC AND HONEST IN ASSESSING THIS

Net Profit

	Revenue	_____
-	Fixed and Variable Costs	_____
-	Taxes	_____
=	Net Profit	_____

Simple Rate of Return

$$\frac{\text{Net Profit}}{\text{INVESTOR'S Original Investment Outlay}}$$ _____

Payback Period

$$\frac{\text{Total Investment}}{\text{(Annual Net Profit + Interest + Depreciation)}}$$ _____

ANNEX A:1 SIMPLIFIED COMMERCIAL ANALYSIS

SUMMARY INFORMATION

PROJECT NAME _____

LOCATION _____

DISTRICT _____

P.O. BOX _____

NAMES OF PROJECT LEADERS _____

_____

CARE FIELD OFFICER _____

DATES VISITED PROJECT SITE _____

ESTIMATED CAPITAL COST OF PROJECT _____

VALUE OF CAPITAL CONTRIBUTION(S) TO PROJECT

A. BY PROJECT PARTICIPANTS Shs._____

B. BY OTHERS

i. NAME _____ Shs._____

PAID FOR WHAT? _____

ii. NAME _____ Shs._____

PAID FOR WHAT? _____

PROPOSED PROJECT START-UP DATE _____

ACTUAL START-UP DATE (IF IN PROGRESS) _____

FUNDS SPENT TO DATE:

A. CAPITAL INVESTMENT _____

B. PRE-PROJECT EXPENSES _____

NAMES OF INFORMANTS _____

_____

DATE _____ SIGNED _____

A. Production Capacity Per _____ (Select time period)

1. Input Per Production Cycle _____

2. Output Per Production Cycle (In Units) _____

3. Hours/Days/Weeks/Months Required per Cycle (Select) _____

4. Production Cycles per Month/Year (Select) _____

5. Output per Month/Year (Select) (Number of cycles per month/year x output per cycle) _____

Total Production Capacity per Month/Year _____

B. Capital & Start-Up Costs

1. Land _____

2. Buildings _____

3. Machinery and Equipment _____

4. Tools _____

5. Furnishings _____

6. Other _____

7. Start-up Costs: (Pre-Production)

   a. Legal _____

   b. Technical _____

   c. Transport _____

   Sub Total _____

Total Capital & Start-Up Costs _____

C. Fixed Costs Per _____ (select time period)

1. Depreciation

   a. Buildings _____

   b. Machinery _____

   c. Tools _____

   d. Livestock _____

   e. Other _____

_____

2. Maintenance & Repair _____

3. Rent _____

4. Salaried Staff _____

5. Supplies _____

6. Licence Fees _____

7. Transport _____

8. Other (Specify)

   _____ _____

   _____ _____

   _____ _____

Total _____

9. Interest (From Capital Requirements - See Page 20) _____

Total Fixed Costs _____

D. Variable Costs: Per Production Cycle: Per Month/Year: Per Unit

1. Cost of Raw Material _____
2. Direct Labour _____
3. Fuel _____
4. Electricity _____
5. Water _____
6. Transport _____
7. Marketing _____
8. Other (Specify)

_____

_____

_____

Total Variable Costs per Production Cycle _____

Number of Production Cycles per Month/Year (Select) _____

Total Monthly/Annual Variable Costs _____

Variable Cost Per Unit (VCU) _____

E. Capital Requirements

1. Capital Costs _____

   Plus:

2. Start-Up Costs _____

   Plus:

3. Working Capital
   (? Days/Weeks/Months X [Fixed Costs + Variable Costs]) _____

4. Less:

   Project Partner's Contribution (Equity) _____

5. Net Capital Required _____

6. Net Interest Payable Per Month/Year
   (Add to Fixed Costs) _____

F. Product/Service Selling Price

Price:

1. Based on Market Assessment _____

2. Based on Production Cost

$$\frac{\text{Fixed Cost Per Production Cycle}}{\text{No.of Units produced per Cycle @ 50\% Capacity}} + \text{VCU } **$$

_____

** For VCU (Variable Cost per Unit) See Page 19.

KEY FINANCIAL INDICATORS

A. Break-Even Point

Steps:

a. Price - Variable Cost Per Unit (VCU) = Gross Margin

_____ - _____ = _____

b. $\frac{\text{Fixed Costs}}{\text{Gross Margin}}$ = Break Even Units

_____ = _____

c. $\frac{\text{Break-Even Units p.a.}}{\text{Full Capacity}} \times 100 =$ Break-Even %

_____ X 100 = _____%

N.B. Break-Even Point can be expressed either as a percentage of production capacity, or alternatively as a time period. For example, a 50% break-even would require a project OPERATING AT FULL CAPACITY to be working for 6 months a year, or about 180 days: a 33% break-even would require a project to be working for 4 months a year, or about 120 days, again at full capacity. Alternatively, a project can work throughout the year, but may not make full use of the capacity. For example, a posho mill may only work for four hours a day (about half the time available). In this case it would be working at only about 50% capacity, although it is open for business 6 days a week.

A.1. **Sensitivity**

N.B. Sensitivity Analysis measures the net profitability of a project at different levels of capacity utilisation.

Percentage of Capacity Used Per Annum	Number of Units Produced Per Annum	-	Break-Even Units (See A.b. Previous Page)	x	Gross Margin	=	Profit
25%							
33							
50							
60							
66							
70							
75							
80							
90							
100							

B. **Net Profit**

Annual Revenue (Income) _____

Less:

Annual Costs (Fixed Costs + Variable Costs) _____

Less:

Annual Taxes _____

_____

Net Profit Per Annum _____

C. **Simple Rate of Return**

$$\frac{\text{Net Profit Per Annum}}{\text{Investor's Original Investment Outlay}} = \_\_\_\_\_$$

D. **Payback Period**

$$\frac{\text{Total Investment}}{\text{Annual Net Profit + Interest + Depreciation}} = \_\_\_\_\_$$

4B. HOW TO ANALYZE THE FEASIBILITY OF A SMALL ENTERPRISE PROJECT

Margaret Clark

I. Activity
Describe this activity

II. Product
What is the product or service of this activity?
What is the price?

III. Market
What is the market for this product?

A. Who will buy it?

B. How many people will buy this product?

C. How often will they buy this product?

D. Are there any seasons or periods of time during the year when the product will not be purchased?

E. Does this product satisfy a real need in the community? What is that need?

F. Can the community members afford to buy this product?

G. Who is your competition, Who else sells this product?

H. What distinguishes your product from your competition?

I. What are the risks associated with the market for this product? List the things that could happen that would result in slower sales or lack of sales (for example, a drought that leaves farmers with no money to buy goods, or if the roads become impassable in the rainy season ar the goods cannot be transported to the place of sale)

1.

2.

3.

IV. Supply/Equipment

A. What equipment is needed for this project? List all machines, tools, buildings, animals needed to begin the project, and the cost and source of supply for each item.

	Equipment	Cost	Source
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

B. What supplies are needed for production on a daily basis? (for example, cotton for spinning thread, raw millet for the grain mill, goods to be sold in the village stores)

List all supplies needed on an ongoing basis, with their costs, how often purchased, source of supply.

Raw Material Needed	When needed/ How often	Cost	Source
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

C. What are the risks in obtaining the materials necessary for production? List events that would result in the inability of the group to obtain the needed supplies.

1.

2.

3.

V. Production Process

Describe the production process. How does the project work? What steps are taken to produce the good? Who is responsible for each step and how often will it be undertaken? Describe, in general, the production process, up to the time of the sale of the goods.

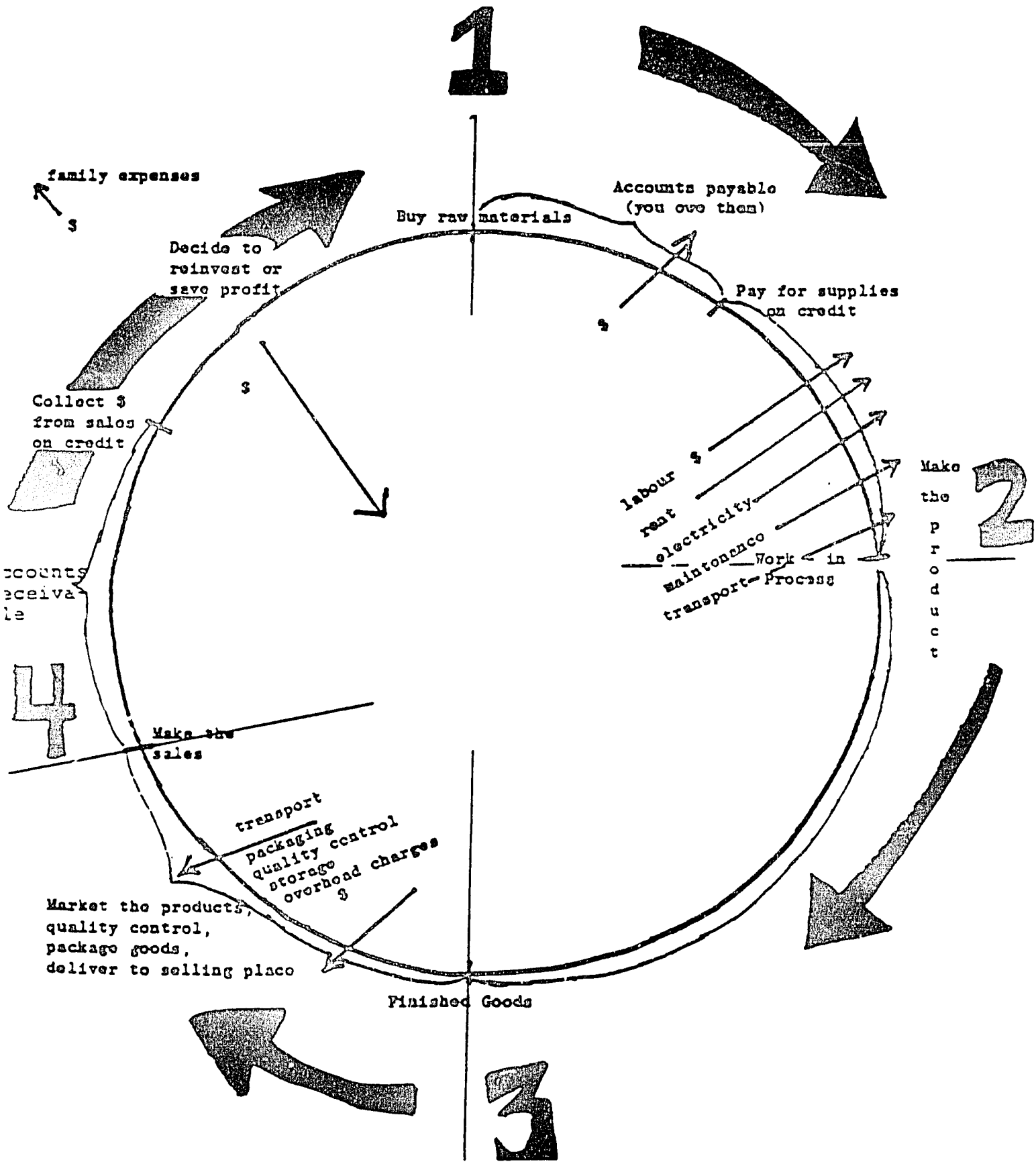
List, in detail, the steps that must be taken to complete the production process.

Task	Person Responsible	When/How often
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Review the Production Process Cycle drawing on the next page. Try to draw a Production Process Cycle for your project. Assume that you have already purchased your start-up equipment. Draw the cycle to represent the ongoing things you must do in your project. Begin with the purchase of your material, continue to the work-in-process stage listing all of your expenses, then think through the marketing stage. Finish with collecting money from sales.

THE PRODUCTION PROCESS CYCLE

(ongoing)



VI. Financial Analysis

A. Profitability:

1. Complete the attached income statement on the next page. If it is a new project, estimate projected income and costs. You may not have information for each category on the balance sheet and income statement; but fill in as much as you can. You can do a monthly or an annual income statement.

2. Analyze the income statement. Look at the costs of the project in relation to the income that the project will generate.

3. Analyze the net profit. Decide if the enterprise will generate enough sales to cover ongoing costs. If it cannot cover its costs, estimate when in the future it will be able to cover its costs. A start-up project may have negative profits.

B. Efficiency

It is important to analyze the cash flows of the project. You can do this by studying your Production Process Cycle Chart and answering these questions. Pay particular attention to the timing of revenues coming in and expenses going out of the project. Think about when the project will have a lot of cash, and when it will need cash.

1. When must the enterprise pay its suppliers?

2. When does the enterprise receive payment from sales?

3. What are the ongoing costs the enterprise must meet? (for example: rent, tax, water) and when must they be paid?

4. Will the enterprise have enough money on hand to meet its on going expenses?

INCOME STATEMENT

for the period of _____ to _____

EVENUES _____

-COST OF GOODS SOLD _____

Materials_____

Direct Labor_____

GROSS PROFIT MARGIN _____

·OTHER EXPENSES _____

Indirect Labor_____

Rent_____
Electricity_____
Transport_____
Other_____

NET PROFIT _____

VII. Management

1. Do the managers of the project have the necessary skills to handle the activity?

2. Do they have any previous experience with the activity?

3. Do the managers have any previous experience with bookkeeping or managing loan repayments?

4. If they do not have the skills needed, identify a technical specialist or local agency that can train the borrower.

5. If the borrower needs help in basic business skills or in the management of the loan, list the steps you will take to provide assistance.

VIII. Recommendations

Based on the information and analysis above, is the project feasible?

If not, why not?

If no, list action steps to help the applicant.

If yes, state the reasons why you feel the project is feasible.

4C. A SYSTEMATIC APPROACH TO LOAN PORTFOLIO MANAGEMENT

Mohini Malhotra, Nathan Associates Inc.

Introduction

The financial resource management of a micro- and small enterprise (MSE) programs has several aspects: (1) the management of endowments and grants, (2) the management of resources devoted to technical assistance, and (3) loan portfolio management. This section is concerned with loan portfolio management because it is a concern for both program managers and loan extension workers (the management of endowments and technical assistance are of greater interest to program managers). Program managers are the critical agents in the planning process for loan portfolio decisions. Loan extension officers are instrumental in effective implementation of policies and procedures and in the monitoring and evaluation of loans within the portfolio, and they need to understand loan portfolio management to do their jobs adequately.

This training module for loan portfolio management is drawn from a classic, commercial bank model. Although MSE programs differ from banks considerably, many of the principles of portfolio management used by banks apply to MSE programs as well and can be scaled down for effective application. The application of these principles varies widely according to the goals and clientele of the lending institution. MSE promotional institutions have a clientele of small-scale and relatively unsophisticated borrowers. The institutions seek to achieve broad social and development goals to benefit their borrowers through their lending activities. Whereas most commercial lenders seek to maximize their profits, MSE programs often seek to maximize the number of borrowers they serve and the production and employment they generate, subject to some satisfactory level of profit, or even loss. Table 1 outlines several differences between MSE lending and commercial bank lending.

Table 1. Differences Between SME and Bank Lending

	MSE	Bank
Objectives	Social and development	Profit maximization
Borrowers	Small, unsophisticated	Sophisticated, with credit history, assets, and collateral
Loan size	Small, relatively unvaried	Relatively large

It is important to stress at this point that, although loan portfolio management as discussed in this training module is an important function for MSE programs, an MSE program must have reached a critical mass of loans to warrant the use of these relatively sophisticated tools.

The experience of retail banks is most relevant to MSE programs; these banks tend to deal with large numbers of small-scale borrowers, often by applying standardized formulas. Retail banks in the United States use simple formulas to extend credit to millions of credit card holders and indirectly to car, house, and consumer goods buyers. Limits are based on the card holder's income level and credit record, which indicate the debt-carrying capacity and the moral risk of the borrower. Credit scoring systems, which are discussed in the subsection on "Risk Analysis and Risk Reduction Mechanisms," provide a useful shortcut method to evaluate loan requests.

Principles of Loan Portfolio Management

Loan portfolio management involves the creation and management of risk assets, that is, loans. Portfolio management is concerned with managing risk, costs, and returns, as well as cash flows. It involves portfolio diversification (spreading risk or spreading loans across a variety of sectors), loan sizes, the number of loans, loan terms and conditions, loan purposes, and so on. Loans in a portfolio can be classified on the basis of these factors. The most common classification in MSE programs is loan size.

The lending process differs for various loan classifications. Each class of loan requires different skills and expertise because each has different risks, costs, and returns.

Risk

Risk is an inherent component of lending, but it is possible to minimize the risk exposure of a loan portfolio by defining and following a systematic approach to loan portfolio management. Several factors contribute to risk: undue concentration in a particular industry, geographic area, or target clientele subjects the portfolio to risks that may affect the sector in which the portfolio is concentrated; loan terms that are inadequately set or incompatible with the nature of the client enterprise lead to low repayment rates and subsequent cash flow problems. For example, a working capital loan to a solidarity group of market vendors requires a shorter payback period than a fixed capital investment loan for a tailor shop. Table 2 outlines factors responsible for risk and ways to minimize risk.

The risk of default or arrearage differs across loan classes, depending on the industry or location concentration. There is no positive correlation between loan size and default: the Grameen Bank in Bangladesh has a higher default rate among its larger loan size borrowers while ADEMI in the Dominican Republic experiences a lower default rate among its longer-term and larger loan size borrowers. However, it is almost always more risky to service start-up enterprises than established ones, and the risk of inflation or foreign exchange exposure increases with longer-term loans because of increased uncertainty. (A more complete discussion of risk analysis and ways to reduce risk exposure follows in the subsection on risk analysis.)

Costs

The costs associated with portfolio management are usually made up of loan administration costs; the cost of funds, including default and arrears risk; and inflation and exchange risk costs. Costs should be appropriately accounted for in setting interest rate policies and structures.

Loan administration costs. These are the most obvious costs. They are normally higher when a large number of borrowers are served or when extensive technical assistance is given. For MSE programs that provide only small working capital loans, these costs rarely exceed 20 percent of annual lending. Servicing costs may vary between different loan classes; it is more costly to service isolated rural clients than clusters of enterprises in urban areas.

Cost of funds. The cost of funds must be fully accounted for. In addition, provisions need to be made for various hazards. If the loan funds have to be repaid to the donor in an appreciating foreign currency, a premium needs to be charged for that appreciation. A large number of MSE lenders have gone bankrupt because they failed to account for the depreciation of local currency, particularly in Latin America. If foreign

Table 2. Risk Factors and Risk Reduction Measures

Factors Contributing to Risk of Loan Default/Arrearage	Risk Reduction Measures
Too many loans in a portfolio to administer by a loan officer	Determine the optimal number of loans to administer in a loan officer's portfolio
Lending terms inadequately mateched to business cycles of enterprises	Establish adequate loan terms and conditions, based on analysis of the client enterprise's business cycle and nature
Economic instability: hyperinflation, recession, etc.	Disburse credit to several industries or types of borrowers to avoid undue concentration; diversify the portfolio
Industry-specific downturns	Avoid concentrating in a particular geographical area where default risk may be greater due to locational, infrastructural, or borrower difficulties
Complexity, size, and number of loans in portfolio	Establish loan-size limits by type of borrower, or by borrower
Inadequate or cumbersom control mechanisms at lending, monitoring and collection phases	Establish adequate risk control mechanism at all stages of the loan cycle
Lack of collateral, credit history of borrower	Third-party guarantees, solidarity groups

exchange loans are taken for MSE lending, it is usually desirable for someone other than the MSE lending agency to bear the exchange risk. Arrears and default costs must be borne by the lending institution.

Inflation. To the extent that the cost of funds does not cover it, inflation must be accounted for, to protect the real value of the loan fund and the lending institution's capitalization. Several Latin American programs have failed primarily because of loan fund decapitalization. Although one lending institution in Peru was charging annual interest rates of more than 80 percent, these rates were still negative in real terms, given annual inflation rates of more than 100 percent.

These costs and risks can be accounted for by charging interest rates inclusive of these premiums, which would capitalize the loan fund, or by establishing a standard loan reserve fund, discussed further in the risk analysis subsection.

Returns

The returns for a socially oriented lending program should be calculated in two ways: in terms of financial benefits and in terms of social benefits. First, the actual financial returns on loans need to be calculated, taking into account the effective rather than the nominal rates charged. For example, consider a borrower with a 1-year loan of 500 pesos at 10 percent simple interest. Payments are to be made in 50 equal installments of interest and principal, or in 50 installments of 11 pesos each. The average outstanding portion of the loan over 50 weeks is 250 pesos, because of the progressive repayment of principal, making the effective interest rate 20 percent. Next, the borrower is required to deposit 1 peso a week and an initial 5 percent of the loan—25 pesos in this case—into a savings account, which therefore has an average value of 50 pesos. If this money is earning 20 percent interest for the fund but is paid only 10 percent, an additional 5 peso charge, or 2 percent of 250 pesos, is incurred. If an additional 5 pesos a week is paid into a guaranty fund, with an average outstanding contribution of 12.5 pesos, an additional 5 percent is charged, making an effective annual interest rate of 28 to 30 percent on the average outstanding balance. This example is a stylized version of a system used by many small loan funds.

Although social returns are normally the motivation for the creation of an MSE lending program, they are often more difficult to define and measure in quantifiable terms. Adequate data should be collected in a systemized manner to assess any differential impact attributable to project inputs. With and without and before and after data on incomes, employment, and so forth should be collected; that data should be compared with the beneficiaries' own baseline, and preferably against a control group. While the financial returns to a lending institution should adequately cover most of the costs associated with running the program—so that the institution can be viable and provide a sustained benefit to its borrowers--the social benefits should merit whatever other costs are incurred.

Functions of Portfolio Management

Effective credit management is a management exercise in which the objectives and policies of credit management, loan portfolio organization, and personnel and operational procedures must be integrated sufficiently in order to produce a desired outcome. Control mechanisms must be established and, more importantly, must undergo continuous and appropriate revision. Although the principal objective of credit management is a healthy loan port-

folio, a systematic approach for loan administration involves integrating three broad interdependent functions: planning, organization, and efficient control.

In the planning stage, the lending institution must (1) establish clear and realistic objectives and (2) develop and implement a sound written loan policy. Organization requires that the institution (1) develop a strong organization with clear-cut lines of responsibility, (2) develop special skills and techniques required for problem loan supervision, and (3) institute an effective program of follow-up on unpaid loans to maximize recoveries. Finally, control is a process with four steps: (1) develop a strong loan review program to facilitate control over quality of loan portfolio, and to identify weak loans as soon as possible; (2) set up comprehensive credit files on borrowers, with records of loan transactions, background information, and so forth; (3) develop techniques and procedures necessary for identifying problem loans as early as possible; and (4) examine the loan loss experience periodically in relation to past experience, and revise loan policy and lending procedures accordingly.

Each of these three stages is discussed in greater detail below.

Planning

Planning involves setting realistic objectives. It also involves considering the risks and returns of loans and developing loan portfolios that maximize the income and social objectives of the lending institution. Planning must be viewed as the process of strategic thinking prior to establishing goals and objectives for portfolio performance, in terms of quality control (low risk portfolio); liquidity (cash position and ability to meet obligations); maturity (loans coming due); and concentration, growth, profitability, and restrictive policies.

ADEMI is an interesting case of an institution that made strategic decisions regarding its portfolio distribution and its overall objectives. At the start of its operations, ADEMI lent to self-organized solidarity groups of five to eight members and to sole proprietors or small enterprises. After several years of experience with both groups, ADEMI decided to concentrate its lending resources on the microenterprise group, believing that it could have a wider and more sustainable impact on them than on solidarity groups, as well as create a more sustainable institution, based on the increased cost returns structure.

Organization

Organization involves developing the tactical functions to achieve planned objectives and goals—defining policies and procedures. This function translates policy and strategic decisions into action. It establishes the mechanisms and means to achieve performance objectives. Some of the

more important components of this function include assessing the cash flow situation of the institution and establishing loan loss reserves, loan disbursement and collection procedures, late payment policies, and feedback mechanisms. A number of the larger MSE programs (ADEMI, the Kenyan Credit Unions) often prepare detailed operating manuals that cover these items.

Control

Control refers to the continual process of evaluating and monitoring loans to ensure that performance goals and objectives are being reached. Control, as it relates to credit management, is the process by which the credit manager compares loan portfolio results with preestablished investment criteria, evaluates the results and those of other similar efforts, and then plans future changes in portfolio composition to maximize performance objectives while minimizing risk. Systematic feedback from loan extension officers is crucial to adequate monitoring, evaluation, and revision. The control function should undergo continuous evaluation, revision, and adjustment. Like the other principal management functions, this is a dynamic, not a static, function of management.

The function of control requires that an adequate management information system be in place, where up-to-date information on the shape and status of the loan portfolio can assist managers in making strategic decisions on the performance and operations of the lending organization. The subsection on "Management Information Systems for Effective Portfolio Management" discusses several reports used by some banks that could be of similar use to other lending organizations to assist in the control function.

Cash Flow Analysis

Cash flow analysis has been discussed as a basic tool for enterprise analysis—for conducting a commercial feasibility study of an MSE. The same principles of cash flow analysis and cash flow management apply to the lending institution. Loan portfolio management involves planning the coordination of fund sources with demand for loans. Fund inflows are generated from interest payments and repayments of principal, which can then be loaned again.

Cash flow analysis is typically done by designing a spreadsheet in which planned inflows (revenues) are compared with planned outflows (costs) of cash in each period, to determine whether the lender has enough cash to cover monthly operating expenses. Cash flow management avoids the possibilities of having no funds or having excess idle funds.

Realistically, funding gaps exist between disbursing loans and receiving repayments because of varying interest rates, differing loan maturities, and arrears. Although overdrafts (known as cash-credit in South Asia) are better devices to fund working capital needs, MSE lending institutions typically lack the volume of borrowers and thus the appropriate cash flow and the accounting systems to do this type of lending. A lending institution that wishes to extend loans for fixed capital investments for start-up enterprises needs to be cognizant of the longer payback period required, as well as the greater risk incurred by choosing to assist new rather than established enterprises. Conversely, an institution providing small working capital loans to established manufacturers should establish a shorter loan term, recognizing the business cycle, capital requirements, and payback ability of the borrower.

Risk Analysis and Risk Reduction Mechanisms

A substantial component of portfolio management is risk analysis. The interest rate charged on riskier projects may include a risk premium. The riskiness of an investment can be defined in terms of the likely variability of future returns from the investment. For example, it is relatively certain that the return on investment for a 1-year government bond expected to yield 6 percent will be 6 percent. The returns on a loan to a new enterprise are more variable, less predictable, and hence, riskier. Starting new enterprises is a highly risky activity in all countries, including the United States, where an estimated 80 percent of small businesses fail in the first year.

Traditional measures of risk measure the risk of individual loans in isolation. Newer approaches recognize that individual loans can be combined with others into classes of loans. For MSE development projects, this newer approach is more relevant, in part because of the small size of loans and the high cost which would be associated with analyzing microloans in isolation.

Establishing a Risk Rating System by Loan Classes

Some banks use a formal system of loan classification, which may be a useful model for MSE lending programs as they expand. A risk rating system serves as a tool for loan officers and bank management to evaluate and monitor credit risks through a uniform measurement of the loan portfolio. A risk rating system establishes a basis for a loan officer to express a judgment about the level of risk in an individual borrower or in a proposed credit proposal or loan application, relative to other borrowers or other transactions. By establishing a system for describing borrowers and transactions relative to one another, a risk rating system creates a common definition or measure throughout the institution for identifying and evaluating the risks of specific credit decisions.

A risk rating system is a critical tool in minimizing credit losses by providing a built-in alert system. A downgrading of a rating by the loan review committee alerts the loan officer to take effective action to minimize the risk exposure of his credit portfolio. The loan officer should rate the loan at the time of analysis of the loan application and loan inception. Loans should be rerated as circumstances dictate.

There is no standard, universally applicable risk rating system. Nor is there an objective or scientific method to evaluate portfolio risk. Risk evaluation is a matter of cautious judgment by an experienced loan officer. The risk of default or insolvency of a borrower is a commercial risk that can be minimized by appropriate risk control mechanisms. External factors, such as changes in commercial and exchange rate policies, political or economic instability, and hyperinflation may affect the performance of enterprises concentrated in a particular industry or all enterprises. There is no sure way to predict such macro risks or their subsequent effects. A risk rating system appropriate for the institution must be developed, taking into consideration the client portfolio, the seasonal nature of the enterprises in the portfolio, the inventory to cash cycle, and any other considerations deemed appropriate. A systemized risk rating system or portfolio evaluation system should incorporate three different analyses:

Case-by-case studies	In the course of project supervision work, the loan officer should assess the potential risk of default, according to the debt-servicing obligations of the client and overall business performance.
Sector studies	Sector studies should be undertaken to identify problems specific to a particular industrial sector or subsector. Such studies allow for more informed decisions on portfolio concentration by sector.
Analyses of arrears	In light of losses or loan rescheduling experience, an institution should develop a basis for assessing portfolio risk, based on previously recorded trends.

A systematic evaluation of the loan portfolio is useful in determining time lags in the receipt of principal and interest payments and their effect on the cash flow and debt servicing capability of the financial institution, and in establishing bad debt provisions.

Establishing Rating Guidelines for a Risk Rating System

Rating guidelines are established to ensure that consistent ratings are applied throughout the lending institution to broad categories of lending situations. The guidelines should be used as standards, from which the ratings vary as circumstances warrant. Guidelines allow objective and standardized criteria to be applied to the risk rating system.

Credit Scoring

The Cs of credit—character, capacity, capital, collateral, and conditions—are typically used as bases for approving credit. For MSE programs, character and capacity are the two most important Cs to consider. Most MSE lenders rely on a judgment approach to credit evaluation, which requires judgment by loan officers on whether to recommend that a loan application be rejected or approved. A credit-scoring approach, on the other hand, is a mathematical evaluation of creditworthiness that relies on historical experience with loans. A loan request is evaluated through the use of a point system, in which loan requests are assigned points for factors such as years in business, income level, business site, or whatever criteria have proven indicative of creditworthiness. Points for these items are based on analysis of past performance of loans. This system should not replace the judgment approach; it is a way to streamline the process. Lending institutions that use this approach generally reject loans that score below an established, acceptable point and refer those that score above an established point or fall in between the two points to a loan officer for further analysis.

Developing a credit-scoring system requires collecting a sufficiently large sample of good and bad loans, with a select number of characteristics or variables that differentiate the two types. Once the sample of loans and the identifying characteristics are collected, a scoring or risk weighting system can be developed. A recently established lending institution can adopt a credit-scoring system based on another similar institution's lending activities and then modify the system as the lending institution develops its own loan performance history. Table 3 outlines the advantages and disadvantages of developing a credit-scoring system.

Establishing Adequate Loan Loss Reserves

The common way for a lender to deal with nonrepayment risk is to establish loan loss reserves. Loan loss reserves should be adequate enough to provide for normal loss expectancy (based on previous or current patterns), plus additional amounts for riskier portfolios. Numerous methods have been devised to assess the adequacy of the loan loss allowance. They

Table 3. Credit Scoring: Advantage and Disadvantages

Advantages	Disadvantages
Shorter loan processing time, leading to increased operational efficiency, savings in personnel and operating costs, and improved use of loan officer's time (which can be concentrated on analyzing the loan requests that fall between the two points of rejection and approval).	If poorly designed because of an insufficient sample size, can lead to poor rejection or approval measures.
Greater flexibility can be brought about by modifying the system to reflect changes in economic conditions. Standards can be tightened by adjusting the minimum score of approval	If inflexible, that is, not periodically modified to reflect economic reality, can encourage poor decisions.
Improved control in quality of loan portfolio, and better adherence to loan policy.	Up-front costs for designing a system may be high and time-consuming.
Reduction in bias or discrimination, based on empirical evidence. This system can benefit women in particular, who are discriminated against in their access to credit. A scoring system must be cognizant of this aspect, and it must ensure that stereotypes are not structured into the system; for example, assigning negative points on the basis of race or gender.	
Improved response time, through reduced loan processing requirements.	

range from intuition to objective but simple methods of calculation. In the example below Institution A has two loan portfolio categories, categorized by sector: service and industry. Note that the risk factor is a subjective figure, derived from previous records of arrears and defaults according to loan portfolios.

	Service	*Industry*
Total loans outstanding ($)	100,000	250,000
Average loss (percent)	5	6
Risk factor	2	4
Weighted ratio (percent)	10	24
Expected loss ($)	10,000	60,000
Loan loss Allowance	70,000	

The loan evaluation systems discussed previously presume a significant amount of data collection or information availability. Given the difficulty of obtaining accurate income and credit record data on small entrepreneurs, some MSE loan programs, such as the Grameen Bank of Bangladesh and the BKK program of Indonesia, substitute third-party guarantees (character-based lending) for borrower guarantees. Generally, however, programs dealing with larger loans do the kinds of investment analysis discussed in the ARIES Credit Management material.

Management Information Requirements for Portfolio Management

Portfolio Organization

The structure of the credit operations and loan portfolio of a bank are organized to reflect the marketing strategies and operational requirements necessary for the types of loans that the bank maintains in its portfolio. Because of advances in computer technology, information on bank loan portfolios can be organized in several ways simultaneously, in order to provide different information to different individuals in the bank. Every loan is assigned to a loan officer and can be classified according to a basic marketing or financial activity, such as agriculture, agro-industry, and artisanry. Loans can also be classified according to geographic regions, industry, liquidity and risk, or any other classification that facilitates portfolio management. As mentioned earlier, the most common loan classification system is loan size. For example, an agro-industrial loan can be classified accordingly:

Activity	Agroindustry
Size	Medium
Location	Dakar
Loan term	Short-term, liquid
Risk	Low risk
Frequency	Annual

Loan Reports

Most Common Reports

The three most common reports prepared by the majority of banks are the following:

- Loan Status Report. This report provides all the accounting information on the loans. It is generally prepared at the end of each week and supplemented by the Daily Transactions report.
- Daily Transactions Report. This report records daily credits and debits.
- Daily Credit Activity Report. This report is a simplified log of the down payments or advance payments given on loans and the repayments received on the reporting day.

Other Routine Reports

Other reports used generally by credit officers and their superiors for better management of their assigned activities are

- Reports on loan maturity dates, which list all loans that will mature within the following 2 or 3 weeks, in chronological order
- Reports of loans in arrears, which generally are organized according to the period for which loan payments are in arrears
- Monthly or trimestral reports, which usually provide credit officers with a list of total loans disbursed in their portfolio, balance in the loan fund, and in some cases, earnings after accounting for costs incurred for management of the portfolio

Routine management reports are also generated, with basic accounting information (loans approved, interest rates, expected earnings, maturity dates, etc.) organized by type of loan or any other classification system used. They include the current status of the loans; total amount committed; average yield;

and earnings by month, trimester, or year to date. Other management reports include reports on nonproducing loans and a list of daily credit transactions.

Special Reports

A certain number of specialized reports with specific management purposes are usually generated by the bank:

- Report on portfolio liquidity. This report provides information on monthly loan maturities and expected payments. This information serves financial planning purposes, in that it provides information on the availability of funds (from repayments and other sources) and allows for planning in the use and management of funds.

- Report of approved loans (committed funds). This report lists and classifies the bank's approved but undisbursed funds: loans in process, credit cards, and bank acceptances. This report indicates the bank's total credit exposure.

- Report on risk concentration (portfolio diversification). This report presents data on loans approved and disbursed, and those approved but not yet disbursed, according to the different risk categories. The information is used to evaluate the concentration of portfolio risk within any particular industry, specific loan type, geographic region, or group of clients.

- Reports on regulated institutions. These include reports to the financial department or office of control and inspection, the central bank, the development department of the central bank, ministries, international organizations, and so forth. The basic information is the same as is used within the bank, but differs in organization and presentation, depending on who views the report and for what purpose.

Loan Process for a Commercial Lending Institution

The typical process of portfolio evaluation begins with collecting clients' financial statements and credit reports and the bank's analyses. This material,

with all correspondence related to the loans, should be set aside in a credit folder, which becomes an important source of information from which to evaluate the bank's portfolio.

A decision by the bank to refuse or grant a loan is generally documented by an internal form prepared by the loan officer or by the credit committee. This form includes data for input into the loan portfolio information system. It is an official document that informs personnel on how to manage the loan and also serves supervision and audit purposes.

Loan closing instruments, such as loan agreements, promissory notes, bank documents, and mortgages are prepared by the bank and executed by the client. These instruments are filed, registered, and maintained in a safe vault.

Loan data, such as expected profitability, maturity, concentration, and other information necessary for managerial decisions, is recorded in the management information system. Loan supervision generally begins after the first loan disbursement or upon receipt of the copy of the loan approval agreement from the credit officer or the loan committee. Repayment records, arrears reports, and other reports are generated as needed, to assess loan portfolio quality.

The loan supervisory functions of the bank generally terminate with complete repayment of the loan. However, the majority of banks continue contact with the client and maintain a system for recording or documenting the communication.

4D. FOUR SMALL ENTERPRISE CREDIT MODELS—ARIES PROJECT

September, 1987

Developed by the ARIES Project

for Catholic Relief Services'

Small Enterprise Development Workshop

TABLE OF CONTENTS

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The developers of the Small Enterprise Development Workshop would like to thank Jane Rosser and Michael Goldberg for their contributions to this work. Ms. Rosser contributed her knowledge and experiences of the CARE Philippines and Grameen Bank credit programs, and Mr. Goldberg researched and wrote the AITEC/ACCION and PfP/Burkina Faso credit models. Their involvement with this project is greatly appreciated.

INTRODUCTION

A wide variety of small enterprise credit programs are currently being implemented throughout Asia, Africa, and Latin America. Some of these credit programs focus on income generation in all of its aspects, while other initiatives stress production-oriented activities. Some variables found among these programs include:

- Urban or rural preference for target population
- Working capital or investment capital loans
- Short-term or long-term loan maturities
- Focus on production, retail, and/or processing activities
- Differing timetables for program self-sufficiency
- Acceptable default rate
- Emphasis placed on pre-credit training and overall management training
- Intensity of loan monitoring and size of loan portfolio
- Debt collection and refinancing policies
- Savings mobilization by individual participants
- Capital build-up by local institutions

The following models present four variations of small enterprise credit programs. They were chosen because they represent fundamentally different approaches to common issues in small enterprise development projects. They also reflect different culturally adapted programs, since experiences from the Philippines, Ecuador, Burkina Faso, and Bangladesh are presented.

No single model provides all the answers; rather, each represents unique learning experiences that have yielded certain design and implementation lessons. Although some of the goals differ from model to model, it would be possible to take policies and practices from several models to create a hybrid credit program that matches the needs of a particular region or country.

Each of the credit models includes the following information:

- Introduction (background and goals of the program)
- Program policies
- Client selection
- Establishment of the interest rate
- Loan application and review process
- Loan process flow chart
- Risks of the model
- Advantages of the model
- Results
- Potential variations
- Sources of additional information

These credit models are meant to encourage discussion of the issues, procedures, target populations, and other key points that can help determine possible directions for organizations engaged in small enterprise credit programs.

DEFINITION OF TERMS

For the purposes of the credit model summaries, some popularly applied terms have been used in specific ways.

Capital build-up. When institution building is an explicit goal of a development program, a way must be found to ensure that the organization will be self-financed at some future date. "Capital build-up" describes efforts to help such counterparts become financially self-reliant.

Income-generating activities. All forms of activity aimed at increasing revenues for the producer are included under this broad term. These activities might include agricultural production, food processing, retail, service, or manufacturing.

Micro-enterprise. The smallest of the small enterprises, micro-enterprises are usually devoted to a variety of workshop trades, market vending, and common services. Programs that focus on this sector are often urban-based.

Revolving loan funds. Recovered loans are put into a special lending account, called a revolving loan fund, to be used to finance future loans. The interest that accrues to the loans is often included in the fund, to protect it from decapitalization caused by high inflation rates. This is considered a fundamental requirement for self-sustaining programs. Otherwise, the availability of future credit can be threatened by interest rates that are too concessionary or by low loan repayment rates and easy refinancing.

Savings mobilization. This policy encourages borrowers to begin savings accounts to protect themselves from emergencies, provide for future credit needs, and teach the importance of savings in general.

Small enterprise. This term includes rural- or urban-sector businesses that usually have a small capital investment and between 1 and 10 workers. The "manager" of the enterprise is also one of the workers, there are few records kept, and business management decisions are often made without analysis. Planning is informal and sporadic.

Solidarity groups. This term refers to a group-based system of mutually insured loans to micro-enterprises or market vendors. If one of the loan recipients is unable to pay back on time, the other members agree to cover the amount until he or she can pay them back.

PfP/BURKINA FASO CREDIT MODEL

INTRODUCTION

One of the most replicated small enterprise credit models is based on work done by Partnership for Productivity (PfP) in eastern Burkina Faso, West Africa. This credit program links the receipt of credit to simultaneous management training. The PfP/Burkina Faso program is a credit learning process for both the lender and the borrower. Applicants and clients learn about the potential benefits--and dangers--of borrowing money, while PfP/Burkina Faso learns about the evolving needs of people undergoing tremendous and relatively rapid change as they combine traditional practices with the reality of a monetized economy.

The credit program developed by PfP/Burkina Faso is intended for people (literate or non-literate) who have had relatively little exposure to the acquisition, obligations, and management of investment credit (credit obtained for the purpose of stimulating or improving productive economic activities). Many applicants have dealt with traditional forms of credit, which are often used to make it through "hard times." However, investment credit is a relatively new phenomenon. Its importance has grown in Burkinans' lives with the increasing adaptation of Western concepts of goods and services to their traditional economy. With this expansion of the concept of goods and services, the importance of money as an exchange medium has also grown, and the spectrum of productive activities has widened. Investment credit has the potential to provide the borrower with great moral and financial satisfaction, or to saddle the borrower with hardship and "loss of face"--all depending on how it is administered by the lender and managed by the borrower.

PROGRAM POLICIES

1. Remain flexible under a variety of circumstances, to encourage productivity while ensuring that loans are repaid and PfP/Burkina Faso's credit fund remains intact.

2. Incrementally teach borrowers about financial obligations and responsibility in step-wise preparation for entry into the formal banking system.

3. Use careful selection criteria to "weed out" applicants with insincere motives or character flaws.

4. Establish and maintain relationships of trust, understanding, and cooperation with applicants and clients by treating them as equals.

5. Monitor the use of new skills and management tools.

CLIENT SELECTION

Since this model's objective is learning about credit and management--not just credit distribution--it works only with individuals and groups who are directly involved in the enterprise's activities. Open and meaningful conversation with those who are most familiar with day-to-day routines and bottlenecks results in timely and appropriate actions. In this way, people receive effective "on the job" training in the use of credit and management techniques.

Requests for assistance are taken from people who come to the PfP/Burkina Faso regional office in person asking to receive help. Those people who make a request by sending someone else cannot be counted on to be fully engaged in the proposed activity or to be fully responsible for its outcome--though often they may believe to the contrary. For example, perhaps the person making the request plans to have a relative or a friend actually work in the activity, while the person making the request assumes "financial responsibility." Who is the real decision maker? Who should receive management advice? Who is able to take the best action at the right time?

PfP/Burkina Faso does not require that its loans be secured by "bankable collateral." This approach allows access to credit training to people who have very little that can be legally used as collateral. (In fact the existence of such collateral is often an indication that the applicant may be better suited to a formal bank loan than to PfP/Burkina Faso's services.) Instead of collateral, PfP/Burkina Faso relies on its judgment of the applicant's character and sincerity as well as a close working relationship based on an understanding of each other's goals. It makes sure that loans are granted in appropriate amounts for viable economic activities (there is no minimum loan amount). When clients understand that they are participating in a step-wise credit learning process using incremental loans, repayment becomes a welcome part of the process--not a burden to overcome.

Of course there are those who request assistance for activities that are plainly unacceptable. "I want to buy a motorcycle," "I want to get married and it is very expensive," and "Our religious holiday is soon and I need to buy a sheep," are a few examples of inappropriate requests.

ESTABLISHMENT OF THE INTEREST RATE

Interest rates are always of primary concern when money is lent or borrowed. PfP/Burkina Faso builds relationships based on honesty and participation with the people it assists. The real costs of any kind of learning process are usually high, and PfP/Burkina Faso believes that people who

benefit from such processes should support a fair portion of those costs so that others may benefit. The annual rate of return on investment for the scales and kinds of economic activities that PfP/Burkina Faso's clients undertake varies between 100% and 500%--or more. Traditional moneylenders are known to charge annual interest rates in excess of 1,000%. PfP/Burkina Faso is restricted by law to charging the standard commercial interest rate--15% per annum.

LOAN APPLICATION AND REVIEW PROCESS

The credit program consists of six separate stages, developed over several years of working with the people of eastern Burkina Faso and experimenting with ways to effectively help them meet economic objectives. This process emphasizes the participation and recognized interdependence of all parties. The six stages of the program are:

1. Request
2. Interview
3. Pre-loan visit(s)
4. Loan
5. Follow-up
6. Post-loan evaluation

Stage 1: Request

Because the program is promoted by word of mouth only, most new applicants have friends who are already active participants. These prospective clients understand some of the limits of the program, the importance it places on management training, and the ongoing monitoring role played by the business extensionists.

As mentioned in the *Client Selection* section, the only fixed rule for eligibility is that the prospective borrower visit the office personally. This requirement insures that he or she understands the commitment involved. Also, PfP/Burkina Faso wants to be sure that it is dealing with the business decision-maker.

Stage 2: Interview

Learning about credit and management starts with the interview between the extension agent and the applicant. An Interview Sheet guides both of them through an organized examination of the applicant's proposed activity. For most applicants, this will be the first time they have attempted to explain the details of their activity in an organized fashion. Their ability to do so is an indication of their management and organizational skills; often they will identify for themselves certain aspects of the activity that

need more planning or information. More importantly, the applicants' willingness to respond to the extension agent's probing questions is a strong indication of their tendency to cooperate in the future. Without such cooperation, follow-up efforts are likely to fail, and borrowers will not gain a realistic understanding of credit--even if there are no repayment problems.

During the interview, the extension agent helps to refine the applicant's impressions and beliefs about the kind of plan that is necessary, the resource requirements, the applicant's assets, and the feasibility and profitability of the proposed activity. This is a joint effort that is based on what they both know about the environment, the competition, sources of supply, and markets. The applicant is assigned tasks to carry out based on the completeness of the proposal. A date is set for the extension agent's visit to the activity site, and the applicant returns to the work place.

Specific tasks are assigned by the extension officer for two purposes. First, the applicant and the extension agent will have jointly identified incomplete or inconsistent aspects of the applicant's proposal during the interview. Tasks are assigned so that information concerning these unclear aspects can be gathered by those who will eventually carry out the activity. Second, the implementing organization can learn a great deal about the applicant's sincerity, management skills, and learning ability by how well he or she completes these tasks.

Tasks take many different forms depending on the nature and completeness of the applicant's proposal. Tasks may include the following: preparing a budget; doing a simple market survey; finding a source of supply; learning some aspect of the proposed activity by spending some time with someone (usually a client) who has a similar activity; preparing or gathering inputs for the activity, such as building a structure or buying tools.

Sometimes the applicant's proposal is too unclear to be able to complete the interview. In this case, the extension agent will suggest ways for the applicant to clarify the proposal. This differs from the formal assignment of tasks mentioned above in that PfP/Burkina Faso has not yet made a commitment to invest its resources (other than the time spent in the interview). The extension agent is not convinced that the applicant understands what is required for a proposal. For example, if the applicant asks for a grain mill, but doesn't know how much it costs, hasn't ever seen one operated, and claims not to have anything to contribute to the project, PfP/Burkina Faso needs to see more of a commitment on the part of the applicant in order to commit itself. The extension agent might encourage the person to visit a grain mill in another village. In any case, the applicant is asked to return when the proposal is more complete.

Stage 3: Pre-loan Visit(s)

On the pre-arranged date, the extension agent visits the worksite of the applicant to begin gathering information for two critical decisions:

1. The applicant's creditworthiness

2. Determination of the loan (loan amount, repayment period, repayment schedule, and repayment amount)

The first decision, concerning the applicant's creditworthiness, is made before proceeding to the next stage. Once the applicant has been judged creditworthy, the information gathered during the pre-loan visit is then used in the next stage to determine the appropriate loan amount and terms of repayment.

For example, suppose that an applicant says during the interview that he is a tailor who has a sewing machine but lacks working capital for cloth. Then, during the pre-loan visit, the extension agent discovers that the applicant is not a tailor, has never owned a sewing machine, has not attempted to complete the tasks assigned, and is not respected by his neighbors. The agent can draw certain conclusions concerning the applicant's character and sincerity. This person would probably be judged uncreditworthy and the credit process would be stopped.

On the other hand, suppose that a merchant estimates her assets to be worth $2,000 and her daily sales to be $50, but upon completion of a basic balance sheet and profit-and-loss estimate, the extension agent finds that her assets are really worth $1,000 and daily sales are $30. An adverse judgment would probably <u>not</u> be made concerning her character and sincerity--especially if she has worked on the tasks she was assigned and her neighbors speak highly of her. In this case, the discrepancy between what she thought she had and what she really has is more an indication of poor management practices than a character flaw. Reasons for the discrepancy would be discussed with her, further tasks assigned based on what she had already accomplished, and a date set for another pre-loan visit.

Additional pre-loan visits are conducted until there is sufficient information to continue to the next stage of the process. There is no fixed limit to the number of visits necessary. However, if three or four visits do not reveal enough information, consideration is given to the resources being used by PfP/Burkina Faso. The process may be suspended until the applicant and PfP/Burkina Faso can agree on the best way to gather the missing information without further delay.

Stage 4: Loan

Once creditworthiness is established, the loan amount, repayment period, repayment schedule, and repayment amount are fixed according to the applicant's contribution level and management capability. These are interdependent functions that are put together in a delicately balanced "loan equation." The loan amount must be large enough to allow the activity to function, but not outstrip the proprietor's ability to manage. The repayment period must not be so long that it forces the applicant into a longer term obligation than desired. The repayment schedule must be tailored to coincide with the projected cash flow patterns of the activity. The repayment amount should only absorb a portion of profits to avoid decapitalization. All four of these loan equation components affect, and are affected by, each other.

Experience has shown that people receiving more in the form of a loan than they have personally invested tend to have trouble managing the proportionally sharp increase in resources. Learning about the use of credit and management is best accomplished when the borrower is not immediately overwhelmed by new responsibilities. Clients are therefore encouraged to borrow again as loans are repaid and their management abilities improve. They may continue borrowing larger and larger amounts until they make a decision as to the degree of financial independence they desire--at which point they may be offered a series of decreasing loans. This step-wise approach is paramount to the establishment of a truly appropriate loan amount. It is the foundation on which the PfP/Burkina Faso credit program is built.

When the four factors in the loan equation have been discussed and agreed upon by both PfP/Burkina Faso and the applicant, the Loan Agreement is formally explained, filled out, and signed by both parties. Cash, a check, materials, or some combination thereof are handed over and the "applicant" becomes a "client."

Stage 5: Follow-up

Follow-up is the longest stage of the process. During this stage, extension agents pay regular visits to their clients' activity sites until the loans are fully repaid. During these visits, extension agents perform the following functions:

- Provide clients with management assistance and monitoring
- Provide clients with technical networking
- Provide clients with moral support and encouragement

- Monitor the human, technical, and financial aspects of clients' loan repayment situations

Management Assistance and Monitoring

Management assistance offered by PfP/Burkina Faso consists of promoting four basic concepts:

1. Organization and planning--Following organized plans for supply, marketing, and other activities.

2. Working capital maintenance--Knowing the difference between working capital and profits, and realizing the importance of maintaining working capital.

3. Cash flow management--Being able to foresee cash requirements (e.g., inventory replenishment, maintenance of equipment, and loan repayments) and having an appropriate policy for customers who buy on credit.

4. The use of "business tools"--Understanding the importance of using an appropriate system to collect and analyze information.

Rural entrepreneurs who request assistance from PfP/Burkina Faso take an untraditional risk and feel strongly that they are putting their reputations on the line. When they arrive at PfP/Burkina Faso offices, they are sure that what will affect their lives most in the new relationship is the fact that they will owe money--not that they will learn something about management. Most of these people are quite confident that they know exactly how to make their economic activities succeed without endangering their reputations--otherwise, they wouldn't risk borrowing money from a community resource.

Offering management assistance to people who are sure that all they need is money requires extreme sensitivity. Too strong a management focus by extension agents may alienate the client; too weak a focus may deny the client an important learning opportunity.

PfP/Burkina Faso uses something analogous to a "carrot and stick" approach to management assistance. People receive credit when they have completed the tasks they were assigned during the interview. By completing those tasks with the supervision and help of extension agents, people are introduced to various management concepts which are appropriate for them. Through credit follow-up based on open conversation and participation, clients come to realize that appropriate <u>management</u> of their resources is as important as <u>having</u> resources.

Clients are encouraged to keep some type of records for disbursements and receipts. Basic balance sheets and profit-and-loss estimates are periodically filled out with client participation. The results of these exercises are almost always of interest to the client. Even if the client doesn't understand what the extension agent writes down, the information is interesting enough to encourage the entrepreneur to learn the concepts. Together they may devise other ways of "recording" things for later analysis--pebbles put in a box to record the number of hours a machine operates between oil changes; different pants pockets to separate working capital and profits; straw marks in a notebook to indicate the number of barrels of water delivered during the week.

Technical Networking

The hundreds of PfP/Burkina Faso's past and present clients constitute an enormous network of locally appropriate technical expertise. This network is available to each client. Often people who have proven to be "models" for a particular technique or technology are asked to receive training visits from other clients. Some of these "models" even find work with other clients, e.g., an expert miller is paid to help another client install a new grain mill.

In addition, PfP/Burkina Faso has contacts with local and international organizations that constitute another kind of technical network, which is also available to clients.

Moral Support and Encouragement

Hardships and misfortunes are commonplace when undertaking economic activities in areas where infrastructures, such as roads and communications systems, are often scarce or incomplete. For the program's clients, the moral support and encouragement provided by PfP/Burkina Faso through its flexible policies and regular visits can make the difference between hope and hopelessness.

Monitoring Loan Repayment

Maintaining close relationships with its clients enables PfP/Burkina Faso to constantly monitor the loan repayment situation. Extension agents are often able to anticipate repayment difficulties before they happen. They can then make suggestions about how to correct the problem, and they can gathe information for a prudent renegotiation of the repayment terms if this becomes necessary.

A few clients make very little effort to cooperate with the extension agents and may even attempt to avoid fulfilling their repayment obligations. Perhaps these people mistakenly

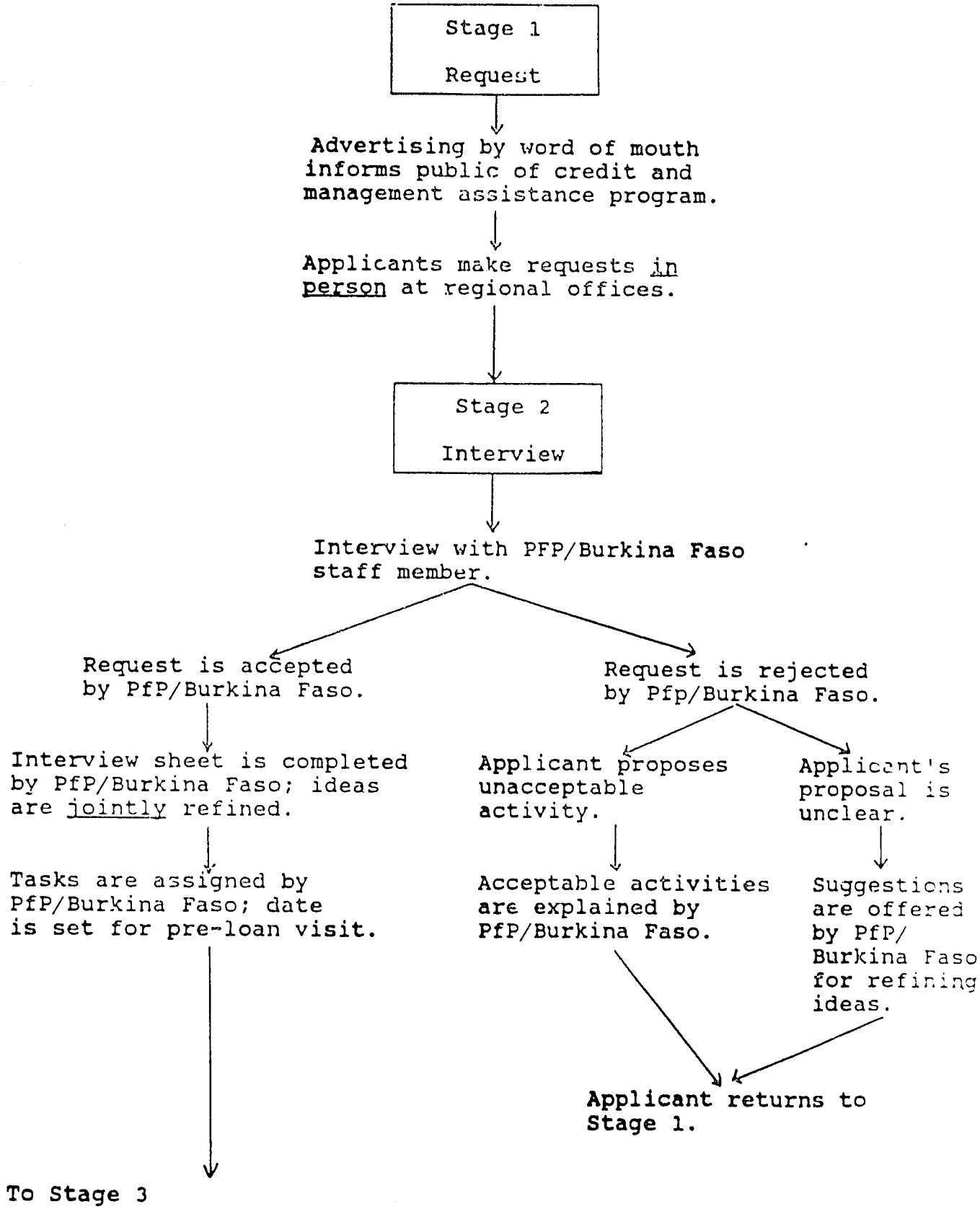
identified PfP/Burkina Faso with organizations dedicated to charity. Or perhaps they encountered problems they hadn't foreseen, and their traditional heritage fosters a reaction of fear rather than a spirit of cooperation. Every effort is made to reach these people to convince them that PfP/Burkina Faso is as concerned about the success of their economic activity as they are and is more than willing to explore different solutions to the problem.

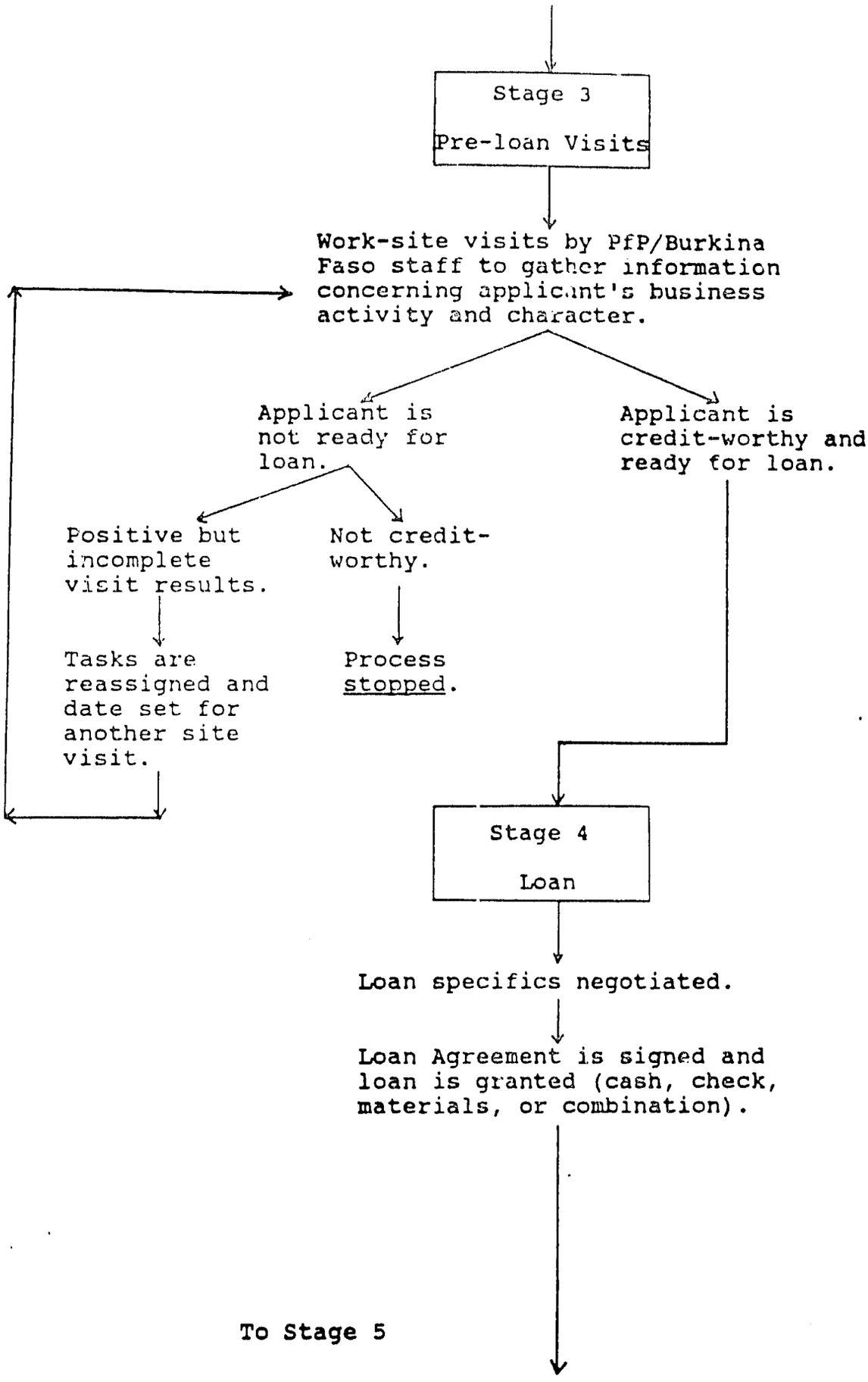
Those who refuse to make efforts to fulfill their financial obligations are referred to as "bandits" by the local staff and risk repossession of some or all of their assests and/or prosecution in court. They also permanently alienate themselves from the only credit training institution in the region that works with all types of proprietors who are engaged in all types of legal economic activities.

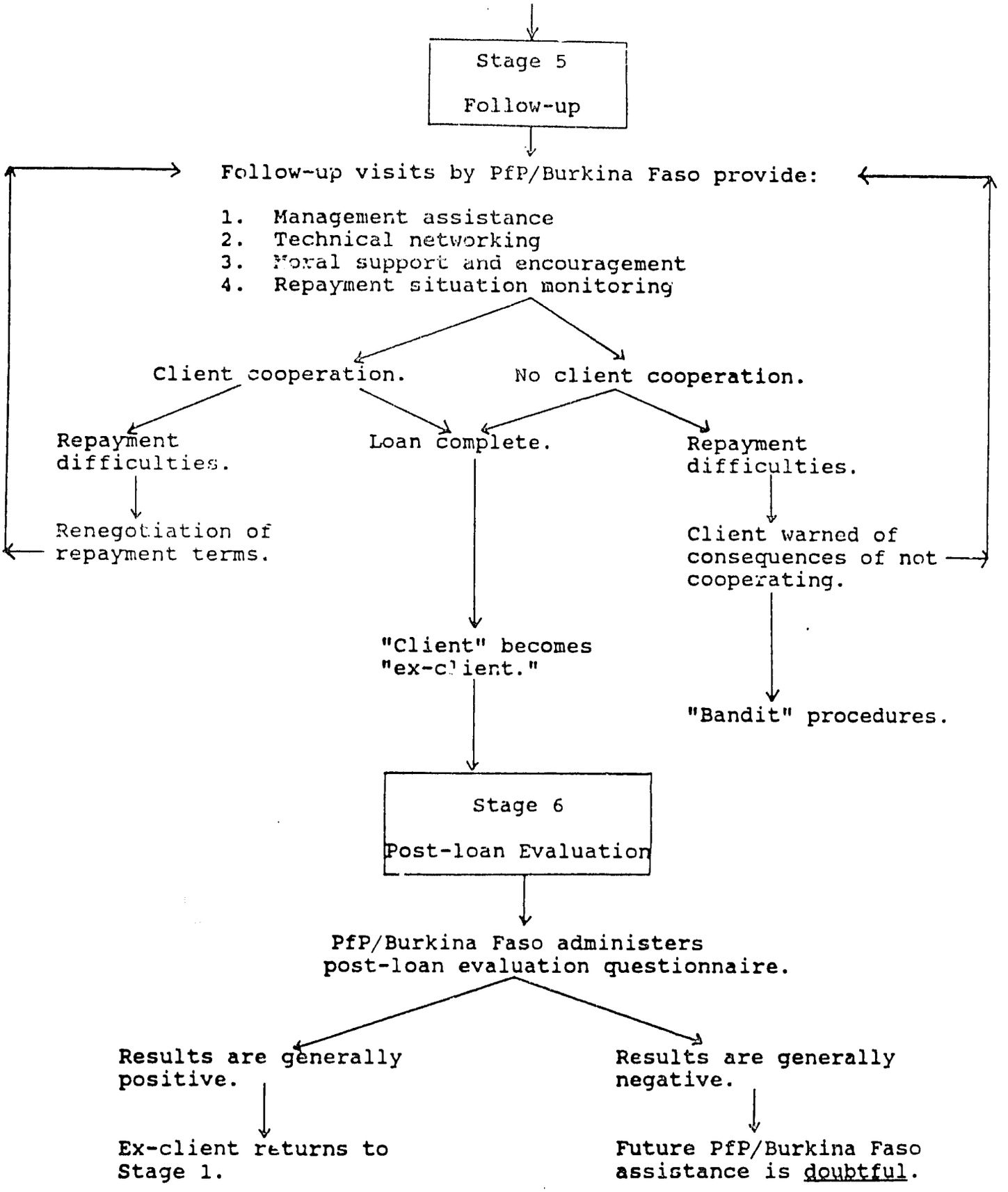
Stage 6: Post-loan Evaluation

After a loan is repaid, the final stage of the credit process is the administration of the post-loan evaluation questionnaire. This questionnaire is designed to record both the client's and the extension agent's observations concerning the effects of the loan on the client's economic activity, family, and community. It also analyzes "before" and "after" financial data for the enterprise. The evaluation results have a strong impact on the nature of any future PfP/Burkina Faso assistance to that person or group.

PfP/BURKINA FASO LOAN APPLICATION AND REVIEW PROCESS




Stage 3
Pre-loan Visits
Work-site visits by PfP/Burkina Faso staff to gather information concerning applicant's business activity and character.
Applicant is not ready for loan.
Applicant is credit-worthy and ready for loan.
Positive but incomplete visit results.
Not credit-worthy.
Tasks are reassigned and date set for another site visit.
Process stopped.
Stage 4
Loan
Loan specifics negotiated.
Loan Agreement is signed and loan is granted (cash, check, materials, or combination).
To Stage 5


Stage 5
Follow-up
Follow-up visits by PfP/Burkina Faso provide:
1. Management assistance
2. Technical networking
3. Moral support and encouragement
4. Repayment situation monitoring
Client cooperation.
No client cooperation.
Repayment difficulties.
Loan complete.
Repayment difficulties.
Renegotiation of repayment terms.
Client warned of consequences of not cooperating.
"Client" becomes "ex-client."
"Bandit" procedures.
Stage 6
Post-loan Evaluation
PfP/Burkina Faso administers post-loan evaluation questionnaire.
Results are generally positive.
Results are generally negative.
Ex-client returns to Stage 1.
Future PfP/Burkina Faso assistance is doubtful.

RISKS OF THE MODEL

1. Occasional problems may arise because some clients use the credit for new activities that were not carefully planned.

2. Depending on the number of "bandits" encountered, there may be a loan recuperation problem resulting in a cash flow crisis. Legal recovery can become administratively costly and damage the program's reputation.

3. The loan recovery rate may be relatively low.

4. Possible cash flow problems could occur due to legal limitations on the interest rate that can be charged, which is often far below the "street rate."

5. Clients with unsuccessful credit experiences through this program could suffer financial hardship, harassment from local authorities, and considerable damage to their self-esteem.

6. Some clients may confuse this type of credit program with a charitable "give-away" program.

ADVANTAGES OF THE MODEL

1. The program does not require "bankable collateral," so it can reach those with minimal assets.

2. Loans can be "customized" to meet specific needs of the client, thus recognizing seasonal opportunities or the special limitations of an applicant.

3. Management guidance can also be personalized, in terms of the frequency, type of training, and so on, provided to clients. The pace of change can be adjusted to meet the natural propensity of the client to accept change.

4. Those who use credit successfully will also learn basic management skills and will better understand the needs of formal sector credit suppliers.

5. This type of program is likely to have superior client selection, given the task assignment approach, which tests a potential client's sincerity and ability to make the management adjustments recommended.

RESOURCE REQUIREMENTS

1. Requires a potentially wide range of management training materials since the training is customized.

2. Requires well-trained staff for management consulting; could require larger staff or internally determined limits on the number of clients served at any one time.

3. Would be more difficult to plan cash flow needs, since loan amounts will vary with individual client's needs.

RESULTS

PfP/Burkina Faso administered over 1,500 loans to over 1,000 people in eastern Burkina Faso between 1978 and 1984, with a repayment rate between 80 and 90%.

SOURCES OF ADDITIONAL INFORMATION

Much of this information is excerpted from the PfP/Burkina Faso report entitled, "Meeting the Needs of Burkinan Micro-Entrepreneurs: A Manual for Credit Training, Credit Administration and Management Assistance," compiled and written by Alex K. Brown, May, 1984. This source also contains some of the forms used during the interview and financial analysis stages.

CARE PHILIPPINES' INCOME-GENERATING PROGRAM'S CREDIT MODEL

INTRODUCTION

This CARE income-generating program (IGP) assists rural, low-income families to improve their economic condition by providing small amounts of production credit and small enterprise technical assistance. Unlike most other CARE projects, CARE provides the capital for the loan fund due to the instability and near collapse of the formal, rural agricultural lending system in the Philippines.*

The program's hypothesis is that very small commercial activities can operate profitably, even facing moderately high interest rates, if they receive training inputs in small enterprise management, credit, and technology, and if the market is not artificially constrained. The ultimate goal of the program is to increase the incomes of the rural poor in a sustainable fashion. The focus on sustainability means that the enterprises receiving loans must be commercially viable and that local institutions must be financially and technically capable of continuing to offer technical assistance to small enterprises after the program ends.

Most of the proposed loans cover agro-based industries, which include on-farm production and animal husbandry activities, plus off-farm activities such as marketing, agricultural product processing, trading, manufacturing, and service enterprises. Examples of small enterprises for which loans are granted include vegetable and fruit production, rice production, cattle and hog fattening, rice and palay (paddy) trading, and food processing of papayas, bananas, and taro. While earlier projects often represented secondary sources of income for the participants, a policy limiting loan recipients to primary economic activities has evolved. All enterprises being considered for a loan, whether new or existing, must undergo a strict financial analysis that includes projected cash flow and income statements, sensitivity analysis and, where appropriate, break-even point analysis and market study. The financial analysis is only one aspect of the intense review that is conducted for all potential enterprise activities.

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* Normally, CARE does not use its own scarce resources as loan capital, but instead tries to link participating farmers with indigenous lending programs. At a minimum, CARE tries to leverage its funds by asking local banks to match CARE funds in extending loans to the rural poor.

Since CARE's intention is to strengthen local organizations to work more effectively with the rural poor, it has chosen to work through private, non-profit organizations in the geographic areas where it hopes to have an impact. CARE provides small enterprise and project management training to these "partner" organizations. It also lends them funds to help establish revolving loan funds. These funds are then either re-lent to the partner's member organizations, which in turn re-lend to poor entrepreneurs, or lent directly to the partner organizations' poorer constituency. In certain cases, a partner organization may borrow directly from CARE to establish its own enterprise. The purpose of the enterprise is to earn income for the partner organization to help support its development and training projects.

An example of a partner organization is the KAISA. The KAISA is a national association of irrigators' (small farmers who have non-IGP irrigation activities) organizations. These irrigators' organizations in turn have individual farmers as members. This type of multi-level organization is key to the success of the IGP's extension approach. For example, CARE does not usually work directly with farmers but, instead, works with the KAISA and its member organizations, such as KAISA-Cebu, which is a regional organization. KAISA-Cebu then directly assists its individual farmer members.

It is not necessary to have a three-tiered structure for this strategy to work. It would be possible to work directly with an indigenous NGO that has organized and works with the rural poor. This is an important point, because there are very few developing countries that have a three-tiered organizational structure offering effective services to the rural poor. On the other hand, there are numerous countries in Asia and Latin America that have extremely strong indigenous organizations that can be trained to provide technical and credit extension services to their constituents. Given these conditions, the CARE Philippines IGP credit program may not be completely replicable, but it is definitely adaptable.

A partner organization must meet certain criteria established by CARE before it can be selected to participate in the program. In addition, before CARE makes a large financial or technical assistance commitment, it implements a small-scale small enterprise project. Starting small enables CARE to become familiar with the partner's credit and project management abilities, while allowing the flexibility to make changes in the enterprise itself or the technical assistance package. CARE believes that it is essential to test ideas and approaches on a small scale before expanding them to the full target population.

PROGRAM POLICIES

1. Support commercially viable enterprises using small enterprise analysis systems common to formal sector business and lending institutions.

2. Use group mechanisms to strengthen local institutional capacity, efficiently organize individual farmers and entrepreneurs, and encourage repayment. However, where possible, provide loans to individual, not group, enterprises.

3. Give priority to food production, processing, and other agro-based activities that encourage crop diversification away from rice and corn.

4. Involve the target population in all phases of project design, proposal writing, implementation, and financing, including a financial contribution that takes the place of collateral.

5. Determine loan amounts on a case-by-case basis. This means that the amount of loan to establish the partner organizations' revolving funds will be based on their ability to manage the funds and the projected financial requirements of the small enterprises receiving loans. The loan to the partner organizations for their revolving loan funds will be for a maximum of five years, including not more than a one-year grace period. The amount of the loan given by a partner organization to one of its member organizations in order to finance individual small enterprises will, likewise, be based on the enterprise owners' ability to manage the funds and repay in a timely manner. Most of the loans granted to individual small enterprises will be for a maximum of one year.

6. As the formal rural banking system is re-established, graduate successful IGP loan recipients to the formal lending sector. Recipients who successfully repay IGP loans will establish their "bankability" with local lending institutions.

7. Limit training programs and technical assistance to groups and individuals linked directly to small enterprise activities.

8. Always complement credit inputs with technical assistance that concentrates on small enterprise management and technology inputs.

9. Implement small enterprise projects through national and regional partner organizations, not directly with village-level small enterprises or community groups.

10. Cluster the IGP with other CARE activities to achieve greater impact and take advantage of mutually reinforcing activities.

11. Integrate personal and equity savings mechanisms (capital build-up) into each small enterprise project. Personal savings ensures that participants won't be forced to use the enterprise's working capital for personal emergencies. Equity savings allows the participant to build up enough capital so that he or she won't need to borrow in the future to maintain the enterprise.

CLIENT SELECTION

Because CARE Philippines works through national and regional partner organizations, there are two levels of client selection involved. The first focuses on the management capabilities and regional presence of the partner organizations themselves, and their potential for implementing a credit program. Often, these partners are already working with CARE in one of its other programming areas--primary health care, agriculture and natural resources, or disaster relief.

The second level of client selection involves the way in which these partners choose specific communities and individual families to participate in the local program. As a rule, low-income communities are the target beneficiaries. Those communities that can demonstrate they have worked as a cohesive unit on past projects will be considered. The individuals, families, and small enterprises to be included will select themselves by demonstrating their willingness to become involved and their clarity about the purpose of the project. Other factors include the applicant's willingness to provide some of the required materials and skills, and a firm commitment to comply with the loan agreement.

Other criteria for individual participants are as follows: he or she has no large outstanding debts, is willing to maintain all necessary records, and agrees to attend whatever training or special activities are deemed necessary.

ESTABLISHMENT OF THE INTEREST RATE

There are two relevant interest rates with this mechanism: 1) the rate paid by the project partner to CARE and 2) the rate paid by the individual enterprise to the project partner. Since one of the program's goals is to establish a sustained source of local capital for community enterprises, CARE charges the project partner a slightly subsidized rate of interest. This is intended to allow capital build-up

and give the partner an opportunity to cover administrative costs, handle emergencies, and prepare for self-sufficiency. Before the project partner receives the subsidized rate, however, CARE develops a multi-year cash-flow projection that indicates which costs are being subsidized and by what amount, and when the partner organization will have the ability to independently cover those costs. CARE also completes a five-year computerized cash-flow projection for its own loan system, which indicates the size of the loan fund, interest rate, and repayment level necessary to cover its own operating costs.

The interest rate charged to local loan recipients by the regional/community group is close to the rural commercial credit rate. CARE Philippines has consciously decided against low-interest loans, citing a number of studies illustrating the lower recovery rate of such loans. The interest rate is intended to advertise this program as one for responsible borrowers only. It also allows loan recipients to be recognized by formal lending institutions as capable of paying commercial rates.

The loan recipients' interest rate is influenced by the cost of the services provided by the project partner, the length of the loan, the capital build-up potential of both parties, and the income levels of the loan recipients. This rate is reviewed on an annual basis and is set above existing government subsidized lending rates for grain production (when loans are to be used for increasing agricultural production).

LOAN APPLICATION AND REVIEW PROCESS

There are eight stages in the loan application and review process. These stages are as follows:

1. Promotion and initial requests
2. Project proposal by partner and regional/community group
3. Proposal review
4. Release of funds to partner organization
5. Regional/community group loan application process
6. Release of funds to regional/community group
7. CARE monitoring
8. Evaluation

Stage 1: Promotion and Initial Requests

CARE contacts a number of national and regional current and potential project partners, explaining the general guidelines and overall objectives of the small enterprise program. In agreement with the clustering approach, target communities are selected.

These organizations contact community groups, if they don't already have such groups affiliated with them as members, to begin the design process. The first step is limited to a small-scale, rural project (often efforts to increase crop yields, diversify, or begin rudimentary agricultural processing). Such efforts involve approximately 20 loan recipients. CARE reviews the initiative to measure the impact on the target population, the partner's ability to manage a revolving credit portfolio, and the amount of financial and technical assistance required.

Stage 2: Project Proposal by Partner and Regional/Community Group

If the results warrant a larger effort, the partner and regional/community group collect baseline data to justify the scale and focus of the small enterprise proposal. The proposal does not have to be for just one enterprise but can actually be for a number of types of enterprise, such as hog fattening, integrated farming, and palay marketing. It is presented in a standardized project proposal format to CARE's Project Officer and includes marketing studies, reviews of the technical production situation and potential, and the current and projected financial and management situations. Assumptions and a financial analysis are also included. Additional components of the proposal are selection criteria for individuals, enterprises, and regional/community groups; loan processing and approval policies; and a capital build-up system and schedule.

It should be noted that this proposal, though somewhat detailed, is developed mainly to describe a broad range of activities for which the regional/community groups' constituents will take loans. It is this proposal that helps establish the partner organization's revolving fund systems.

Stage 3: Proposal Review

The proposal is reviewed in a meeting of the CARE Project Officer, members of the regional/community group, and representatives of the partner. Any changes deemed necessary by CARE are discussed, and the partner and regional/community group are responsible for incorporating these into a final proposal.

CARE conducts an internal review of the final proposal, either accepting it, recommending further changes, or rejecting the document.

Stage 4: Release of Funds to Partner Organization

If CARE accepts the project as presented in the final proposal, the CARE Country Director, IGP Project Manager, and the partner organization sign a letter of agreement and copies of the final proposal. The funds are then released to cover administrative overhead and the establishment of the revolving loan system defined in the agreement.

Stage 5: Regional/Community Group Loan Application Process

The regional/community group (which may also be an existing small enterprise or women's group) prepares an application for small enterprise projects in compliance with the guidelines specified in the final proposal. The proposed enterprises fall within the same categories (hog fattening, etc.) as detailed in the final proposal. The application includes the amount of credit required per individual loan recipient, the repayment schedule, and the expected impact.

Usually individual members of the regional/community group receive the loan, even though the loan is given to the group as a whole. The group is responsible for covering the individual loans if a member defaults. If a regional/community group defaults on its loan, then the partner organization is legally responsible to CARE for repayment.

Stage 6: Release of Funds to Regional/Community Group

Before receiving the credit, the regional/community group must present its cash contribution to the partner organization. If an in-kind contribution is called for, this must be reviewed by a representative of the partner organization as well. The partner's cashier is then free to disburse the loan amount to the regional/community group (which, in turn, primarily distributes not cash but agricultural inputs to loan recipients) and make the necessary accounting entries.

Stage 7: CARE Monitoring

CARE's Project Officer prepares a plan for monitoring the project, both from the standpoint of the partners's management of the revolving credit system and the impact on the target population. This plan includes periodic visits to the field and interviews with group members who have received loans.

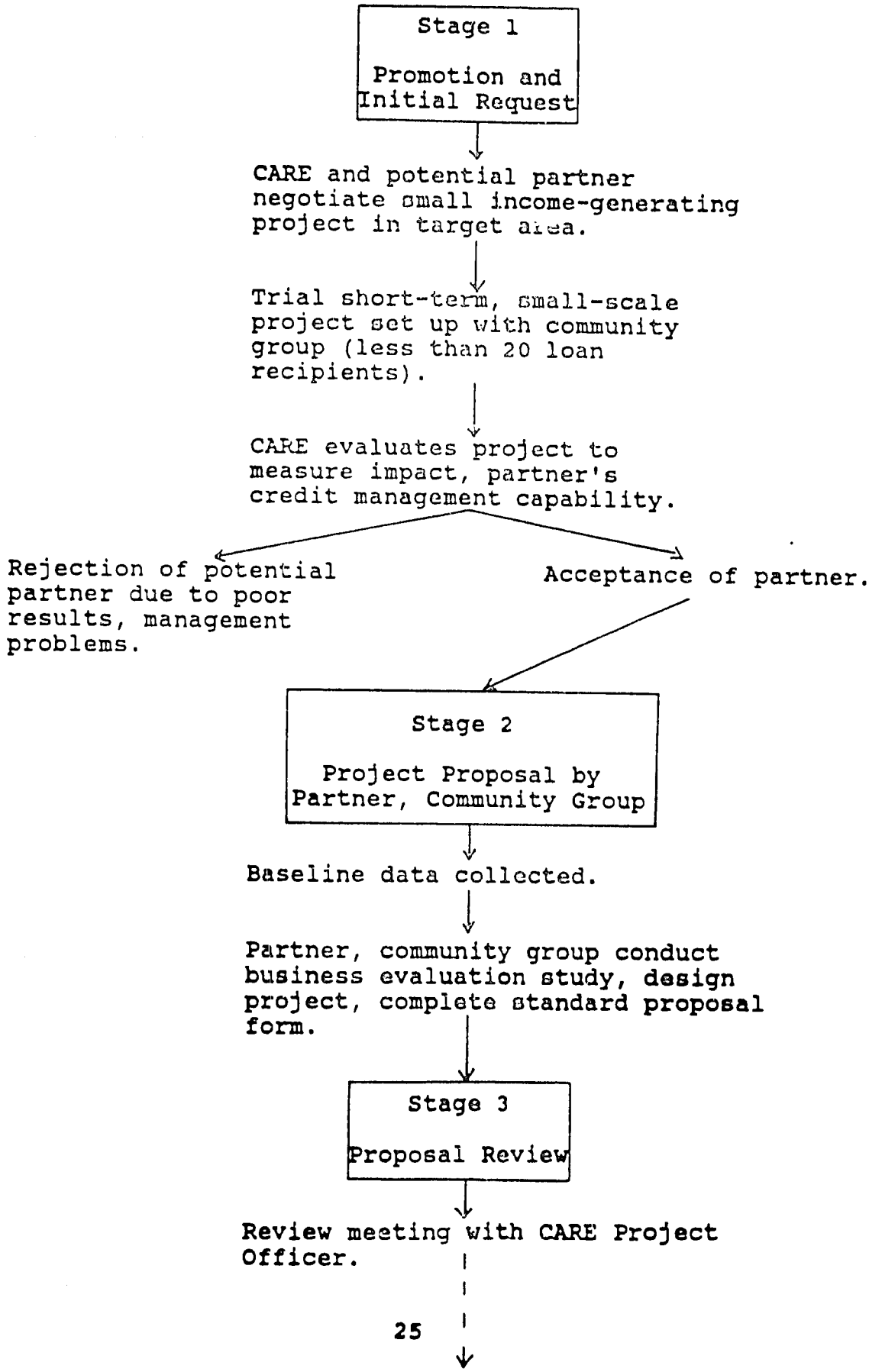
CARE also tracks the project through descriptive reports from the partner and regional/community group, periodic financial reports, and audited annual financial statements. The partner organization is responsible for maintaining documentation concerning loan repayment and the revolving loan system in accordance with CARE regulations.

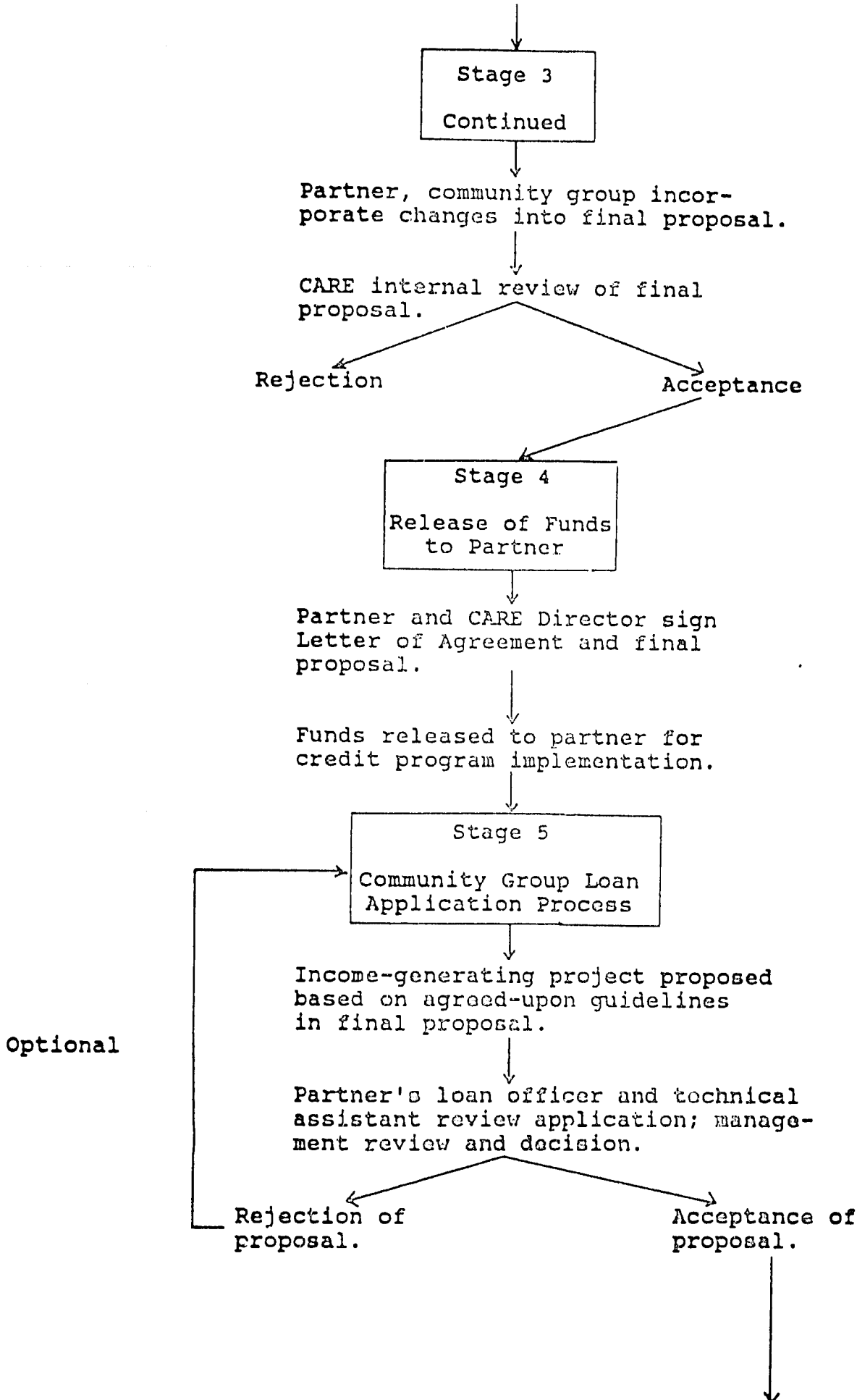
Stage 8: Evaluation

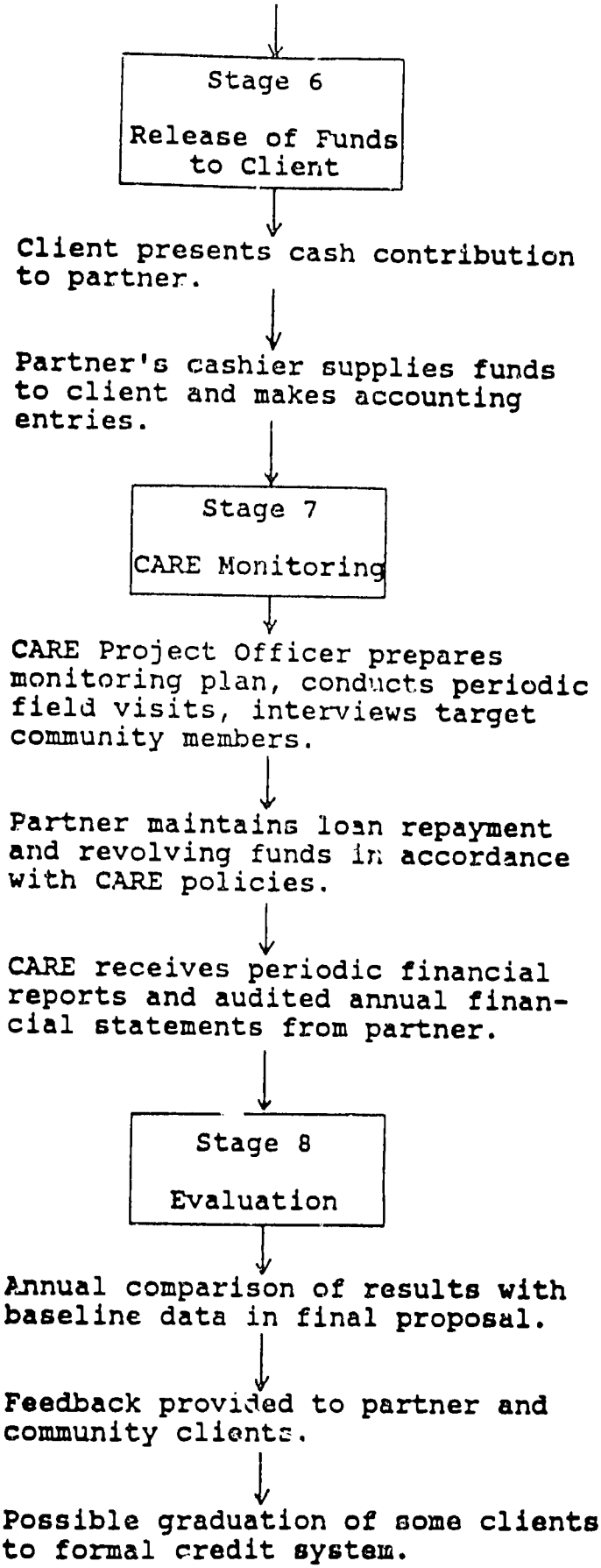
CARE evaluates the project annually, comparing results from the field with the original baseline statistics collected during preparation of the final proposal. Feedback is shared with the partner, the regional/community organizations, and the individual group members. Major factors evaluated include: increases in income to individual loan recipients as a result of small enterprise activities, repayment rates, and the sustainability of the loan fund.

While the agreement between CARE and the partner organization may last for five years, the loans granted to the regional/community groups are of a much shorter duration. Some of these groups are encouraged to "graduate" to the formal sector credit system when results warrant. Successful partners will have sufficient capital build-up accumulated to begin independent operations after the five-year period, thereby creating a renewable source of local credit for small enterprise activities.

CARE PHILIPPINES LOAN APPLICATION AND REVIEW PROCESS




Stage 3
Continued
Partner, community group incorporate changes into final proposal.
CARE internal review of final proposal.
Rejection
Acceptance
Stage 4
Release of Funds to Partner
Partner and CARE Director sign Letter of Agreement and final proposal.
Funds released to partner for credit program implementation.
Stage 5
Community Group Loan Application Process
Income-generating project proposed based on agreed-upon guidelines in final proposal.
Optional
Partner's loan officer and technical assistant review application; management review and decision.
Rejection of proposal.
Acceptance of proposal.


Stage 6
Release of Funds to Client
Client presents cash contribution to partner.
Partner's cashier supplies funds to client and makes accounting entries.
Stage 7
CARE Monitoring
CARE Project Officer prepares monitoring plan, conducts periodic field visits, interviews target community members.
Partner maintains loan repayment and revolving funds in accordance with CARE policies.
CARE receives periodic financial reports and audited annual financial statements from partner.
Stage 8
Evaluation
Annual comparison of results with baseline data in final proposal.
Feedback provided to partner and community clients.
Possible graduation of some clients to formal credit system.

RISKS OF THE MODEL

1. This model faces many of the risks of agricultural lending programs, particularly the chance that irregular rainfall or insect infestations may cause a decline in marketable output. In addition, loans tend to be for four to six months to cover at least one complete cropping cycle. Repayments are made only at the end of this period. If there is a poor harvest, the loan cannot be repaid. (This differs from the Grameen Bank model, which works with enterprises that provide weekly income and which collects weekly loan installment repayments.)

2. Many of the products involved in agricultural lending programs face sudden price changes, due to government price board actions or the seasonality of market supply and demand. This could make it difficult for loan recipients to make loan repayments on schedule.

3. The technical assistance and associated time requirements are difficult to predict since there are a wide range of approved small enterprise activities that need input from the staff.

4. The fact that a partner organization can manage community-level projects does not necessarily translate into credit management skills. Likewise, the fact that a regional/community group can manage a project does not necessarily mean that its members have financial management skills.

5. CARE's Project Officer must recognize problems as they develop at both the partner and regional/community group levels. Institution building tends to require in-depth, continual monitoring that takes financial and staff resources to support.

6. The IGP program that offers small enterprise management, technology, and institution strengthening inputs is more expensive to operate than those small enterprise programs that only offer credit inputs.

ADVANTAGES OF THE MODEL

1. This program gives the local partner organization an opportunity to answer the most pressing needs it identifies in a fairly independent manner. It is also a more streamlined approach than would be the case if CARE personnel had to review every small community-level project.

2. Depending on the success of capital build-up, this mechanism could create a new source of local capital for credit.

3. Since the program is operated with the "cluster" concept in mind, there could be important, mutually reinforcing links between projects in an area.

4. There is a preference for crops that will diversify the community's productive base beyond staples such as rice and corn.

RESULTS

This effort by CARE Philippines is based on previously successful small enterprise systems developed by Philippines Business for Social Progress (PBSP) and other local organizations. The lessons incorporated into the IGP program were the use of non-government counterparts, a focus on capital build-up, and the need to base credit on food-based agricultural production and processing. The first mid-term evaluation of the project will be performed in August, 1987.

SOURCES OF ADDITIONAL INFORMATION

This summary has been abstracted from several CARE Philippines documents, including the "IGP Multi-Year Plan," "Partner Organization Management Assessment Framework," "IGP Fiscal Year 86 Year-End Report," and IGP agreements and project organization profiles. In addition, the author has had three in-depth visits to the project in 1985, 1986, and 1987.

THE GRAMEEN BANK SMALL ENTERPRISE DEVELOPMENT MODEL

INTRODUCTION

The Grameen Bank project began in 1976 as a result of a university professor's vision of how the rural landless poor of Bangladesh could increase their incomes in a sustained manner. Professor Muhammad Yunus felt that if the poor could work for themselves, rather than working as laborers for others, they could retain much of the surplus generated by their labor. He reasoned that to become self-employed, the landless primarily needed access to credit with which to purchase tools or to use as working capital. Thus, his objective was to design an organizational framework that provided a reasonable and dependable forum through which the banking system could extend credit to the landless without collateral.

Professor Yunus also wanted to establish an action research project to test the hypothesis that if financial resources are made available to the poor at reasonable terms and conditions, they can generate productive self-employment and improve their economic conditions without any external assistance. The other major ingredients for small enterprise development, small enterprise management, and technology inputs were not included in his original concept of the Grameen Bank. This was because loan recipients were mainly to be engaged in small enterprise activities and at a scale of operation with which they were already familiar. In addition, they would be aiming for local markets that they understood.*

Professor Yunus launched the Grameen Bank not just to offer credit but to offer <u>access</u> to credit. This meant decentralizing the loan application and processing system so that loan recipients could have banking services at the village level rather than having to travel to the district or town centers. In addition, access meant that traditional collateral and other loan stipulations would not be required.

In this system, prospective borrowers must take certain steps to earn the right to participate as member/shareholders of the Bank. (In 1983 the Grameen Bank became an independent bank with its own share capital and shareholders. Loan recipients are member/shareholders in the Bank.) They must adopt the Bank's "sixteen principles," which include abandoning the dowry system, repairing their homes, starting vegetable gardens, and installing latrines. These steps illustrate the social dimension of the Bank's program.

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* When enterprise characteristics change, e.g., expansion or diversification of products, markets, and/or technologies, credit becomes only one--and not necessarily the most important--aspect of small enterprise development.

To support the Grameen Bank, Professor Yunus was able to mobilize financial support from the central bank, six commercial banks, the International Fund for Agricultural Development, the Ford Foundation, and UNICEF. Much of this support is in the form of loans to the Bank. These funds are then on-lent to the members. It is important to note that among the Bank's employees and members there is a widespread feeling of participating in a social revolution through which they can find social, political, and economic strength and eventually redefine the distribution of financial and development resources in Bangladesh.

PROGRAM POLICIES

1. All major decisions related to loans are made in open meetings at the community level. Topics in these weekly get-togethers include loan repayment schedules, amounts to be offered to individuals, and savings requirements of the program.

2. One goal is to have all branch offices self-financed by loan activities. This is critical to the establishment of a reputation as a credit business, rather than as a charitable organization.

3. Loans are repaid gradually and on a regular basis. A mutual assurance system is intended to keep loan repayment dependable.

4. Loan requests must first be approved by the group and then by several levels of Bank management.

5. Group savings, both for emergencies and for internally generated credit in the future, is an integral part of the scheme.

6. Bank extensionists must live in the community for which they are responsible. This enables them to identify potentially reliable clients and feasible small enterprise opportunities.

CLIENT SELECTION

Loan recipients, who are also members (or shareholders) of the Grameen Bank, are landless men and women. Since not all landless are necessarily poor, the Bank has adopted a net worth criterion for selecting potential loan recipients. Membership is restricted to individuals whose families own less than 0.5 acres of cultivable land. In addition, the total value of each family's assets cannot exceed the market

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value of one acre of medium-quality land in the area. Although income may be considered a more direct measure of poverty, it is notoriously difficult and time-consuming to estimate.

Besides working with some of the poorest people in the country, the Grameen Bank particularly emphasizes working with rural, landless women who are at the absolute bottom of the economic ladder. It is a remarkable feature of the Bank that in a country where most women adhere to traditional, religious rules of isolation, over 56% of its members are rural women.

The Bank's selection system limits membership to those who are at the same economic and social level. It is reasoned that if village elites were included as members, they would dominate the groups and, as employers and moneylenders, intimidate the poorer members. Also, the particular quality of the membership tends to foster solidarity and a social movement atmosphere among the members.

This approach is not necessarily appropriate for other countries where separating the poor from the middle class and wealthy can be seen as divisive. It is best for each small enterprise development project to weigh the benefits of the approach.

INTEREST RATES

The Grameen Bank central office is lent funds at various rates, e.g., 8.5% from such institutions as the Bangladesh Bank. It then lends funds at 10% annual interest to its branch offices. Loans are offered at 16% per annum (calculated on a declining balance) to the members, which is similar to other rural lending programs offered by Bangladesh banking institutions. The interest rate is not lowered because of its special clientele. The Grameen Bank is run as a <u>business</u> and needs to cover its operating costs from collection of interest payments. All branch offices should be self-financed through loan activities. Other small enterprise development loan programs can learn from Grameen's approach. If a loan fund's operating (not technical assistance) costs are subsidized, then it will be difficult to financially sustain the program.

The 16% annual interest rate is actually low compared to the estimated 300% rate in effect in the rural, non-formal lending sector. The 300% rate doesn't even come close to the hidden economic costs, such as the opportunity costs incurred when the farmer must agree to sell his produce through the lender.

STRUCTURE OF THE ORGANIZATION

The Staff

The Grameen Bank has a head office in Dhaka and zonal, area, and branch offices in the rural areas. The branch office is established within easy reach of the target population and has Branch Workers (also called Bank Extensionists) and Program Officers who work directly with the villagers both at the "group" and "center" meeting level. Each area and zone also has managers who are involved in the loan review and approval process.

The Group

Before loans are given to eligible borrowers, the landless men and women must organize themselves into five-member groups. In many ways this epitomizes self-selection at the village level, since the villagers choose whether or not to participate in the program. They also decide who is eligible to be a member (this is further screened by the Branch Worker) and the composition of each group. Groups usually consist of five people who know each other well. Close relatives, however, cannot be members of the same group. The villagers are quite careful about whom they choose to be members of their group because members cannot receive loans if another member defaults on a loan. If this happens, they need to reorganize the group. However, it is this critical role in selecting members and groups that gives the villagers a sense of ownership of the program.

The group must participate in a one- to two-week training course to learn about the Bank's philosophy, rules, and procedures and pass a test concerning this information. They must also be able to sign their names, which is a major accomplishment for many of them, and agree to be observed by the Branch Worker for one month before the first loan is given.

Each group elects a chairman and a secretary, holds weekly meetings which all members must attend, and collects a fixed amount from each member as weekly savings. It is also at the weekly meeting that the sixteen principles are reviewed and loan requests are first formulated and considered. If approved at this level, they are forwarded to the next level, the center, which does the final review before approval of the loan.

The Center

A "center" consists of five or six groups in the same geographic area. It selects from among the chairmen of the various groups a Center Chief and Deputy Center Chief. These officials conduct the weekly meetings of the center, recommend loan proposals, supervise loan activities, and assist the Branch Worker. All major decisions related to loans are made at the center and group meetings. These decisions are discussed openly along with loan repayment schedules and amounts to be offered to individuals.

LOAN APPROVAL AND COMPLIANCE REQUIREMENTS

Individual requests are approved successively by the group, the Center Chief, the Branch Worker, the Program Officer, and the Branch and Area Managers. No collateral is required for the loan, but peer pressure from the group helps assure regular repayments. If a member defaults on a loan, he or she is disqualified and a new group must be organized.

Initially two members of the group, excluding the Chairman or Secretary, are given loans. Upon compliance with the regulations for one month, two additional members become eligible for loans. After another month of compliance, the fifth member may receive a loan. The loans are for a maximum of one year and are repaid at the weekly meetings in fifty equal installments. The interest is repaid in the last two weeks of the year.

Limiting loans to one year, regularly collecting repayments, and providing a short interval between repayments helps train the borrower in the discipline of loan repayment and also helps assure that the borrower doesn't spend his or her earnings, which were budgeted for loan repayment, on other items. This is an important point, since most borrowers chronically need cash to pay for essential items. The longer the cash remains with the borrower, the greater the likelihood that it will be used for something other than the loan repayment. In addition, the weekly equal repayment method is easily understood by the borrowers and the short, one-year loan period allows them to "see" the end of their indebtedness.

One-year loans and weekly repayments, however, are only possible with those small enterprise activities that have a consistent and fairly regular cash flow picture. In other words, the enterprise from start-up provides weekly net income that permits the loan recipient to repay the loan. Loans that fall into this category include small trading and service activities, such as rice and vegetable trading, rickshaw transport, peddling, and oil pressing, which take very little time (a few days) to start and which comprise the vast majority of the Grameen Bank's loans. Agricultural

loans and loans for production activities (which either require a long start-up period or necessitate a certain level of production or efficiency before loans can be repaid) require payment periods based on when income is expected from the sale of the products, i.e., harvest time.

The majority of the Bank's loans are given to individuals for small enterprise activities that are organized on an individual or family basis. As of 1984, loans for collective or joint activities, such as rice milling, fish ponds, or management of power pumps, accounted for only 2.7% of the total loans. This is because group enterprises--with their increased complexity, size, and sophistication--are notoriously difficult to manage. Furthermore, in addition to credit, they often require small enterprise management and technology inputs which the Bank does not generally offer. Without these two additional, major inputs, larger and more complex enterprises often run into trouble. If a collective or joint enterprise does apply for a loan, it must be approved by both the Branch and Area Managers along with the Zonal Manager.

GROUP AND EMERGENCY FUND DEDUCTIONS

In addition to weekly meetings, weekly loan installments, and weekly savings, each loan recipient is required to pay a group tax of 5% of the loan amount. This tax is retained by the Bank, in the group's account, at the time of loan disbursement. The weekly savings and group tax constitute the "group funds" from which individual members can borrow (at a rate fixed by the group) for consumption and investment purposes. Group members are also required to contribute to an "emergency fund" that consists of 25% of the total amount of interest charged by the Bank on the loan. The emergency fund payments, however, aren't due until the loan is fully repaid. This fund can be used for life, health, or asset insurance for the members or to improve their standard of living in some substantive way. In certain instances it can be used to repay the loan of a member who becomes unable to repay due to accident or other unforeseen circumstances.

The group funds (savings and tax) are owned and operated by the group. Although individuals on leaving the group are entitled to receive their personal savings, the proceeds from the group tax are the property of the group. This endows the group with continuity beyond the individual members. The emergency fund, although collected by the group members, is a "center" responsibility and operates at the center level.

The combination of interest payments (16%) and the variety of deductions amount to a minimum of 25% of the loan. Such high rates of savings or deductions are only possible if the loan investments are highly productive.

LOAN APPLICATION AND REVIEW PROCESS

The Grameen Bank's loan application and review process comprises the following stages. The tasks involved are performed primarily by the Branch Worker.

1. Promotion
2. Group formation and training
3. Loan application, disbursement, and collection
4. Monitoring
5. Subsequent loans
6. Community credit needs reassessment

Stage 1: Promotion

The Branch Worker begins by visiting a potential village and providing villagers with general information and applications for the Grameen Bank. He or she also collects baseline data at this time to determine who might qualify to be a member.

Stage 2: Group Formation and Training

The Branch Worker conducts a one- to two-week training session for interested individuals, helps them form groups of five and choose group officers, and assists in uniting five or six of these groups into a "center." He or she, along with other branch staff, then observe the group for one month. Eventually each Branch Worker will be responsible for approximately 40 groups, or 200 members.

Stage 3: Loan Application, Disbursement, and Collection

The Branch Worker attends the weekly group meeting and with the group reviews loan applications and collects repayments, savings, and other deductions. As part of the loan application procedure, the Branch Worker reviews the level of income, assets, family size, and past borrowing experience of the applicant; visits the enterprise to verify the accuracy of the information; and, if the loan is approved by the appropriate persons, disburses the loan in cash to the borrower at the next center meeting.

Stage 4: Monitoring

The Branch Worker visits loan recipients at work sites within the first week of their receiving credit. He or she also monitors the group's development, its adherence to the sixteen principles, loan repayments, and payments of savings and fund deductions. In addition, the Zonal Manager visits the loan recipients without warning and attends the center's meetings once a month. This enables the Zonal Manager to

keep in touch with the branch's needs and the problems faced by the members.

Stage 5: Subsequent Loans

The Branch Worker assists groups who have been dependable to apply for subsequent loans, loans for emergencies and home purchases. Home loans are offered with terms up to 15 years at formal sector rates.

Stage 6: Community Credit Needs Reassessment

During this stage, the Branch Worker summarizes the community's credit requirements for the Branch Manager. The various Branch Managers then discuss each community's needs with higher-level bank officials, who determine how available funds should be distributed.

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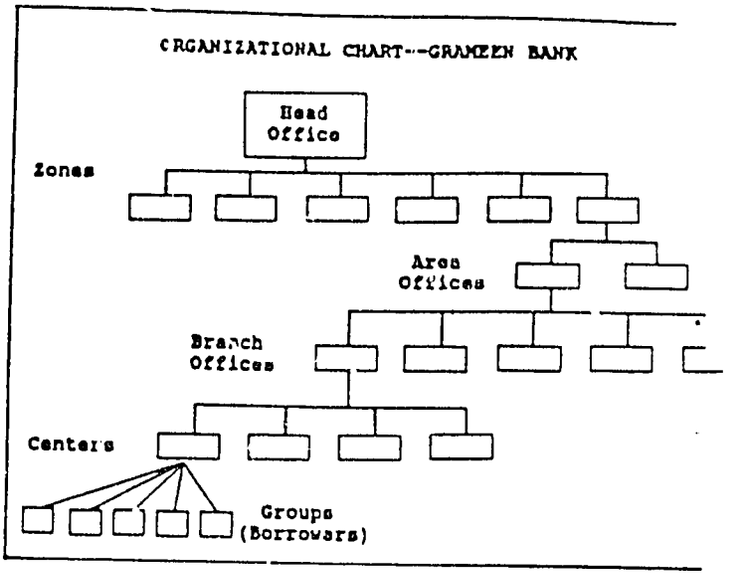
GRAMEEN BANK LOAN APPLICATION AND REVIEW PROCESS

Stage 1

Promotion

Bank extensionists informally discuss program guidelines with community members.

Extensionists collect baseline data.



Stage 2

Group Formation and Training

Interested individuals attend training sessions (1 to 2 weeks).

Entrepreneurs form groups of five.

Centers of five or six groups formed in community; center leader and assistant leader chosen by members.

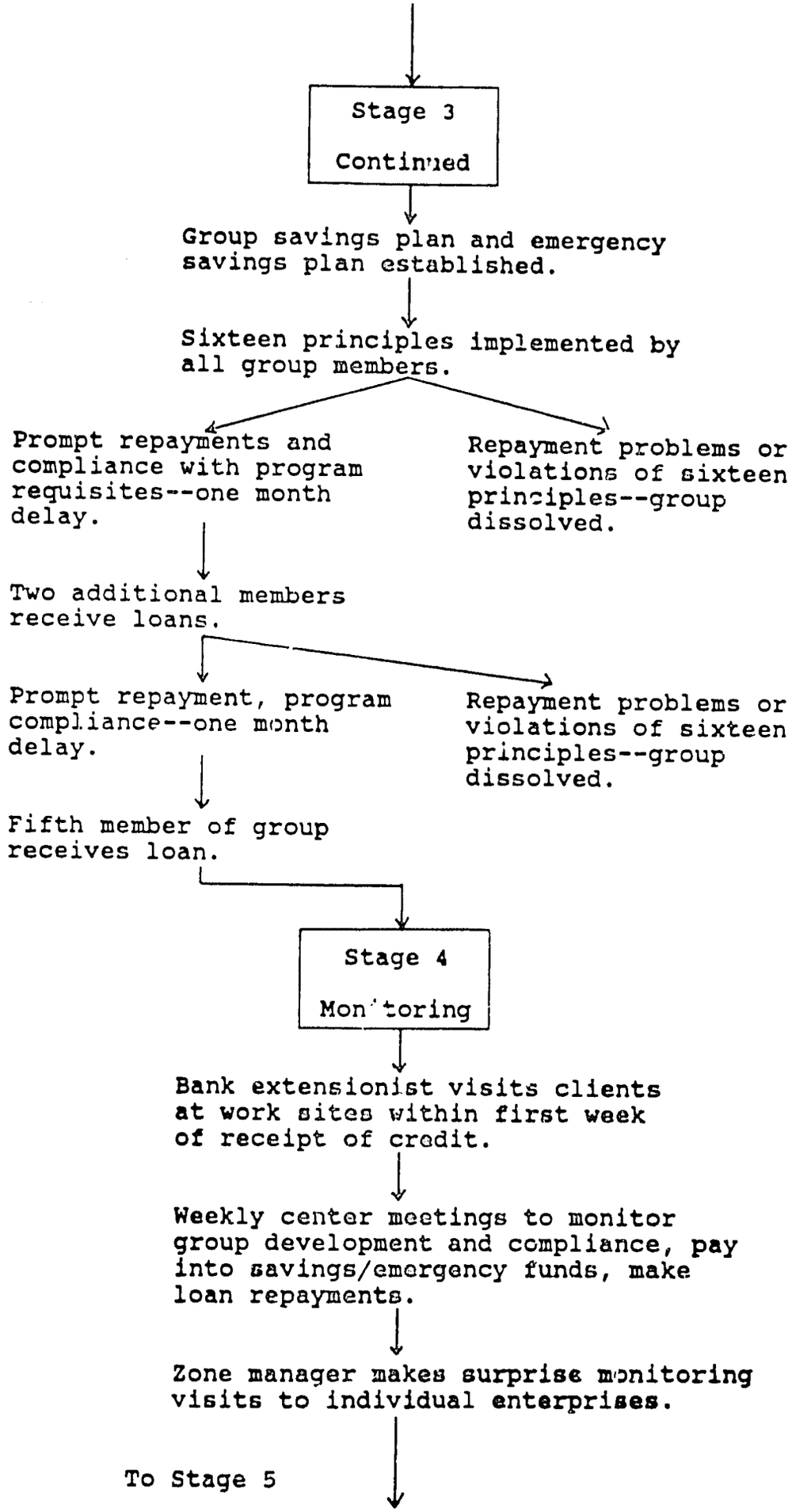
One month of observation before first loan applications can be submitted.

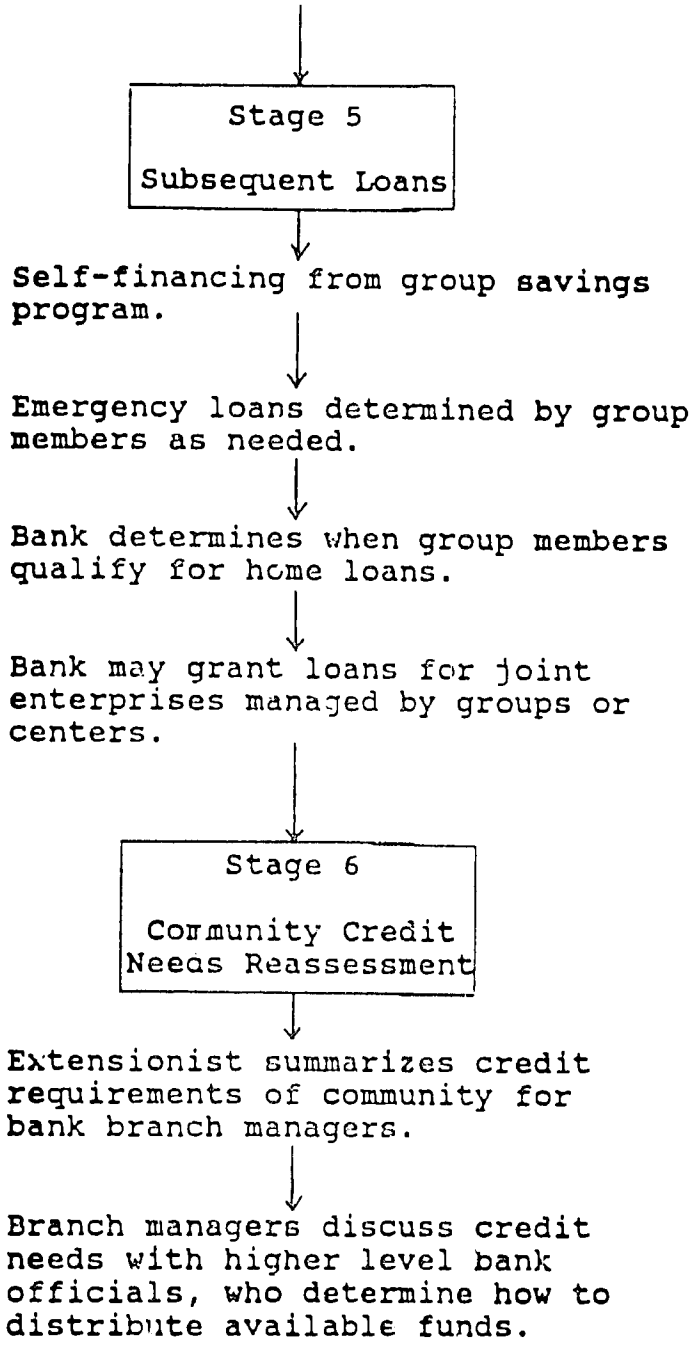
Stage 3

Loan Application

Group of five chooses two members to apply for loans to support income-generating activities.

Applications made in weekly meetings.


Stage 3
Continued
Group savings plan and emergency savings plan established.
Sixteen principles implemented by all group members.
Prompt repayments and compliance with program requisites--one month delay.
Repayment problems or violations of sixteen principles--group dissolved.
Two additional members receive loans.
Prompt repayment, program compliance--one month delay.
Repayment problems or violations of sixteen principles--group dissolved.
Fifth member of group receives loan.
Stage 4
Monitoring
Bank extensionist visits clients at work sites within first week of receipt of credit.
Weekly center meetings to monitor group development and compliance, pay into savings/emergency funds, make loan repayments.
Zone manager makes surprise monitoring visits to individual enterprises.
To Stage 5


Stage 5
Subsequent Loans
Self-financing from group savings program.
Emergency loans determined by group members as needed.
Bank determines when group members qualify for home loans.
Bank may grant loans for joint enterprises managed by groups or centers.
Stage 6
Community Credit Needs Reassessment
Extensionist summarizes credit requirements of community for bank branch managers.
Branch managers discuss credit needs with higher level bank officials, who determine how to distribute available funds.

ADDITIONAL CHARACTERISTICS OF BANK-SUPPORTED ENTERPRISE ACTIVITIES

Besides being individual or family enterprises, the activities of borrowers can, if given an infusion of reasonably priced credit, rapidly generate regular and consistent output and income. They are located in densely populated areas that present numerous opportunities for marketing goods and services. (This isn't the case in certain countries such as Nepal, where rural areas are sparsely populated and marketing of goods and services is extremely difficult. The Grameen Bank approach would need to be redesigned for areas such as these.)

Furthermore, the small enterprise activities that are undertaken are familiar to the loan recipients--skills and technologies are known and relatively simple. For the most part, loan recipients are not dependent on extension services or inputs from the government. The element of risk is also relatively limited as compared, for example, with agricultural operations, which are dependent on other agencies for timely supply of inputs and on the weather for a successful harvest. Finally, the loan recipients are free to select the activities for which they receive a loan. Thus, the activities selected are those in which the loan recipient feels confident in successfully carrying out.

RESULTS

As a result of its objective to be an action research project, the Grameen Bank is an extremely well-documented and analyzed program. Even though documentation and evaluation are expensive, they have helped the Bank to identify its successes and pinpoint areas for improvement.

As of December 31, 1984, the Grameen Bank had 121,051 members all fitting into the category of landless. Fifty-six percent of its loans were taken by female members. On the whole, the investments made by the loan recipients have been extremely productive and have contributed to signficant improvements in household output, income, and consumption. According to surveys, for a two-and-one-half-year period, the average per-capita income increase for Grameen Bank loan recipients was 32%. For a similar period there was an average per-capita income increase in Bangladesh as a whole of only 2.6%.

The amount of loans overdue as a percentage of total loans issued is only 1.9%. The repayment record for female loan recipients is 98.4% and 96.8% for male loan recipients. The recovery performance is best for members taking loans for processing and manufacturing activities and less satisfactory for loans issued for livestock raising (4.1% overdue loans). The problems associated with livestock credit may be due to the irregular flow of income from livestock raising and, in a

few cases, death of the animals purchased with the loans.

Because it is extremely difficult to accurately estimate the rate of return on investment for the informal sector, the following statistics should be interpreted carefully. According to surveys the average rate of return on investment is 10% for industrial activities and 40% for trading activities. After studying the various small enterprise activities the Bank found that "modern" industrial and trading activities (weaving, cottage industry products, agricultural goods trading, pottery) yield relatively high returns for capital employed, while traditional handicrafts are associated with low or negative returns.

The Grameen Bank has earned a profit since 1984. This is net profit after deducting the costs of funds borrowed from the Bangladesh Bank and the cost of maintaining the branch, area, zonal, and head ofices. In addition, funds are appropriated for cash reserves and employee funds. These results confirm the premise that lending to the poor can be a worthwhile, sustainable activity if the lending program is designed appropriately.

RISKS OF THE MODEL

1. The model depends on densely populated areas where there are high volume, regular markets for a wide variety of goods and services.

2. The central role of the Branch Worker could lead to personality-bias in making certain critical decisions.

3. Without small business management (which includes financial management and marketing guidance) and technology inputs, members might be restricted to the small, marginal activities with which they are already familiar.

4. The sixteen principles may prove to be inoperable, especially in light of the fact that entrepreneurs are often "independent actors."

5. The Grameen Bank has had strong government and NGO support. These resources may not be available in other situations.

6. It is difficult to maintain a dedicated, well-trained pool of Branch Workers. The skills they develop make it possible to find more secure and higher paying jobs elsewhere.

7. Since agricultural wage rates often increase about 25% in Grameen Bank communities (due to a decrease in the availability of wage laborers) some small enterprise

inputs also increase in price.

8. The system with its various levels could become highly bureaucratic. Up to 30 loans are being revised at each center's weekly meeting, along with completing a great deal of paperwork for the savings and deduction plans.

9. Branch Workers handle relatively large amounts of cash at the center meetings. If not tightly controlled, this could pose a problem and raise the issue of the Bank's credibility.

10. When a group starts to participate in the program, one member of the group must wait more than four months for a loan. This person's ability to get a loan may have nothing to do with the proposed activity, since the loan is contingent on others performing according to the loan agreements.

ADVANTAGES OF THE MODEL

1. The Grameen Bank system has led to an increase in the availability of a wide range of goods (husked rice and other food products, milk, meat, household utensils) and services (transport, access to shops and markets) which figure prominently in the expenditure patterns of the rural poor. The increased availability in turn has resulted in decreased costs.

2. Because of its extensive network (it now works in over 4,300 villages) the Bank has been able to extend marketing and petty trading to new and isolated areas, thus contributing to the economic development of Bangladesh.

3. The increased participation of women in small enterprise activities has enhanced their economic independence and status within the household.

4. The savings generated by the groups has allowed the members to survive natural disasters and personal emergencies without diverting capital from their enterprises.

5. The Grameen Bank credit has enabled members to be independent of moneylenders and to take advantage of price fluctuations in the market (buying inputs when prices are low and selling products when prices are high).

6. The Branch Workers live in the village and know the personal circumstances of group members and viability of proposed enterprise activities.

7. Repayments are affordable, at a rate of only 2% of the loan each week. In addition, the short time interval between repayments helps ensure that a portion of the week's income is reserved for loan repayment.

8. Peer pressure is seen as a valuable aspect of the program by both the Bank staff and group members. The threat of losing face keeps members serious about honoring their financial commitments.

9. Zonal managers spend up to 90% of their time in the field, keeping them close to the reality of rural life.

SOURCES OF ADDITIONAL INFORMATION

This summary has been extracted from the following sources and from interviews with the Grameen Bank staff during visits to Tangail, Bangladesh, in 1985 and 1986. Since the Grameen Bank systems change to meet the needs of its members, readers should be aware that there may be slight differences between the procedures mentioned in the various documents.

1. Hossain, M., Credit for the Rural Poor: The Experience of the Grameen Bank in Bangladesh, The Bangladesh Institute for Development Studies, Dhaka, October 1984.

2. Rahman, Atiur, Demand and Marketing Aspects of Grameen Bank: A Closer Look, The Bangladesh Institute for Development Studies, Dhaka, May 1985.

3. Ghai, Dharam, An Evaluation of the Impact of the Grameen Bank Project, Grameen Bank, Dhaka, March 1984.

4. Siddiqui, Kamal, An Evaluation of the Grameen Bank Operation, Grameen Bank, Dhaka, July 1984.

5. Yunus, Muhammad, On Reaching the Poor, Grameen Bank, Dhaka, April 1984.

6. Yunus, Muhammad, Grameen Bank Project in Bangladesh--A Poverty Focused Rural Development Programme, Grameen Bank, Dhaka, March 1982.

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AITEC/ACCION INTERNATIONAL CREDIT MODEL

INTRODUCTION

The AITEC/ACCION credit model has been implemented, with a number of variations, throughout Latin America. This summary is based on two of the most developed models--those in Ecuador and the Dominican Republic.

The ACCION approach hypothesizes that small entrepreneurs can use a line of credit, in the traditional business sense, more effectively than they can use a handout in the traditional development sense. The underlying concept is that the important constraint for this sector is lack of short-term working capital for the purchase of raw materials.

Small working capital loans allow for a gradual change in the structure of the business, rather than the major structural adjustment caused by the purchase of a new piece of equipment. Relatively small amounts are loaned during the first few periods, to be used expressly for raw materials and salaries. For this reason, formal training plays a secondary role in the early stages of the process. Instead, hands-on practice using manageable amounts of credit is seen as the best possible learning process. (Management training is mandatory at a later stage.)

The goals of the project are to create jobs, increase the amount and quality of production, and focus governmental and banking sector attention on the feasibility of providing credit to microentrepreneurs. The program seeks to make a major impact by providing several hundred loans in the first year. There is a strong Women-in-Development component, often with the goal of having 25 to 30% of loan recipients be women entrepreneurs.

Another set of objectives focuses on the need for program self-sufficiency. While the AITEC programs begin with donations, they are run as potentially self-financing operations. Funds are raised through interest payments, fees for training materials, and sometimes assistance from the national private sector. The program's cash flow situation is a constant concern, since any interruption could delay getting loans out on the street and thereby risk the credibility of the new program.

Finally, a substantial amount of time is devoted to creating a "mystique," in which credit extension workers (promoters) and loan recipients are encouraged to recognize this effort as a step in national development and social awareness. However, it is also clear from the beginning that this effort is building a true credit institution, not a charity system. An overriding feeling of solidarity and teamwork is often generated, at least in the early stages of the program.

PROGRAM POLICIES

1. Office located within easy reach of entrepreneurs.

2. Easy refinancing for first loan, but with added interest charges and enforced month-long wait for subsequent loan.

3. Portfolio per promoter of up to 60 clients.

4. Graduation to the formal banking sector an explicit goal.

CLIENT SELECTION

Production-oriented small enterprises are encouraged to become involved in the credit program. Retail businesses are excluded from the program, with the exception of market stall operators, who are incorporated into the Solidarity Groups system (see the Potential Variations section). There is an attempt to involve producers from a wide variety of fields, such as carpenters, shoemakers, tailors, and seamstresses, and even some services such as restaurant owners. Limits are set concerning the amount of assets and number of workers involved in production, although this does not always conform with the legal definition of small enterprise for the country. Usually, the preference is for microenterprises, rather than small businesses. Since collateral is not required, those businesses felt large enough to turn to the formal sector are encouraged to do so.

Based on work-site interviews, a client is accepted into the program for a small loan or rejected due to a number of factors. Some of the key criteria for acceptance include years of training (often as a trade apprentice) and experience in the field. Experience with the formal credit system and supplier credit can be viewed positively, since it demonstrates reliability, or negatively, because the program is intended to help those who cannot get credit from such channels. Other data related to the business may also lead to disqualification (see the Loan Application and Review Process section).

ESTABLISHMENT OF THE INTEREST RATE

There are several reasons for setting the interest rate above formal sector levels. The program's assumption that entrepreneurs are already using informal sector credit provides a reason to use a high interest rate, compared to formal sector alternatives. Since bank interest rates are often set artificially low, in the face of inflation rates of up to 50%, use of formal sector rates would lead to a rapid decapitalization of the revolving credit system.

On the other hand, most governments have set upper limits for the interest that can be charged for microenterprise credit programs. In at least one case, ACCION's local counterpart added special fees and loan fund "voluntary contributions," which were incorporated into the rates applied to short-term loans.

LOAN APPLICATION AND REVIEW PROCESS

The loan application process is completed several hundred times in the first two years. Because the first loans are for small amounts of working capital for two to three weeks, the following nine-stage system must be well-established within a relatively short period of time. These stages are:

1. Promotion and request
2. Work site interview
3. Application review
4. Loan delivery
5. Monitoring visit
6. Loan repayment
7. Training
8. Subsequent loans
9. Graduation to formal sector credit

Stage 1: Promotion and Request

The typical ACCION project actively seeks microenterprise operators who believe that they are in need of credit. While word of mouth is the most successful way of locating potential clients, the program is also advertised through newspapers, radio announcements, and in presentations to small enterprise groups (often based on the activity or neighborhood). The organization develops its own pamphlet that explains--through sketches, words, and simple charts--the goals and mechanisms of the project. Several hundred are distributed in door-to-door campaigns when the program is just getting started, and each potential borrower is given three or four copies to distribute among his or her friends.

The business extension staff is made up of "promoters," whose job is to develop a loan portfolio in specific neighborhoods. Prospective clients who visit the office are scheduled for work site interviews based on their proximity to ongoing or other new clients. Each prospect is told that he or she can expect a visit within two weeks of signing up at the office.

Stage 2: Work Site Interview

When the promoter visits the prospective client's workshop, he or she asks a series of questions about the individual's background, past credit experiences, the business's history, and the current situation. Specific questions address the number of full-time and part-time employees, sources of raw materials, and current as well as potential customers. Hypothetical questions are also posed to measure the ability of the prospective borrower to use the loan in a quick, profit-oriented manner. For instance, one heavily weighted question is:

> If you did increase production, would you be able to find enough customers? How? Where?

Next, the entrepreneur is asked to identify current clients by name and to list the most important potential clients. This illustrates the emphasis placed on marketing and on quick cost recovery.

A rudimentary balance sheet is constructed, and the promoter examines the inventory and assets to see if the prospect has overstated their values. A monthly profit and loss estimate is made, although the value of this is often difficult to ascertain, due to the ways in which different entrepreneurs interpret the questions. Terms such as "sales," "profit," and "owner's salary" are often interchanged. Also, there is a risk that the entrepreneur will supply the information he or she thinks is being sought rather than the actual data, introducing an important bias into the baseline information for that particular case.

The final step is to ask for the way in which the entrepreneur plans to use the funds. A response that involves the purchase of new machinery or equipment is usually considered to be outside the scope of this credit mechanism. The preferred answer involves either additional raw material purchases or salary expenses. These inputs can result in immediate increases in production, sales, and profitability.

The business owner is asked for the name of a person who will guarantee the loan; that person is contacted soon after the interview, and asked to assume this responsibility.

Stage 3: Application Review

When the promoter returns to the office, he or she adds a commentary on each visit to the loan application form, and submits it to the supervisor for review. Because first loans are very small, usually not more than $100, the credit analysis process is short and relatively subjective. If there is no clear reason to deny credit, it is often granted in a matter of minutes.

If some of the selection criteria are not met, or if the case is considered to be a borderline situation, the supervisor and one or two promoters may hold a brief meeting to discuss the specifics of the case.

At this point, the entrepreneur is contacted and told whether the application was approved. If accepted, he or she is told when to visit the office to collect a check for the loan. If rejected, the reason is explained and the possibility of a future loan discussed, pending any required changes.

Stage 4: Loan Delivery

The client brings a picture identification card and is given a packet of information to review, including a letter of credit guaranteeing payment in full with interest at the date of maturity. The importance of the commitment is reinforced by the promoter. After signing the letter of credit, the entrepreneur is presented with a check and a deposit slip, already filled out with the date of maturity. The client is told that the promoter will visit the business, without notice, before the loan maturity date.

Stage 5: Monitoring Visit

The promoter visits the entrepreneur in the workplace approximately one week before the loan repayment is due. The client is asked to provide information that can be compared to original data in order to verify the use of funds and measure the effects of the loan.

The client decides if he or she would like to receive another loan of the same size or move up to the next loan level. There is limited flexibility in the new amount and maturity period offered by the system.

Stage 6: Loan Repayment

The entrepreneur brings the amount due to the office (both principal and interest) and the first letter of credit is cancelled. If the application for a new loan has been approved, a new letter of credit is signed and the check is delivered. The new timetable and interest are reviewed, and the enterprise operator is given additional pamphlets to distribute to friends who qualify for the program.

If the client fails to pay, refinancing is almost automatic. The same interest rate applies for the additional two weeks of time granted for a first loan. However, even if the client pays the refinanced loan on the agreed-upon date, he or she cannot apply for additional loans for the next month.

If the client does not meet the new deadline offered with the refinanced loan, he or she is threatened with legal action. This threat is never carried out. However, the client is visited frequently so that at least part of the money at risk can be recovered. This individual is not permitted to apply for a future loan.

Stage 7: Training

There is no training required until the second loan has been repaid. At that time, the entrepreneur must complete six hours of training in general management and basic accounting. After the fifth loan is repaid, the entrepreneur must attend a similar class on project management, dealing with the differences in business practices when a new capital investment is made. Finally, before the ninth loan is received, the client must complete a course on marketing. These courses are offered at night or on Saturdays, and are taught by someone with non-formal training experience.

The first course also stresses the importance of starting a savings account, and the minimal amount to be saved is established in agreement with the size of the loan. The promoter checks on the savings account balance periodically.

Stage 8: Subsequent Loans

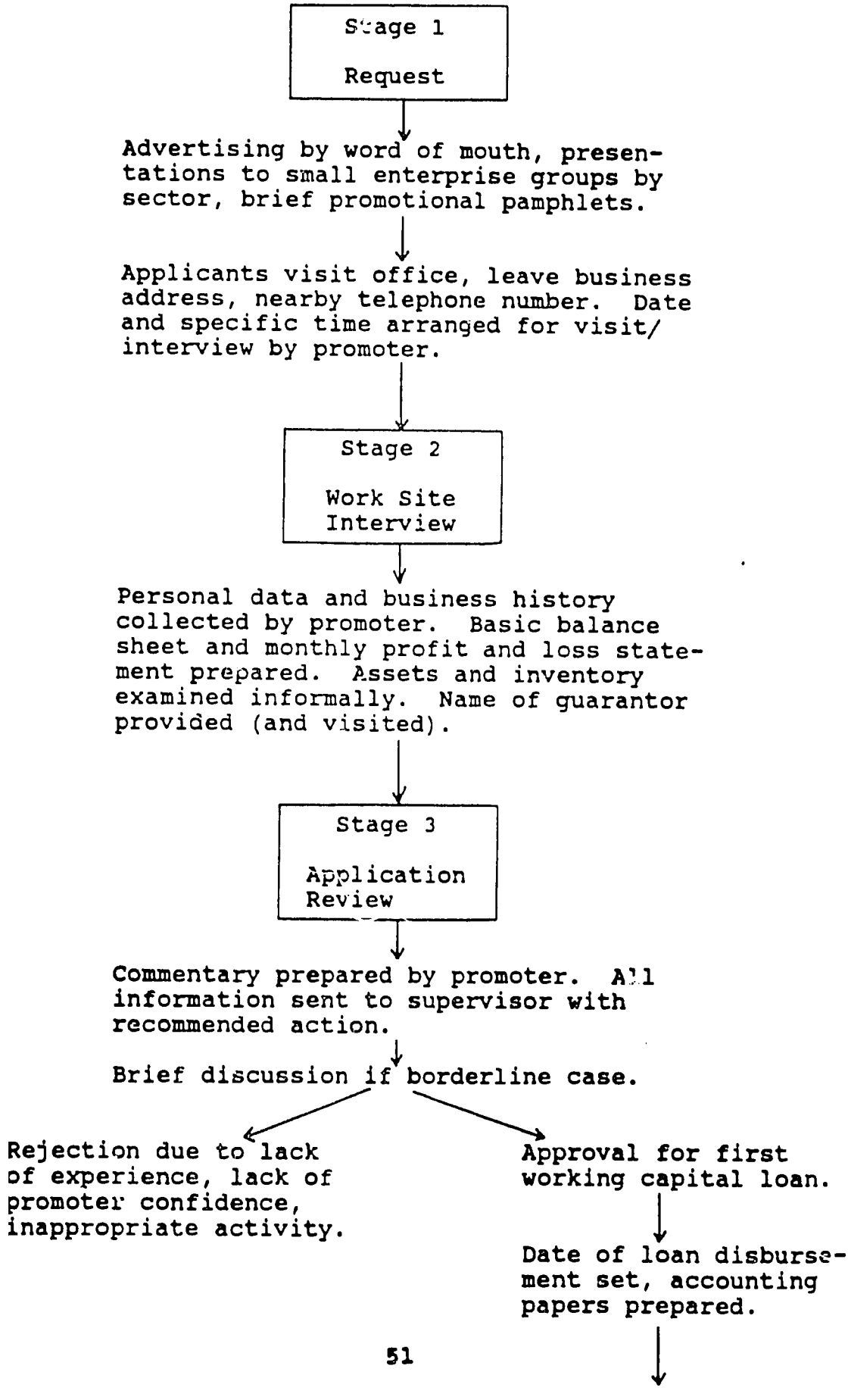
Monitoring visits continue to be conducted shortly before the next loan is offered. The results of the brief interviews performed during these visits are compared to previous data on the firm's performance. The information also becomes part of the program's monthly summary.

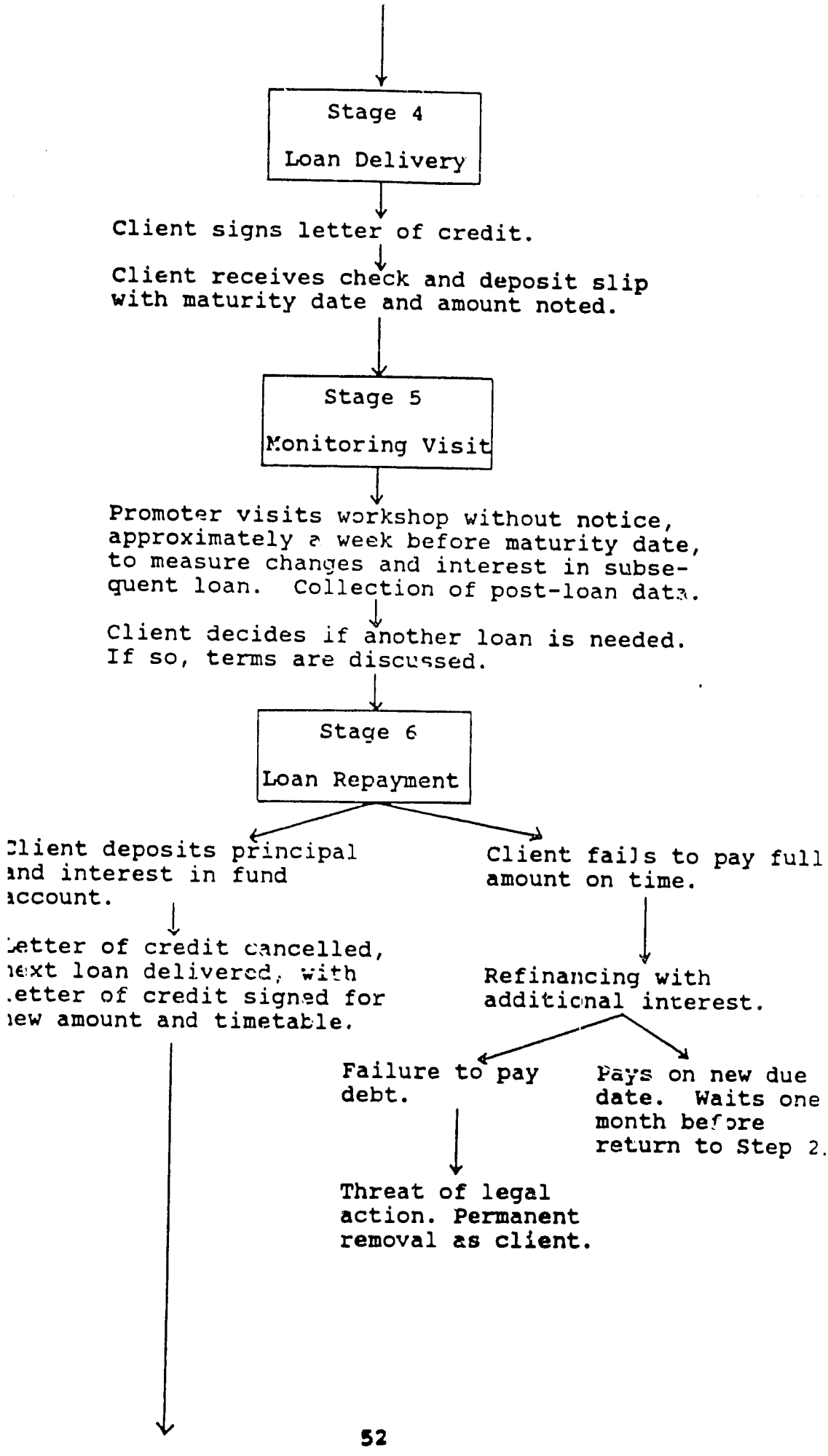
Stage 9: Graduation to Formal Sector Credit

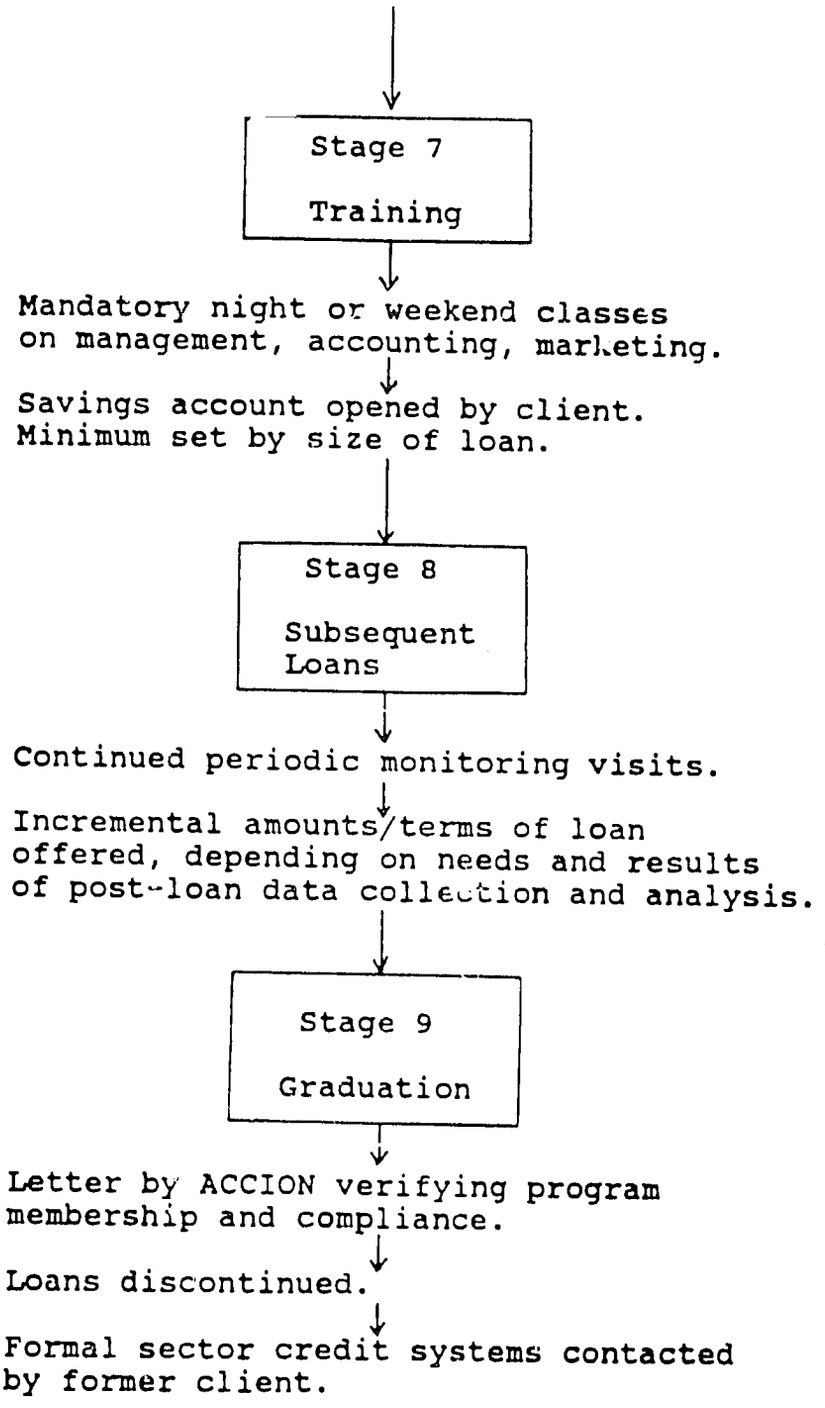
Upon reaching a certain amount, in the range of $700 to $800, the entrepreneur is told that credit will be discontinued. The credit program provides a letter to the client verifying that he or she has fulfilled the obligations, attended the classes, and successfully used credit on several occasions to improve the business. At this point, no further credit is made available; it is assumed that the client is ready to "graduate" to the formal credit sector.

The organization may contact banks that receive government funds to establish small enterprise credit programs. These banks are contacted during the initial planning stages of the project and are informed periodically of the state of the program.

AITEC/ACCION LOAN APPLICATION AND REVIEW PROCESS




Stage 4
Loan Delivery
Client signs letter of credit.
Client receives check and deposit slip with maturity date and amount noted.
Stage 5
Monitoring Visit
Promoter visits workshop without notice, approximately a week before maturity date, to measure changes and interest in subsequent loan. Collection of post-loan data.
Client decides if another loan is needed. If so, terms are discussed.
Stage 6
Loan Repayment
Client deposits principal and interest in fund account.
Letter of credit cancelled, next loan delivered, with letter of credit signed for new amount and timetable.
Client fails to pay full amount on time.
Refinancing with additional interest.
Failure to pay debt.
Threat of legal action. Permanent removal as client.
Pays on new due date. Waits one month before return to Step 2.


Stage 7
Training
Mandatory night or weekend classes on management, accounting, marketing.
Savings account opened by client. Minimum set by size of loan.
Stage 8
Subsequent Loans
Continued periodic monitoring visits.
Incremental amounts/terms of loan offered, depending on needs and results of post-loan data collection and analysis.
Stage 9
Graduation
Letter by ACCION verifying program membership and compliance.
Loans discontinued.
Formal sector credit systems contacted by former client.

RISKS OF THE MODEL

1. The supervisor must be able to make quick policy and credit capacity decisions. There is a risk that a sudden decision could lead to a dangerous precedent.

2. There is a risk of bribes, since the promoter wields a lot of power over who gets the loans.

3. Since an explicit goal of the model is to reach as many entrepreneurs as possible in a short time, monitoring can be consigned to a secondary level of importance.

4. Cash flow is critical. If there is a shortage, this can endanger the program's reputation, due to the powerful promotion efforts already conducted.

5. While refinanced or unpaid loans represent less than 3% of the portfolio during the program's first few months, they may skyrocket to the 12 to 15% range as monitoring drops off.

6. Refinancing is automatic, making it difficult for the promoter to encourage on-time payment. This is why the penalty of a one-month delay in considering a subsequent loan was added to the program's procedures.

7. It is unclear whether graduation is a workable concept.

8. Monitoring becomes very difficult as a promoter's portfolio grows.

ADVANTAGES OF THE MODEL

1. There can be an enormous impact on the sector in a relatively short period of time.

2. Very low promoter turnover, thanks to regular staff meetings, a strong feeling of "mission," and relatively high salaries.

3. Promoters do not need a lot of training, unless they are used as classroom teachers.

4. Low processing costs per dollar lent, due to volume. Program may reach self-sufficiency relatively quickly, if loan rescheduling can be kept to a minimum.

RESOURCE INTENSITY

1. Accounting is difficult, given the sheer volume of loan applications.

2. Strong supervisor required to keep track of issues that evolve, the portfolio, and political linkages.

3. Initial cash requirements may be high, and cash flow is a more critical concern than with other initiatives.

CASE STUDY RESULTS

The Dominican Republic program was able to let out 6,200 loans to almost 2,000 enterprises in the first two years. The average loan size was $250. Fully 17% of the micro-enterprises were run by women. A rough estimate showed that more than 1,100 jobs were created during this time.

In the Ecuadorian program, promotion was halted after four months, since the word-of-mouth campaign was so successful. However, there were frequent cash flow problems during the first year. There was a strain on the accounting section of the organization, and manual documentation caused some confusion as well. Mortality rates (late payment or no recovery) rose to 15%, an unacceptably high percentage. The Solidarity Groups described below proved to be enormously popular and payback was in the 99% range. However, there was almost no employment creation through this mechanism.

POTENTIAL VARIATIONS

The most important variation is that which includes Solidarity Groups. Five or six street vendors form a group which applies for a group loan for working capital. Each member receives an additional portion, and promises to cover the debt that other members take on if they are unable to do so. This was one way in which the need for credit on the retail side was addressed. Also, the percentage of women involved was much higher.

SOURCES OF ADDITIONAL INFORMATION

An article by Marta Olivares of ADEMI, entitled "An Urban Credit System," provides background information on the Dominican Republic example. The Ecuadorian example was based on the experiences of two Peace Corps Volunteers. Additional country experiences and theoretical background can be found in the PISCES documents of AID and ACCION.

Appendix A

SAMPLE AGENDA FOR A WORKSHOP IN CREDIT MANAGEMENT

AGENDA
CREDIT MANAGEMENT WORKSHOP

Santo Domingo, Dominican REpublic
March 6-10, 1990

Monday, March 6

8:30-08:45	Inauguration
8:45-10:15	Objectives and Goals of the Workshop The Role of Credit in Economic Development
10:15-10:30	Coffee Break
10:30-12:30	The Credit Project Life Cycle Designing a Credit Policy Structuring Interest Rates Savings Mobilization
12:30-02:00	Lunch
02:00-04:00	Credit Delivery Mechanisms Designing a Credit Methodology The Role of a Credit Institution
04:00-04:14	Coffee Break
04:15-05:30	The Conceptual Framework of the ADEMI Model

Tuesday, March 7

08:30-10:15	Designing a Credit Administration Accounting and Information System
10:15-10:30	Coffee Break
10:30-12:30	Interest Rate Calculations: Three Methods; Compound, Simple, and ADEMI
12:30-02:00	Lunch
02:00-04:00	Recovery and Viability—Loan Portfolio Management, Loan Feasibility Analysis, Costs and Production
04:00-04:15	Coffee Break
04:15-05:30	Group Exercises

Wednesday, March 8

08:30-10:15	Basic Tools for Credit Analysis: Cash Flow, Balance Sheet, Income Statement
10:15-10:30	Coffee Break
10:30-12:30	Continuation of Earlier Topic
12:30-02:00	Lunch
02:00-04:00	Break-Even Analysis
04:00-04:15	Coffee Break
04:15-05:30	ADEMI: Loan Monitoring, and Financial Management Techniques

Thursday, March 9

08:30-10:15	The Use of the Texas Instruments Financial Calulator
10:15-10:30	Coffee Break
10:30-12:30	Time Value of Money: Theory and Exercises
12:30-02:00	Lunch
02:00-04:00	(Continuation of earlier topic)
04:00-05:30	Different Credit Models

Friday, March 10

08:30-10:15	Interest Rate Calculations With and Without the Financial Calculator
10:15-10:30	Coffee Break
10:30-12:30	Attaining Financial Self-Sufficiency
12:30-02:00	Lunch
02:00-04:00	Discussion of earlier topic, participant presentations on Strategies for Achieving Self-Sufficiency
04:00-04:15	Coffee Break

04:15-05:30 Participant Conclusions and Summaries—What is the Future? Final Workshop Wrap-up and Workshop evaluation

Reception

Appendix B

REFERENCES TO OTHER MATERIALS IN FRENCH AND SPANISH

French (used in Senegal)

1. J.D. Von Pischke, "Directives Pour la Determination des Conditions de Credit," EDI, World Bank.
2. Roger Kouessi and Wendy Weidner, "Evaluation des Project de Credit," CESAG.
3. Outline for Evaluation Session.
4. Moussa Ba, "Le Traitement des Demande de Credit," CESAG.
5. Roger Kouessi and Frank Lusby, "Formation de Beneficiare: Promotion de Groupes," CESAG.
6. Roger Kouessi, "Controle Financier," CESAG.
7. Roger Kouessi, "Manual de Procedure," CESAG.
8. Roger Kouessi and George Butler, "Prevus des Besoin de Financement," CESAG.
9. W. Schaefer-Kehnart, "Les Prets Collectifs Au Malawi: Une Experience Reussie," EDI, The World Bank.
10. Isabelle Mamaty, "Les Banques Populaire des Rwanda."

Spanish (Used in Dominican Republic)

1. "El Official de Credit," Miguel Angel Garcia.
2. "Cartera," Miguel Angel Garcia.
3. Interest Calculation Exercises.

Appendix C

SAMPLE WORKSHOP EVALUATION FORM

PARTICIPANT EVALUATION FORM

Please answer the following questions in the most complete fashion. Your comments and suggestions are critical in assisting us to improve future workshops.

1. Did this workshop meet your training expectations?

2. Which topics were of most interest to you?

3. Which topics were of least interest to you?

4. Were certain topics which you expected to see addressed not covered? if so, what are they?

5. Did you find the workshop exercises useful? Which ones, if any, were not useful?

6. How adequate was the workshop pace?

7. Which of the following variables did you find most conducive to learning: With 1 as the lowest score, and 10 as the highest, please rate the contribution of the following to the Workshop:

Presentation	1	2	3	4	5	6	7	8	9	10
Large group discussion	1	2	3	4	5	6	7	8	9	10
Small group discussion	1	2	3	4	5	6	7	8	9	10
Exercises	1	2	3	4	5	6	7	8	9	10
Workshop organization	1	2	3	4	5	6	7	8	9	10
Participant Contributions	1	2	3	4	5	6	7	8	9	10
Instructor(s)	1	2	3	4	5	6	7	8	9	10
Facilities	1	2	3	4	5	6	7	8	9	10

8. Other comments, suggestions for improvement

Appendix D

SOLUTIONS TO SESSION 8 EXERCISES

BREAK-EVEN ANALYSIS EXERCISE

Answer Sheets

SITUATION 1 SOLUTION

Mathematical Solution:

Breakeven Point = Fixed Costs divided by Price per unit - Variable Cost per unit

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Fixed Costs = $30.00
Variable Cost per bale = $4.80 (Variable Cost per ha.) divided by 40 (bales per ha.)

= $0.12
Price per bale = $0.24

Calculation:
Bales to "break even" = $30.00 divided by 0.24 - $0.12 = 250 bales

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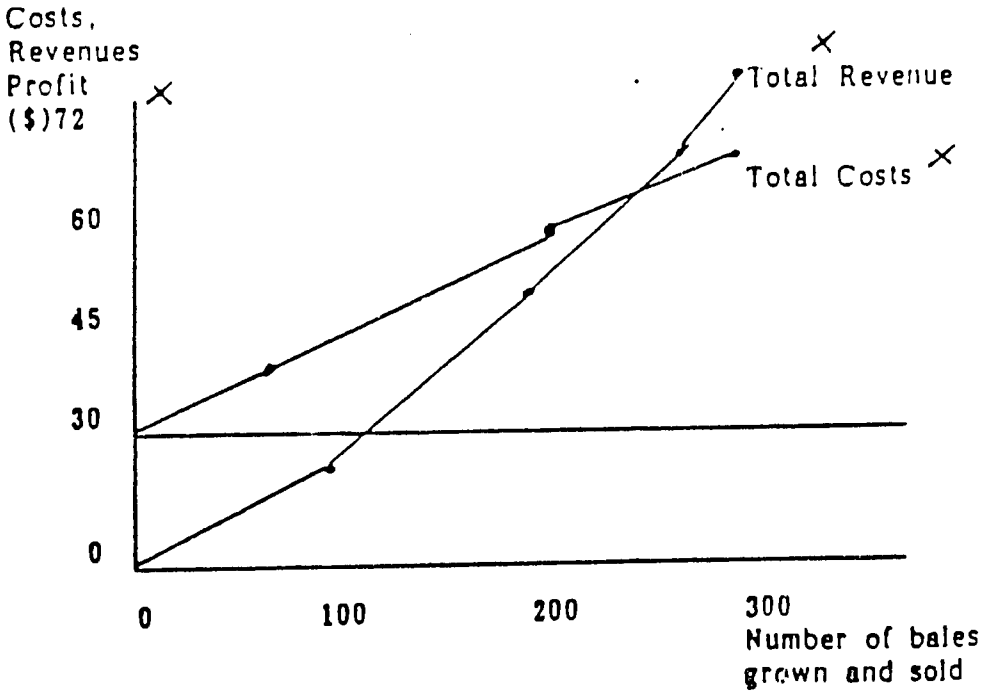
Graphical Solution:



Bales	Revenues	Costs	Profit/Loss
0	0	30	(30)
100	24	42	(18)
• 120	28.80	44.40	(15.60)
200	48	54	(6)
• 250	60	60	0
300	72	66	6

• Level of production for farmer
• Breakeven Point

SITUATION 2 SOLUTION

Mathematical Solution:

Breakeven Point = Fixed Costs divided by Price per unit - Variable Cost per unit

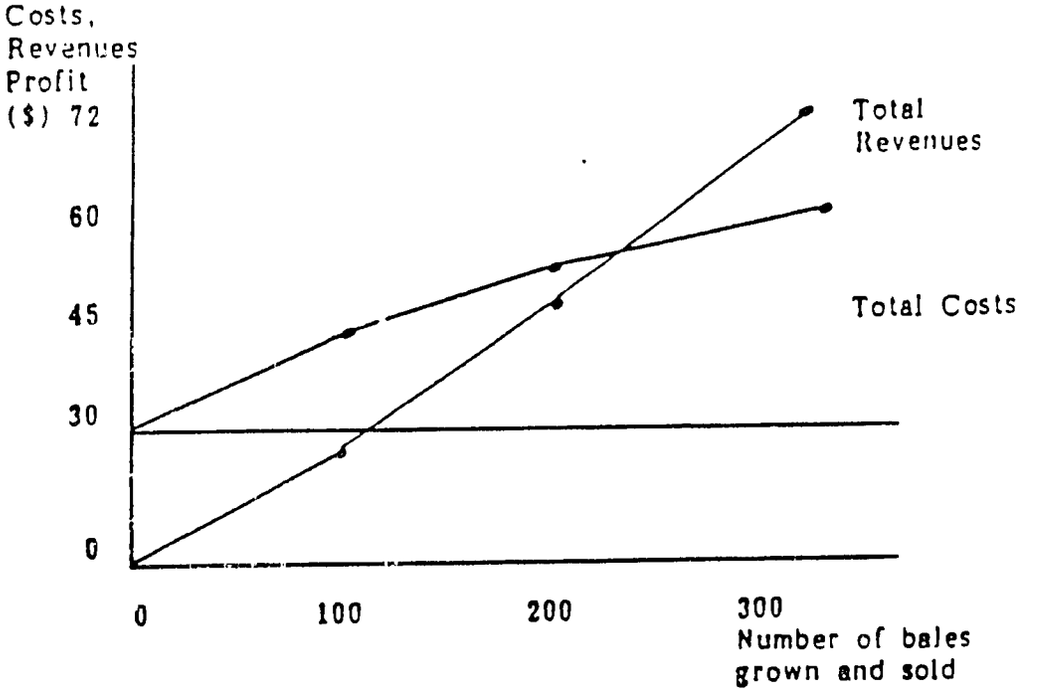
---

Fixed Costs = $30.00
Variable Cost per bale = $5.00 (Variable Cost per ha.) divided by 50 (bales per ha.)
= $0.10

Price per bale = $0.24

Calculation:
Bales to "break even" = $30.00 divided by $0.24 - $0.10 = 214 bales

Graphical Solution:



Bales	Revenues	Costs	Profit (Loss)
0	0	30	(30)
100	24	40	(16)
• 150	36	45	(9)
200	48	50	(2)
• 214	51.36	51.36	0
250	60	55	5
300	72	60	12

• Level of production for farmer
• Breakeven Point

SITUATION 3 SOLUTION

Mathematical Solution:

Breakeven Point = Fixed Costs divided by Price per unit - Variable Cost per unit

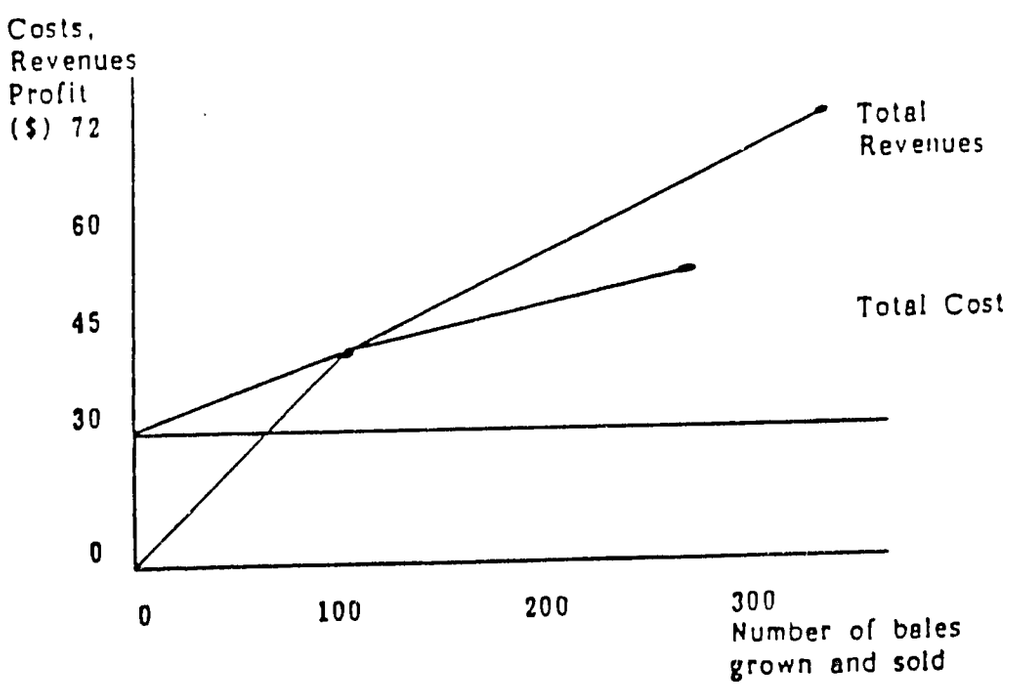
---

Fixed Costs = $30.00
Variable Cost per bale = $5.00 (Variable Cost per ha.) divided by 50 (bales per ha.)
= $0.10

Price per bale = $0.40

Calculation:
Bales to "break even" = $30.00 divided by $0.40 - $0.10 = 100 bales

Graphical Solution:



Bales	Revenues	Costs	Profit (Loss)
0	0	30	(30)
* 100	40	40	0
• 150	60	45	15
200	80	50	30
250	100	55	45
300	120	60	60

* Level of production for farmer
• Breakeven Point

BALANCE SHEET EXERCISE

Answer Sheet

a) **Balance Sheet on July 1**

Assets		Liabilities	
Vehicle	$7,500	Bank Loan	$5,000
		Owner's Capital	2,500
Total	7,500	Total	7,500

b) **Balance Sheet on December 31**

Assets		Liabilities	
Cash	250	Suppliers	300
Bank	300	Loan	3,000
Stock	1,000	Retained Profit	1,050
Vehicle	800	Owner's Capital	2,000
Building	4,000		
Total	$6,350	Total	$6,350

Session 8
Exercise 3
Answers

ANNUAL INCOME STATEMENT

Answer Sheet

	1Q	2Q	3Q	4Q	TOTAL
Revenues	15,000	22,500	24,000	27,000	88,500
Cost of Goods	10,500	15,750	16,800	18,900	61,950
Gross Margin	4,500	6,750	7,200	8,100	26,550
Fixed Costs	4,800	5,763	5,763	5,763	22,089
Net Profit	(300)	987	1,437	2,337	4,461

CASE STUDY EXERCISE ANSWERS

In calculating the break-even point for this case, we examine three different scenarios with and without financing costs:

Case I — Producing bread only

Case II — Producing scones only

Case III — Producing bread and scones

Fixed Costs per Month		Shs
1. Depreciation per month	=	263

Equipment	Shs	15,100
Transportation		700
	Shs	15,800

Shs 15,800 - 60 months (5 years) = 263)

2. Labor (direct only)	=	1,500
3. Fuel	=	1,040

4 bags/week
4 x Shs 65 x 4 weeks = 1,040

Total monthly fixed costs (with hypothetical financing cost)	2,803
4. Hypothetical Financing Cost =	442.22

20,000 x .022111 = 442.22

Total monthly fixed costs (with hypothetical financing cost)	Shs 3,245

Variable Cost per Production Cycle for Bread (40 Loaves)

A	B	C	D
Raw Materials	Amount Required per Production Cycle	Bulk Price and Unit Price	Total Cost
Flour	12 kg	Sh 171 = 24 kg 7.125 per kg	85.50
Sugar	1/2 kg	Sh 7.60 = 1 kg	3.80
Yeast	100 gr	Sh 84.10 = 1 kg 0.0841 per gr	8.41
Salt	100 gr	Sh 2 = 1/2 kg	.40
Fat	1/2 kg	Sh 240 = 12 kg 20 per kg	10.00
Packing Bags	40 bags	Sh 24 = 100 0.24 per bag	9.60
		TOTAL	117.71

40 Loaves ÷ 117.71 = 2.94

Unit cost of bread = 2.94

Variable Cost per Production Cycle for Scones (60)

A	B	C	D
Raw Materials	Amount Required per Production Cycle	Bulk Price and Unit Price	Total Cost
Flour	6 kg	Sh 171 = 24 kg 7.125 per kg	42.75
Sugar	250 gr	Sh 7.60 = 1 kg	4.205
Yeast	50 gr	Sh 84.10 = 1 kg 0.0841 per gr	1.90
Salt	50 gr	Sh 2 = 1/2 kg	.20
Fat	250 gr	Sh 240 = 12 kg	5.00
Packing Bags	10 bags	Sh 24 = 100 0.24 per bag	2.40
		TOTAL	56.455

60 Scones - 56.455 = 0.94

Unit cost of scones = 0.94

CASE I: PRODUCING BREAD ONLY

A. BREAK-EVEN (B/E) ANALYSIS WITHOUT FINANCING COST (BREAD)

1. Data Needed

Price (P)	= Shs 3.60 per unit
Variable cost per unit (VCU)	= Shs 2.94 per unit
Fixed costs (FC) (without financing cost)	= Shs 2803 per month

2. Calculations

a) P - VCU = GM (Gross Margin)
3.60 - 2.94 = 0.66

b) $\frac{FC}{GM}$ = B/E Units

$\frac{2803}{0.66}$ = 4246.9 = 4247 units

c) $\frac{\text{B/E Units}}{\text{Full Capacity}}$ = B/E %

$\frac{4247}{2880}$ = 1.47 x 100 = 147% capacity

B. BREAK-EVEN ANALYSIS WITH FINANCING COST (BREAD)

1. Data Needed

Price (P)	= Shs 3.60 per unit
Variable cost per unit (VCU)	= Shs 2.94 per unit
Fixed costs (FC) (with financing cost)	= Shs 3245 per month

2. Calculations

a) P - VCU = GM (Gross Margin)
3.60 - 2.94 = 0.66

b) $\frac{FC}{GM}$ = B/E Units

$\frac{3245}{0.66}$ = 4917 units

c) $\frac{\text{B/E Units}}{\text{Full Capacity}}$ = B/E %

$\frac{4917}{2880}$ = 1.71 x 100 = 171% capacity

CASE II: PRODUCING SCONES ONLY

A. BREAK-EVEN (B/E) ANALYSIS WITHOUT FINANCING COST (SCONES)

1. Data Needed

Price (P)	= Shs 2.00 per unit
Variable cost per unit (VCU)	= Shs 0.94 per unit
Fixed costs (FC) (without financing cost)	= Shs 2803 per month

2. Calculations

a) P - VCU = GM (Gross Margin)
2.00 - 0.94 = 1.06

b) $\frac{FC}{GM}$ = B/E Units

$\frac{2803}{1.06}$ = 2644.3 = 2644 units

c) $\frac{\text{B/E Units}}{\text{Full Capacity}}$ = B/E %

$\frac{2644}{4320}$ = 0.61 x 100 = 61% capacity

B. BREAK-EVEN ANALYSIS WITH FINANCING COST (SCONES)

1. Data Needed

Price (P)	= Shs 2.00 per unit
Variable cost per unit (VCU)	= Shs 0.94 per unit
Fixed costs (FC) (with financing cost)	= Shs 3245 per month

2. Calculations

a) P - VCU = GM (Gross Margin)
2.00 - 0.94 = 1.06

b) $\frac{FC}{GM}$ = B/E Units

$\frac{3245}{1.06}$ = 3061

c) $\frac{\text{B/E Units}}{\text{Full Capacity}}$ = B/E %

$\frac{3120}{4320}$ = 0.708 x 100 = 71% capacity

CASE III: PRODUCING BREAD AND SCONES

A. BREAK-EVEN (B/E) ANALYSIS WITHOUT FINANCING COSTS (BREAD AND SCONES)

In the interview, it was stated that many times the bakery produces both bread and scones. Given the size of the oven, 30 loaves of bread and 15 scones can be produced in each production cycle.

	Price	VCU	Gross Margin
Bread	3.60	2.94	.66
Scones	2.00	.94	1.06

	Full Capacity		Cycles/ Day		Days/ Week		Weeks/ Month		Units/ Month
Bread	30	x	3	x	6	x	4	=	2160
Scones	15	x	3	x	6	x	4	=	1080

Fixed Costs (without financing) = 2803

Allocation of Fixed Costs

Fixed cost is allocated on the basis of gross sales for each product at full capacity.

	Full Capacity		Price per Unit		Total Sales		% of Capacity
Bread	2160	x	3.60	=	7776	=	78.3
Scones	1080	x	2.00	=	2160	=	21.7

Allocation of Fixed Costs: Bread = 2195 (78.3%)

Scones = 608 (21.7%)

2803

Break-Even Units

Bread

$$\frac{FC}{GM} = \text{B/E Units}$$

$$\frac{2195}{.66} = 3326 \text{ Units}$$

$$\frac{\text{B/E Units}}{\text{Full Capacity}} = \text{B/E\%}$$

$$\frac{3326}{2160} = 154\% \text{ Capacity}$$

Scones

$$\frac{FC}{GM} = \text{B/E Units}$$

$$\frac{608}{1.06} = 574 \text{ Units}$$

$$\frac{\text{B/E Units}}{\text{Full Capacity}} = \text{B/E\%}$$

$$\frac{574}{1080} = 53\% \text{ Capacity}$$

B. BREAK-EVEN ANALYSIS WITH FINANCING COSTS (BREAD AND SCONES)

Fixed Costs = 2803 + 442 = 3245

Allocation of Fixed Costs

Bread 3245 x 78.3% = 2541

Scones 3245 x 21.7% = 704

Break-Even Units

Bread

$\frac{FC}{GM}$ = B/E Units

$\frac{2541}{.66}$ = 3850 Units

$\frac{B/E\ Units}{Full\ Capacity}$ = B/E%

$\frac{3850}{2160}$ = 178% Capacity

Scones

$\frac{FC}{GM}$ = B/E Units

$\frac{704}{1.06}$ = 664 Units

$\frac{B/E\ Units}{Full\ Capacity}$ = B/E%

$\frac{677}{1080}$ = 61% Capacity

POINTS TO CONSIDER WHEN APPRAISING A BAKERY

Given the number of products, cycles, and workers involved, this task is more complex than it appears.

Once you have defined the minimum capacity required to break even, you must determine whether the product(s) can be marketed.

In this case study, we have looked at three scenarios: Case I, where only bread is produced; Case II, where only scones are produced; and Case III, where both bread and scones are produced.

Only one of these scenarios has proven viable for the bakery: Case II, producing only scones. Even then, with financing costs added, the break-even point is 71%, which is extremely high and therefore too risky. As the bakery has no experience in producing and selling only scones, this scenario is probably unrealistic.

This means that the bakery in its present form is not viable and should not be financed.

Here is a hypothetical solution for improving the bakery's profitability, if only bread is produced:

1. The most important constraint to the bakery's viability is production.

2. Bread has a very low gross margin.

VCU	Shs	2.94	82%
GM		.66	18%
Price	Shs	3.60	100%

Assuming that the VCU cannot be lowered or the price raised, the only possible solution is to increase production by maximizing the use of the oven. At present the oven is used for only 3 hours per day. Can it be used the other available hours? It should be remembered, however, that in all probability the bakery will require more labor and pans to do this.

0045m

Attachment

EVALUATION FORM FOR THE CREDIT MANAGEMENT TRAINING PACKAGE

EVALUATION FORM FOR THE CREDIT MANAGEMENT TRAINING PACKAGE

Please complete this evaluation form and mail it to A.I.D./APRE/SMIE, to the attention of Melody Bacha, ARIES Project Officer, Washington, D.C., or to Nathan Associates, 1301 Pennsylvania Avenue, N.W., Washington, DC 20004, to the attention of Thomas Timberg, ARIES Director. We would like to receive any comments you have on the usefulness of this document, and and/or suggestions for its improvement.

1. What do you like most about this document?

2. What do you like least about this document?

3. Do you feel that these materials are useful and appropriate for conducting or planning a training workshop on the subject matter?

4. Do you think that the User's Guide provides sufficient and useful material for planning a workshop?

5. Would you suggest adding anything to this document to increase its effectiveness?

6. General comments and recommendations.