

# Better Practices in Agricultural Lending



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**AGRICULTURAL FINANCE REVISITED**



**BETTER PRACTICES  
IN AGRICULTURAL LENDING**

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The sustainable provision of credit and general financial services to farmers and rural inhabitants in developing countries has proved to be a difficult task. The history of such endeavours is littered with failures. This has led to a decline in agricultural credit supply for borrowers. Such a reduction contrasts with the increased demand following structural adjustment reforms.

This publication explores how the new microfinance technologies in urban areas of developing countries can provide useful models for similar operations in rural areas for agricultural production lending. The problems of high risks and costs are specific issues for agricultural finance. These are elaborated in this edition.

The paper forms part of the FAO/GTZ Joint Initiative "Agricultural Finance - Revisited" that deals with components relevant to the successful provision of agricultural finance in developing countries. The initiative aims to contribute to develop new concepts, financial technologies and procedures to improve the access of agricultural farm-households to quality financial services.

Three overall goals are defined for the Initiative:

- to ensure that effective small farmers' demand for agricultural finance is satisfied by adequate access to financial services;
- to overcome the existing structural obstacles of financial markets for efficient handling of agricultural lending and utilization of improved financial technologies. Success would serve to close the gap in agricultural finance;
- to contribute to world food security strategies through an efficient agricultural financial sector policy.

Agricultural finance is examined under the following topics:

1. Agricultural Finance Revisited: Why?
2. Agricultural Finance: Getting the Policies Right
3. Better Practices in Agricultural Lending
4. Sources of Funds for Agricultural Lending
5. Prudential Regulation and Supervision for Agricultural Finance
6. Enhancing Farmer's Financial Management Skills

“Better Practices in Agricultural Lending” explores the challenge of agricultural lending in developing countries. It outlines some improved practices that emerge from recent financial market development. By reviewing lessons learned in microfinance, the text concentrates on the transferability of these practices to the agricultural sector. Three innovative financial institutions in different regions are investigated. All have well-documented experiences in lending to farmers.

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## ABBREVIATIONS

AMPES	Salvadorian Association of Medium and Small Entrepreneurs
ASA	Association for Social Advancement, Bangladesh
BAAC	Bank for Agriculture and Agricultural Cooperatives, Thailand
BancoSol	Banco Solidario, SA, Bolivia
BOT	Bank of Thailand
BRAC	Bangladesh Rural Advancement Committee
BRI	Bank Rakyat Indonesia
CEDEP	Centro de Estudios para el Desarrollo y la Participación, Peru
CENTA	Centro Nacional de Tecnología Apropriada, El Salvador
CMAC	Cajas Municipales de Ahorro y Crédito, Peru
COFIDE	Corporación Financiera de Desarrollo, Peru
CVECA	Caisses villageoises d'épargne et de crédit autogérées, Mali
EU	European Union
FA	Financial Assistance
FAO	Food and Agriculture Organization of the United Nations
FEPCMAC	Federación Peruana de Cajas Municipales de Ahorro y Crédito
FINACCOOP	Financiera de Cooperativas Agropecuarias, Honduras
FINCA	Fundación Integral Campesina
GDP	Gross Domestic Product
GTZ	Gesellschaft für Technische Zusammenarbeit
IDB	Interamerican Development Bank
IFAD	International Fund for Agricultural Development
JLG	Joint Liability Group
KFW	Kreditanstalt für Wiederaufbau
MFI	Microfinance Institution
MIS	Management Information System
MSE	Micro- and Small Enterprises
NGO	Non-Governmental Organization
SDI	Subsidy Dependency Index
SHG	Self-Help Group
TA	Technical Assistance

UNDP  
USAID

United Nations Development Programme  
United States Agency for International Development

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The question of how to best develop an effective rural financial system has been much debated over the past three decades. A significant evolution in agricultural and rural development strategies has taken place over the last decade. This evolution represents a shift away from supplied and interventionist policies towards a more liberal, market-oriented approach. Liberalization of the financial sector includes the elimination of regulated interest rates and directed credit programmes, and the restructuring or liquidation of state-owned agricultural development banks.

These changes removed distortions in financial markets and enhanced the prospects for the long-term development of a sustainable rural financial system. However, for the moment they have reduced the availability of formal rural and agricultural credit. Most banks have neither the rural branch network nor the agricultural lending expertise to serve small farmer clients. As a result, many rural people still rely heavily on informal financial arrangements. Unofficial deals may be beneficial in some respects but cannot be a substitute for effective banking services.

Lack of access to formal credit and to full financial intermediation services impedes agricultural development and hampers the efforts to alleviate rural poverty.<sup>1</sup> However, new initiatives are being undertaken to meet the demand for rural credit. They include the reform of agricultural development banks, enabling them to pursue a market approach in the delivery of credit services to small and medium-sized rural clients. At the same time, some microfinance institutions (MFIs) are attempting to transfer their urban microcredit technologies to rural areas.

Two recent developments have influenced these initiatives. The first one has been the adoption of a “financial systems” development approach. This emphasizes the need for an integrated approach to financial market development and the provision of competitive and durable financial services in local financial markets. A clear understanding of both client demand and existing informal financial services providers is required. In fact, over the last decades, development agencies, NGOs, practitioners

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<sup>1</sup> See Agricultural Finance Revisited: Why? AFR, No. 1, 1998, pp. 45-46.

and researchers have accumulated substantial experience in operating financial services for rural clients.

The second development has been the emergence of specialized microfinance institutions. Microenterprise credit programmes were initiated to address the unemployment problems that are associated with the vast rural-urban migration in developing countries. Initially, they targeted the promotion of self-employment and income-generating activities for the urban poor. The evolution in microfinance, like the earlier one in rural finance, has been affected by the principles of financial systems development. Attention is on developing financial institutions that target low-income clients while pursuing commercial viability.

The best known micro and rural finance institutions such as the Grameen Bank in Bangladesh and the Bank Rakyat Indonesia reach hundreds of thousands to millions of clients in urban and rural areas. In the course of time they have succeeded in reducing their reliance on subsidies. Although today only a few microfinance institutions have achieved full financial independence, many more use innovative credit technologies and have developed organizational structures that produce positive results. These initiatives illustrate the potential to overcome the financial barriers that commercial banks traditionally face when they try to lend to low income clients. As a result a number of these banks now provide financial services to microenterprises and small businesses (Baydas, Graham, and Valenzuela, 1997). In addition, new financial institutions have been established that attend low-income clients. However, even in cases where services are extended to rural clients, small agricultural producers are only rarely attended.

The goal of this publication is to identify those lending practices that are able to address the challenge of financing small farmer clients. Within the framework of rural financial markets, the text concentrates on the specific issues of lending to agricultural producers. The lessons that can be learned from microfinance have been reviewed and an assessment made of the possibility of transferring successful microcredit practices to agricultural lending. In addition, the experiences and the strategies of three innovative agricultural lending institutions have been examined in greater detail.

The document is divided into four chapters. Chapter 1 gives a brief overview of agricultural finance and highlights its unique features. An detailed analysis of the characteristics of agricultural lending has already been presented in the first publication of the AFR series.<sup>2</sup> In this study these features are examined, with regard to the implications they have on the management of the costs and risks faced by agricultural lending institutions.

Chapter 2 summarizes the main lessons that have been learned from microcredit. It presents the approaches that successful microlenders follow in managing their costs and risks in lending. The chapter concludes by indicating the main limitations that the microcredit lessons have for agricultural lending.

In Chapter 3, three field experiences in agricultural lending are reviewed. The objective of this chapter is to assess the innovations that have enabled the case study lending institutions to meet the challenges that are traditionally associated with the granting of rural and agricultural credit. Particular attention has been given to those aspects that facilitate a better cost and risk management in agricultural lending.

Finally, Chapter 4 summarizes conclusions and highlights the remaining challenges in agricultural lending.

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<sup>2</sup> See Agricultural Finance Revisited: Why? AFR, No. 1, 1998

# 1 THE CHALLENGE OF AGRICULTURAL LENDING

Agricultural lenders face distinct challenges that are related to the specific nature of farm production. In this chapter, the issues that have been developed in the first two publications of the AFR Series are re-examined. Particular attention is given to the factors that affect the design of agricultural lending products.

In the first part of the chapter, a summary is given of the past agricultural credit policies including the shift from supply-led and directed agricultural credit programmes towards rural financial market development. In the current prevailing market environment in developing countries, major attention is now given to the assessment of the effective demand for financial services. Moreover, some practices of informal financial arrangements are presented. The second part of the chapter outlines the unique features of agricultural lending. In this context, the question is posed as to in which aspects rural financial markets differ from urban ones. Major attention is given to an assessment of the specific cost and risk barriers that formal lenders face in agricultural lending.<sup>3</sup>

## 1.1 RURAL FINANCIAL MARKETS

### 1.1.1 *From Directed Agricultural Credit to Rural Finance*

Until the early 1980s, agricultural planners were primarily concerned with the need to increase food crop production. The adoption of the new green revolution technologies was relatively costly, and small farmers were perceived as being too poor to save and to self-finance the required investments in additional farm inputs. As a result, vast amounts of financial resources from governments and donors were poured into agricultural development banks and agricultural credit projects. These programmes served as conduits for the provision of subsidized credit to small farmers often for specific production purposes.

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<sup>3</sup> For a detailed examination of the unique features of agricultural lending, see Chapter III in AFR, No. 1, 1998.

The provision of subsidized and easily accessible credit constituted a central theme of the agricultural development strategies in the 1970s and 1980s. It was argued that enhanced access to credit would accelerate technological change, stimulate national agricultural production through increased farm output and improve rural income distribution. However, this approach failed to produce the desired results. The reasons for the failure of these policies were manifold and have been detailed elsewhere.<sup>4</sup> As general conclusions the following explanations can be given.

Many agricultural development banks were created for political purposes and were not meant to operate as viable financial institutions. As they were established to channel subsidized donor and government funds to farmers, they lacked the market discipline and incentives of commercial banks. The provision of credit depended upon political decisions and interests. Moreover, the irregular availability of loan funds, the setting of interest rate ceilings and the periodic write-offs of overdue loans seriously undermined the effectiveness of these agricultural development banks. It is not surprising that many of them have been either restructured or condemned to liquidation.<sup>5</sup>

As the performance of these banks was measured in terms of loan disbursements rather than in the actual number of small farmer-borrowers attended and recovery of outstanding loans, they were tempted to grant sizeable loans predominantly to well established larger farmers. This was reinforced by the rent-seeking behaviour of these farmers, who benefited from the subsidized interest rates that were set by the governments (Schmidt and Kropp, 1987, Gonzalez-Vega and Graham, 1995).

To continue many agricultural credit programmes were poorly designed and failed to consider the high costs that are associated with agricultural lending. Moreover, as agricultural development banks focused exclusively on agricultural lending, they were exposed to a high concentration of risks. This required frequent rescheduling of overdue loans, thus further undermining the loan recovery efforts and the loan repayment discipline of both bank staff and farmers.

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<sup>4</sup> See especially Adams *et al.*, 1984.

<sup>5</sup> Some examples of successfully reformed ADBs include BRI in Indonesia, and BAAC in Thailand. BAAC is examined in detail in Chapter 3 as a case study of an agricultural lending institution.

The poor experiences with directed credit programmes in the early 1980s have already led to the first changes in policies from channelling supplied agricultural credit, the system has evolved to meeting the demand for different types of rural financial services. In fact, rural financial market development includes the provision of both farm and non-farm rural lending services as well as essential savings deposit facilities. This implies the creation of commercially viable financial institutions. These act as full-fledged financial intermediaries and compete with informal lenders.

The new policies have led to a shift away from the administration of directed credit programmes that rely on continuous government subsidies. Major attention is now given to the performance of financial institutions. When it comes to lending to poorer clients two performance indicators have been developed, *outreach* and *sustainability* (Yaron, 1992, Christen *et al.*, 1995). Outreach refers to the extent in which a financial institution provides high quality financial services to a large number of small clients. It includes both a horizontal dimension of “coverage” that measures the number of clients that are served, as well as a vertical dimension of “depth” that refers to the income level profile of the attended clients. Attempts are also made to evaluate the degree to which a financial institution meets the effective demand for financial services of the targeted clientele. The concept of outreach includes thus a quantitative and a qualitative dimension.

A major feature of sustainability is the financial self-sufficiency or the ability of the financial institution to provide durable services on a cost-covering basis without reliance on external subsidies.<sup>6</sup> Financial sustainability is attained when the return on equity, net of subsidies received, equals or exceeds the opportunity costs of capital (Krahen and Schmidt, 1994). This means that a financial institution must cover the costs of loanable funds, loan administration costs, provisions for loan losses as well as costs of protection against inflation. Financial institutions are considered commercially viable when they generate profits above and beyond their total financial transaction costs and can

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<sup>6</sup> Yaron's Subsidy Dependence Index is widely used to assess financial sustainability. It measures the dependency of financial institutions on subsidies. See Yaron, 1992 and Yaron *et al.*, 1997.

finance the development costs that are required to provide new financial products from their retained earnings.

While financial self-sufficiency is a pre-condition to sustainability, other factors have been identified that are necessary to attain full sustainability. These are related to the organizational and the operational effectiveness of financial institutions. They include:

- the development of new financial products to respond to market opportunities;
- the provision of high quality financial services to strengthen the institution's competitiveness. This ensures client trust and loyalty;
- an effective governance and management structure that protects the institution against political interference and distortions that are induced by government and donor interests;
- the ability to access financial markets to fund loan portfolio growth and to strengthen the equity base of the financial institution.

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Although the financial systems development approach is now being increasingly accepted and adopted, the debate continues on the nature and the extent of required government interventions in the rural financial sector. For instance, the essential role of governments in establishing an enabling policy environment and laying down an appropriate legal and regulatory framework is generally accepted. But there is much less consensus on the need and the extent to which governments should be involved in the direct provision of financial services in the event of serious market failures. In view of the limited available resources, direct government interventions should be exerted on the basis of operational efficiency and cost-effectiveness. A general rule is that state-owned rural financial institutions should not receive special privileges that create unfair competition.

### ***1.1.2 Credit Demand: Rural Clients***

In the financial market and systems development approach, the users of financial services are considered clients rather than beneficiaries.<sup>7</sup>

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<sup>7</sup> See AFR No. 2, Chapter 1, 1998.

Recent research has revealed that a number of assumptions about small farm households, which formed the rationale for directed agricultural credit programmes, were wrong.

Contrary to earlier perceptions, research on rural households has shown that even small farmers save. In fact, their savings are an integral part of farm household livelihood strategies. Savings are crucial to straddle the period between two successive harvests and to meet contingency expenditures. Household savings can be used for a variety of production, investment and deferred consumption purposes. These include conserving seeds, purchasing new farm inputs, storing of crop produce for deferred consumption and/or selling off later in the season at more lucrative market prices. Cash savings are normally kept at home due to the lack of appropriate bank deposit facilities. Deposits can be mobilized also through informal arrangements such as savings groups and money collectors.

Another misconception is that rural people are unable to pay market interest rates for credit. Widespread use of informal credit suggests that, even farmers with their own savings periodically borrow from informal sources at high effective interest rates. For instance, they prefer to sustain durable relationships with moneylenders who can provide timely access to small loans. Given the risky nature of agricultural production and the incidence of contingency expenditures, farmers are anxious to have access to a range of potential sources of finance even at high cost.

Research has shown that small farmers tend to be risk-averse and are conservative in their decision-making (Hazell, Pomareda, and Valdes, 1986). They cope with risks by diversifying their household income from farm and non-farm activities. Small farmers save in various forms, accumulate physical assets and participate in networks defined by social relations and mutual aid arrangements. An analysis of the cash flows of low-income rural households indicates that an often complex interdependency exists between the farm and the family household. Non-farm activities may account for a large share of the farm household income in rural areas. Non-farm employment has an important function by gener-

ating earnings that are used as working capital, or savings. In the case of poorer households they are an income source for survival during “hungry seasons”.<sup>8</sup>

Agricultural planners used to focus their attention on efforts to increase food production, as they failed to recognize the importance of non-farm income sources for small farm households. Consequently credit programmes did not consider the effects of diversified and off-farm income-generating activities on the overall farm household net cash flow. Planners underestimated the capability of farmers to self-finance their returning investment requirements and to repay their loans.

The recognition of the existence of rural savings and the need to grant loans for rural off-farm activities has highlighted the prospects for rural financial market development. Appropriate savings deposit facilities and diversified loan products are essential strategies. In fact, their provision would serve to strengthen rural financial intermediation and satisfy the effective demand for different types of financial services. Moreover, the success of rural financial institutions does not depend only on the range of services they are able to provide, but also on their competitiveness with informal lenders.

Informal financial arrangements are important in the rural economy. They have continued to flourish despite the presence of subsidized donor and government credit programmes. An analysis of their nature is essential to better understand the economic situation of farm households and their demand for financial services.

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<sup>8</sup> For poor small farmers with little scope for production and income diversification, credit may be required to reduce their vulnerability to contingencies. Farmers may consider financing production innovations only after the financial requirements of the household have been met (Hulme and Mosley, 1996).

### 1.1.3 Credit Supply: Typology of Rural Lenders

The table below presents the types of rural lenders that can be found in developing countries.

Table 1  
**Typology of Rural Lenders**

#### **1. Formal lenders**

Agricultural development banks  
Rural branches of commercial banks  
Co-operative banks  
Rural banks/community banks

#### **2. Semi-formal lenders**

Credit unions  
Co-operatives  
Village or semi-formal community banks  
NGOs

#### **3. Informal lenders**

Relatives and friends  
Moneylenders  
Rotating savings and credit associations

#### **4. Interlinked Credit Arrangements**

Input suppliers/Crop buyers  
Processing industries

The range of rural and agricultural lenders is far more limited than in urban financial markets. This results from the unique features of agricultural production, finance and the history of financial sector development.

Commercial banks are not involved in rural finance. They have not voluntarily established extensive rural branch networks nor have they developed specific financial services for the poorer rural clientele. In some cases, they extended limited services to larger agro-industries in rural areas. This was the background against which governments in many developing countries constituted specialized agricultural development banks. Specialized banks were affected by the structural adjustment programmes, financial sector reform and the changed environment of market liberalization and privatization. Many of these banks have been restructured or have ceased their operations.

Beyond formal rural lenders, there are many small, decentralized, semi-formal or informal financial intermediaries. Examples of these providers include village banks, community banks, co-operatives and credit unions. Usually their involvement in agricultural lending is constrained as their lending operations are savings-based. They lack sufficient longer-term financial resources for agricultural lending. There is evidence that many small farmers now rely on semiformal and informal arrangements for financing their on-farm production. This shift has emerged following demise of the directed agricultural credit programmes and the liquidation or restructuring of the agricultural development banks. Of particular importance are the traditional forms of trade finance and the contemporary agribusiness institutional arrangements like contract farming (Ladman *et al.*, 1992). See the following box for these interlinked credit arrangements.

In the past informal rural lenders have suffered from a negative reputation, largely due to the lack of competition in local financial markets. The often usurious behaviour of moneylenders contributed to this view. While not unfounded, improved understanding of the dynamics of informal financial markets has increased the awareness of the distinct advantages that they offer.

Informal lenders include moneylenders, input suppliers and traders. They lend for distinct purposes and offer credit at different terms and financial conditions. Lending also occurs between family members and friends. These loans are often interest-free. Group-based credit arrangements exist in the form of rotating savings and credit associations (ROSCAs) plus credit co-operatives. Informal savings arrangements

## Box 1

### Interlinked Credit Arrangements

In the context of the directed agricultural credit policies, governments often forced commercial banks to open rural branches to lend to small farmers and other rural households. As developing countries have changed from centrally-planned to market economies, most banks have withdrawn from non-profitable lending to small farmer borrowers, who are perceived as costly and risky clients. Various types of interlinked credit arrangements by non-financial institutions such as trade finance, nucleus estate outgrower schemes and contract farming have (re-) emerged as a significant way to finance the on-farm production of small farmers. For instance, trader and agribusiness outgrower schemes in Zambia have taken over the roles of the earlier government administrated agricultural credit programmes. They have also substituted for liquidated or restructured financial institutions like the Lima (Agricultural Development) Bank, the Zambian Co-operative Federation/Financial Services Ltd. (ZCF/FS), and the Credit Union and Savings Association (CUSA).

Interlinking the supply of agricultural inputs with credit and output marketing, works well in a single-channel marketing system. The approach holds whether or not it is supplemented with technical assistance and strict production supervision by traders or agribusiness firms. This also works for agricultural commodities that require highly specialized processing facilities. Where alternative marketing outlets exist, loan repayment may not be Guaranteed. Recovery is difficult to enforce, as the farmer borrower can opt to sell his produce to another buyer. A consideration that deters farmers from side selling their crops is the fear that they may find themselves without access to seasonal production credit next crop season. At the same time, small farmers may be paid unfair low prices for their produce in comparison with the costs of the supplied production inputs. They are disadvantaged by their weak bargaining position. In a competitive market environment, however, it is in the interest of the agribusiness contractors to establish long-term relationships with farmers. This ensures a steady supply of primary raw materials and/or of high quality final products.

include individual money collectors and savings societies that are organized between friends, neighbours and employees (Bouman, 1995).

Informal financial services providers fill the gaps in financial markets. They serve predominantly lower income people who are perceived by formal financial institutions as “unbankable” due to their inability to comply with conventional loan collateral requirements. Informal credit is also used by higher income people when the availability of bank credit is limited. It is used for consumption purposes. Distinct advantages are afforded by informal credit. There are no restrictions imposed on the purpose of its use, provided in very small amounts and it is typically available with a minimum time delay (Adams and Fitchett, 1992; Ghate, *et al.*, 1992).

Informal lenders have overcome the high cost and risk barriers which face institutional lenders when they attempt to serve small clients. Their local presence ensures a convenient and timely access of clients to financial services, increases their familiarity with the borrower’s needs and his/her loan repayment capacity and reduces the costs of loan follow-up. As they are interested in maintaining a good credit reputation to ensure continued access to credit resources, clients have a strong incentive to repay their loans promptly.

Although informal credit and savings services play a crucial role, they also have limitations. In fact, well-functioning banks have institutional advantages for client coverage. They are also able to provide full financial intermediation services and can offer a wide range of financial products through regulated contracts. Formal rural financial institutions need to revitalize their poor public image from the past. They have to build and maintain the confidence of their clientele. This is essential if they intend to compete with informal lenders who can be costly, but are easily accessible and provide opportune services. In particular, formal rural lenders need to demonstrate their viability and sustainability by reducing the high costs and risks that are associated with agricultural lending.

## **1.2 COSTS AND RISKS SPECIFIC TO AGRICULTURAL LENDING**

Agricultural lenders who serve small farmers face high financial transaction costs when granting small loans. High lending risks are suggest-

ed by the frequent inability of small farmer-borrowers to provide acceptable forms of loan collateral. The unique features of agricultural lending have been discussed in Chapter 3 of the AFR Publication No. 1 and they are summarized in the box below (see page no. 12).

### ***1.2.1 Costs of Agricultural Lending***

In this section special attention is given to the challenges that agricultural lenders face in managing their financial transaction costs and risks.

#### ***Dispersed Clients***

Low population density coupled with dispersed location of rural clients make the provision of formal financial services costly. From the lender's perspective, the long distances between communities and the inadequate rural transportation facilities in many developing countries increase the costs of loan appraisal, loan monitoring and enforcement of loan repayments (Gurgand, *et al.* 1996). The use of mobile loan officers and/or branch offices can be effective in lowering transaction costs. But mobile facilities may be subject to security risks if bank staff are required to transport money. The establishment of a rural branch network reduces the security risks, but branches are costly to maintain and to supervise.

Financial transaction costs of institutional credit can also be high for rural borrowers. This results from the high opportunity costs of lost working time. A borrower may have to pay several visits to the bank branch office to conclude cumbersome loan application procedures which require a long time for processing. Clients often have to spend much time and money to obtain the required documents and to find loan guarantors. For very small loans, these costs can significantly increase the effective lending interest rate (Klein, 1996).

While the decentralization of field operations has been effective in reducing the transaction costs in some countries their success depends on the local environment, infrastructure conditions and the management skills of the financial institution.

#### ***Seasonality and Loan Term Structure***

The seasonal nature of agricultural production and the relative long gestation periods before crops can be harvested and sold have direct impli-

### Unique Features of Agricultural Lending

#### 1. Lending activities in a politically sensitive environment

- Agriculture is a politically sensitive sector.
- State interventions often occur in rural financial markets.

#### 2. Risks associated with agricultural lending

- Similar economic activities of borrowers generate covariant risks due to market and price fluctuations, yield uncertainties, changes in domestic and international policies.
- State interventions (e.g. waiver of loan overdues).
- Low loan repayment discipline in externally-funded credit schemes.

#### 3. High financial transaction costs for lenders and borrowers

- Long distances to serve a dispersed rural clientele.
- Poorly developed transportation and communication infrastructure.
- Little knowledge about heterogeneous farm households.
- Expensive management and supervision of rural bank branch networks.
- High additional costs for borrowers: opportunity costs (e.g. lost working time), transport costs, bribes, fees.

#### 4. Specific credit demand

- The provision of long-term credit can lead to matching problems between assets (loans) and liabilities (funding sources).
- Reduced turnover of agricultural loan portfolio over the year.
- Seasonality in agricultural credit demand.

#### 5. Lack of required loan collateral

- Small farmers have few physical assets (e.g. land).
- Farmers and especially poor rural women have difficulties in clearly demonstrating their legal ownership of assets.
- Legal contract enforcement problems arise even when collateral is available.

#### 6. Farm households are integrated production and consumption units

- Demand for loans depends on the self-financing potential, access to savings deposit facilities and risk management ability of borrowers.
- Due to the fungibility of money borrowed funds can be used in the farm household for consumption, education, social insurance, production and investment purposes.

cations for the financial transaction costs of the lender. Agricultural loans are normally larger and are required for longer periods. Matching assets and liabilities is more difficult than for non-farm activities. Agricultural credit is also often repaid in “lumpy” installments. These are one or two loan repayments rather than regular weekly or monthly installments common in microcredit. This irregular pattern implies more difficult monitoring of repayment capacity and willingness. Moreover, an uneven distribution of the agricultural lending operations over the year increases the fixed costs of personnel. The earnings from lending may not be sufficient to cover these costs. Liquidity requirements in periods of high seasonal loan demand also increase the price of loanable funds. In times of low demand, excess liquidity needs to be invested in low or non-earning assets. This will increase the opportunity costs of these funds. In summary, lenders face high agricultural lending costs.

### ***Heterogeneity of Farming***

The diversity in farm and non-farm income-generating activities of rural households requires better knowledge of the farm household financial situation. Loan officers have more information than may be needed in the case of urban lending. This can extend the bank staff time (and expenses) needed for loan appraisal. It may also require the setting of individual loan repayment terms. It is likely to increase the costs of training agricultural loan officers.

### ***1.2.2 Risks Associated with Agricultural Lending***

Financial institutions face four major risks:

1. ***Credit or loan default risk*** - refers borrowers who are unable or unwilling to repay the loan principal and to service the interest rate charges
2. ***Liquidity risk*** - occurs when a bank is not able to meet its cash requirements. Mismatching the term of loan assets and liabilities (sources of loanable funds) exposes banks to high liquidity risks.
3. ***Interest rate risk*** - risk that a loan will decline in value as interest rates change.
4. ***Foreign exchange risk*** - defines exposure to changes in exchange rates which affect international borrowings denominated in foreign currency.

This study on better practices for agricultural lending focuses mainly on agricultural credit or loan default risks. The other risks (liquidity, interest rate and currency risks) are associated with funding and are covered in AFR No. 4 (Giehler, 1999).

Risks impact borrowing farmers and the financial institutions that lend to them. Active management can reduce these risks. Risks and uncertainty are pervasive in agricultural production and are perceived to be more serious than in most non-farm activities. Production losses are also impossible to predict. They can have serious consequences for income-generation and for the loan repayment capacity of the borrowing farmer. The type and the severity of risks which farmers face vary with the type of farming system, the physical and economic conditions, the prevailing policies, etc.

Agricultural lending implies high liquidity risks due to the seasonality of farm household income. Surpluses supply increased savings capacity and reduced demand for loans after harvest and deficits reduce savings capacity and increase demand for loans before planting a crop. Also, agricultural lenders face particular challenges when many or all of their borrowers are affected by external factors at the same time. This condition is referred to as covariant risk which can seriously undermine the quality of the agricultural loan portfolio. As a result, the provision of viable, sustainable financial services and the development of a strong rural financial system is contingent on the ability of financial institutions to assess, quantify and appropriately manage various types of risk (Von Pischke, 1994). Credit risks in agricultural lending are summarized below.

## **Risks from Changes in Domestic and International Policies**

### ***Production and Yield Risks***

Yield uncertainty due to natural hazards refers to the unpredictable impact of weather, pests and diseases, and calamities on farm production (Ellis, 1988). Risks severely impact younger, less well-established, but more ambitious farmers. Especially affected are those who embark on farming activities that may generate a high potential income at the price of concentrated risks - e.g. in the case of high input monoculture

of maize. Subsequent loan defaults may adversely affect the creditworthiness of farmer borrowers and their ability to secure future loans.

### ***Market and Price Risks***

Price uncertainty due to market fluctuations is particularly severe where information is lacking and where markets are imperfect, features that are prevalent in the agricultural sector in many developing countries (Ellis, 1988). The relatively long time period between the decision to plant a crop or to start a livestock enterprise and the realization of farm output means that market prices are unknown at the moment when a loan is granted. This problem is even more acute for perennial tree crops like cocoa and coffee because of the gap of several years between planting and the first harvest. These economic risks have been particularly noticeable in those countries where the former single crop buyer was a parastatal body. These organizations announced a buying price before planting time. Many disappeared following structural adjustment reforms and privatization of agricultural support services. Private buyers rarely fix a blanket-buying price prior to the harvest, even though various interlinked transactions for specific crops have become more common today. These arrangements almost always involve the setting of a price or a range of prices, prior to crop planting.

### ***Risk of Loan Collateral Limitations***

Problems associated with inadequate loan collateral pose specific problems to rural lenders. Land is the most widely accepted asset for use as collateral, because it is fixed and not easily destroyed. It is also often prized by owners above its market value and it has a high scarcity value in densely populated areas. Smallholder farmers with land that has limited value, or those who have only usufruct rights, are less likely to have access to bank loans. Moveable assets, such as livestock and equipment, are regarded by lenders as higher risk forms of security. The owner must provide proof of purchase and have insurance coverage on these items. This is rarely the case for low-income farm households.

Moreover, there are a number of loan contract enforcement problems, even when borrowers are able to meet the loan collateral requirements. Restrictions on the transfer of land received through land reform programmes limits its value as collateral - even where sound entitlement

exists. In many developing countries the poor and especially women have most difficulties in clearly demonstrating their legal ownership of assets. Innovative approaches which draw on the practices of informal lenders and provide incentives to low income borrowers to pay back their loans have been developed in microcredit programmes. These are explored in the following chapters.

### ***Moral Hazard Risks in Distorted Credit Cultures***

Potentially serious risk problems have risen from the effects of failed directed credit programmes. The impact on the loan repayment discipline is pervasive. Borrowers who have witnessed the emergence and demise of lending institutions, have been discouraged from repaying their loans. Further people have repeatedly received government funds under the guise of “loans”. Loan clients have been conditioned to expect concessional terms for institutional credit.

Under these circumstances, the incidence of moral hazard is high. The local “credit culture” is distorted among farmers and lenders. Borrowers lack the discipline to meet their loan repayment obligations, because loan repayment commitments were not enforced in the past. Lenders, on the other hand, lack the systems, experience and incentives to enforce loan repayment. There is also an urgent need to change bank staff attitudes and the poor public image of financial institutions in rural areas.

Another effect of a distorted credit culture on the risk exposure of agricultural lenders is the priority that borrowers give to repaying strictly-enforced informal loans. These are settled before they comply with the obligations associated with “concessional” institutional credit. This is explained by the fact that losing the access to informal credit is viewed as more disadvantageous than foregoing future bank loans (due to the uncertain future of rural financial institutions). Very often informal lenders have stronger enforcement means than banks.

### ***Risks from Changes in Domestic and International Policies***

Policy changes and state interventions can have a damaging impact on both borrowers and lenders. For the latter they can contribute significantly to covariant risks. Many low-income economies under structural adjustment programmes have slashed their farming subsidies. This has had, for instance, a serious effect on the costs and the demand for fer-

tilizer. Reducing government expenditures as an essential part of structural adjustment programmes may also affect employment opportunities in the public sector. Costs may even reduce agricultural production levels, if extension services are suddenly discontinued.

## 2 LESSONS FROM MICROCREDIT

During recent years, financial services have been provided to an increasing number of low-income people and microentrepreneurs because of innovative developments in “microfinance”. Microfinance refers to that part of the financial sector that responds to the financial demand of low-income households (Fruman/Goldberg, 1997). Until now, microfinance institutions have operated mainly in urban areas. They provide small and short-term loans predominantly for trading, services and microenterprise activities. The lessons learned from the failures of the earlier directed agricultural credit projects plus the principles of the new financial systems development approach have been particularly influential in microfinance. Important progress has been made in the areas of institutional and organizational set-up and operational strategies. New lending technologies have been designed for low-income clients.

In this chapter, the key lessons that have emerged as the “best practices” in the field of microfinance are examined. The chapter is divided into three sections. The first reviews the supply and demand features of microcredit. The second section examines some key factors which have emerged from the cumulative experiences of microcredit. Particular attention is given to the review of the microcredit technologies and the contribution that they make towards managing the costs and risks of small loans. The last section highlights the main limitations that are encountered in transferring the microcredit practices to agricultural lending.

### 2.1 TYPOLOGY OF MICROLENDERS

A variety of organizations and institutions are active as providers of Microcredit services. They can be broadly divided into three groups: non-governmental organizations (NGOs); credit unions and co-operatives; and banks.

#### *NGOs*

The majority of the microcredit programmes are operated by NGOs.

These include national organizations, many which receive assistance from international donor organizations. The international NGOs operate programmes through affiliated local agencies. They have a clear commitment to work with poor people. NGOs have the advantage that they are familiar with the household livelihood strategies and the financial situation of their target population. They are well established in local communities with good access to the population.

However, NGOs have encountered many challenges in the administration of credit programmes. As predominantly social assistance organizations, few possess the required professional expertise or the business culture to efficiently execute credit operations. In fact, they will have to undergo a substantial transformation if they intend to become specialized financial services providers. They will have to alter their public image. Instead of serving “beneficiaries”, they must establish contractual relationships with clients.

Since the mid-1980s, a number of NGOs have established themselves as specialized microfinance institutions. While some have discontinued their social services, others have created separate affiliated organizations to provide financial services. Specialized NGO microlenders have been at the forefront in the development of appropriate institutional and organizational structures. They have initiated the design of innovative microcredit technologies.

Despite the significant advancements in the field of microfinance, the majority of the NGOs serve only a few hundred or a few thousand clients. Most provide loans and usually have only one or two loan products. Although some require mandatory savings deposits from their clients that form part of their loan collateral, just a few mobilize voluntary savings. There has been interest in operating savings deposit facilities as a means to mobilize loanable funds and to enhance their customer services. However, NGOs are generally restricted from taking deposits. They fall outside the formal banking regulation and supervision system, as they operate without a formal banking licence.

This restriction has recently motivated some NGOs to transform themselves into regulated financial institutions. This process, known as *up-*

*grading*, gives microfinance institutions the freedom to expand their range of financial services. It also enhances the chances of accessing financial markets for additional loanable resources. Bancosol in Bolivia was the first NGO to achieve the status of a regulated financial institution. BRAC in Bangladesh and K-Rep in Kenya are also in the process of obtaining bank licences.<sup>9</sup>

### ***Credit Unions and Co-operatives***

Historically, credit unions used to serve people who experienced difficulties in accessing commercial banks. Credit unions tend to be more formal in their structure than NGOs, including the possible establishment of regional and national networks. The constitution of central finance facilities also enables the reallocation of surplus (liquidity) funds between member credit unions. In many countries, credit unions have been included as a special category in the banking law. They are subject to separate regulation and supervision mechanisms.

Most credit unions and co-operatives limit their services to members, whose savings provide the financial basis for their lending operations. This has the advantage that they can better screen prospective borrowers and appraise, monitor and recover loans. As in the case of informal savings and credit groups, members are self-selected, and peer pressure is exerted to attain full and timely loan repayment. Social pressure and superior information on member clients are effective mechanisms. This functions as long as members know each other and the scope of the financial operations remains manageable.

Despite their advantages, credit unions and co-operatives face notable challenges. The provision of financial services is restricted to members

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<sup>9</sup> Some NGOs have successfully borrowed from banks to finance their loans to clients. The ACCION International Bridge Fund has promoted NGO lending from commercial banks by providing a guarantee scheme. A stand-by letter of credit is issued from one bank (in this specific case the CitiBank) to another (local banks in Latin America). As a result, the NGOs can get a loan from the local bank, which is backed by the stand-by letter of credit. If the institution fails to repay, the lender can call on the Citibank upon presentation of the unpaid matured notes. The stand-by letter in this case makes up 130% of the guarantee provided by ACCION. The ACCION guarantee fund which backs the stand by letter of credit is capitalized by private individuals and institutional investors often with philanthropic motives.

and thus limits their outreach and growth potential. Because loanable funds are generally limited to the mobilized member savings, the credit union is restricted in its efforts to satisfy the total effective credit demand of their members. Loans are often granted for smaller amounts than were applied for. They are only available after outstanding loans have been reimbursed. This restricts borrowing opportunities and therefore the effectiveness of the loans. The lack of professional management, and cronyism among members can undermine the loan portfolio quality. Moreover, where borrowers dominate the co-operatives' policies, there has been a tendency towards setting low lending interest rates. This practice may undermine the financial performance and the potential for loan portfolio growth.

Absent of these difficulties, credit unions and co-operatives have demonstrated potential as a viable institutional model for providing microcredit services. Changes in the regulatory and supervisory framework for credit unions together with technical assistance services from international credit union organizations, have been identified as key factors in strengthening their performance.

### ***Banks***

The involvement of commercial banks in microfinance is relatively recent.<sup>10</sup> Banks employ a variety of strategies in serving low-income clients, who are normally perceived as “unbankable”. Microcredit may be granted *indirectly* or *directly*.

Indirect ways in which commercial banks lend to small clients include the so-called *linkage* programmes with NGOs or other intermediary organizations. In these cases, banks provide loanable resources and the intermediary organizations on-lends the resources to members of self-help groups for microenterprise activities. In these arrangements, banks have limited contacts with the final borrowers. They are not actively involved in the loan product design or credit administration. They rely on the NGO for all aspects of loan appraisal, loan monitoring and loan recovery.

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<sup>10</sup> Indonesia is an exception and banks were specifically created with the purpose of serving small clients (Baydas, Graham, and Valenzuela, 1997).

While this model has increased the access of low-income clients to bank loans, it has proven to be only moderately successful in the provision of sustainable banking services. The bank has few incentives to develop appropriate and cost effective credit technologies. It relies on a number of organizations, each with different objectives and performance standards.

More interesting has been the recent involvement of some commercial banks in direct lending through the design of new loan products and services for low-income clients. This process is referred to as *down-scaling*. It implies the creation of a specialized microcredit department in the bank. This development is particularly attractive in view of the outreach and the financial expertise contained in commercial banks. Well established financial institutions enjoy public confidence, as clients recognize and perceive the banks as reliable and stable organizations.

The involvement of banks in microfinance can offer, for example, their amplified intermediation potential. However, if bank operations are inefficient and bank staff are unable to change their traditional banking culture and attitudes, tedious barriers remain to directly serving low-income clients. Indeed, in these cases, it may be preferable to create a new microfinance institution that has a clear corporate mission and set of objectives. This is necessary in cases where banks have a poor reputation due to failed directed credit programmes, or when their operations have been undermined by government interference.

## **2.2 STRATEGIES TO REDUCE COSTS AND TO MANAGE RISKS**

Micro lenders have developed solutions for the problems of high risks and costs associated with lending to microenterprises and low-income clients. Over the years, a series of best practices and guiding principles have been formulated to enhance the outreach and sustainability of microfinance institutions.<sup>11</sup> In this section, an analysis is made of the

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<sup>11</sup> The best practices and guidelines presented here are derived from key literature including Yaron, 1992b and Yaron *et al.*, 1997; Christen *et al.*, 1995; Donors' Working Group, 1995; ILO, 1996; Rhyne and Holt, 1994; Schmidt and Zeitinger, 1994; Ledgerwood, 1998.

key lessons that have been learned from microcredit practices. Particular attention goes to procedures that reduce costs and risks. The final objective is to assess if and to what extent these practices can be transferred to agricultural lending.

### ***2.2.1 Cost Reduction***

Microlenders face the problem of high costs that are associated with the granting of small loans. In fact, loan administration costs do not vary by loan amount. By definition small loans are less profitable for a lender. Moreover, in many networks there are few branches in formal financial institutions. Generally, setting up and operating branches is very costly. Operation costs should be covered by the profits generated by the branch office. As a result, financial transaction costs are high for borrowers, who may have to travel long distances to the bank branch offices. Microlenders, however, have found ways to reduce the high costs of providing small loans. Various strategies are presented below.

#### ***Standardization of Loan Products and Lending Procedures***

Microlenders simplify their operations by offering only a few highly standardized loan products. They usually provide short-term working capital loans and, only occasionally, grant investment capital loans to established borrowers. Often they have adopted a “credit-only” approach and few microlenders provide technical assistance or business training to their clients. Some have established collaboration agreements with partner agencies for the provision of non-financial support services.

Loans are kept small and are extended for only a few weeks or months, especially to first-time clients. Borrowers with good loan repayment records are rewarded almost automatically with repeat loans. Some microlenders increase the size of repeat loans by using pre-determined formulas. Although the provision of small and short-term loans to first-time borrowers is costly, the financial transaction costs can be considerably reduced for well-known recurring borrowers.

Microlenders usually charge borrowers interest rates and fees that are much higher than those used by conventional formal lenders. Interest rates need to be positive in real terms to protect the loan portfolio value against the effect of inflation.

### ***Productivity of Loan Officers***

Loan officers are expected to serve a large number of clients. Typically 200-300 borrowers are assigned per loan officer. In order to achieve this, staff performance bonuses are widely used. These incentives are related to the loan volume handled, the quality of the loan portfolio and the number of low income or remote clients that are attended in some cases. While these incentives increase the loan administration costs, well-trained and motivated staff are essential to increase the overall productivity of the financial institution. This lowers the lender operational costs in relative terms.

### ***Group versus Individual Lending***

Microfinance institutions provide loans either through groups or lend directly to individuals. Proponents of the group lending approach highlight the cost-reducing aspect of this methodology. On the other hand, the defenders of individual lending emphasize the advantages of flexibility in meeting the loan demand, achieving a high loan product quality and reducing credit risks.

### ***Group Lending***

There are two modalities of group lending. A microlender may lend to a collective entity such as a co-operative or a village bank, which in turn on-lends the funds to its members. More frequently, however, the term is used for *joint liability or solidarity group lending*, whereby the lender provides loans to individual borrowers who are organized in groups. In both cases, group members are collectively responsible for the full and timely repayment of the loans.

Group lending can have the advantage of increasing the lender's outreach capacity by reducing the loan administration costs. In the first kind of group lending mentioned above only one loan is administered for each group. Moreover, group lending reduces the lender costs by maximizing the use of insider information and by relying on peer borrower screening. Group members perform as well loan monitoring and loan repayment enforcement.

However, the costs of group formation are high in most cases. This is especially true for lenders who do not work with existing groups. They have to support the whole group formation process. Also, group main-

tenance costs are high as group members' needs and circumstances diverge over time, thus weakening cohesion. Loan officers may have to participate in regular group meetings to attempt to strengthen the loan administration responsibilities of the group, the group cohesion and the sense of peer responsibility amongst the group members.

### ***Individual Lending***

Microlenders use a modified version of the traditional bank lending technology that has been adapted to the characteristics of providing small and short-term loans to low income borrowers. The screening of potential clients is carried out by assessing their individual loan repayment capacity and their willingness to repay. Innovative microlenders examine the enterprise household cash flow and check the credit history of the loan applicant to get a complete picture of his/her loan repayment capacity and creditworthiness.

The process of collecting detailed information on individual clients is a costly exercise for microlenders. However, these costs can be lowered by using a standardized checklist of demands. Moreover, once the high start-up costs of establishing a lender-client relationship have been made, the costs of obtaining additional information or updating existing information are much lower.

Some microlenders attempt over time to introduce more individualized lending terms for the members of joint liability groups. These initiatives are interesting since they combine the cost savings of working with groups with the high quality of providing individual lending services to group members. In many cases, loan follow-up and loan repayment enforcement are done by the group and the lender, which may result in relatively high costs to all.

### ***2.2.2 Risk Management***

Microlenders manage the risks of lending to low income borrowers by selecting a specific target clientele. These clients are normally urban microentrepreneurs who have some experience in the business activity for which a loan application is made. Delegation of lending authority to the branch office level is enabled to specific amounts. This ensures that loan officers who are close to the customers have influence in the lending decision.

Another element in the risk management strategy of some microlenders is the requirement that borrowers contribute a minimum equity share of the total investment costs or down payment. In individual lending the duration of the loan and the loan repayment installments are also adjusted to the repayment capacity of the individual borrower. This reduces the loan default risk. Loan collateral substitutes are normally accepted, as the target clientele will rarely possess conventional bank collateral. First borrowers have to build up a track record of good loan repayment performance before larger loans are granted. Major risk management mechanisms of professional microlenders are adequate liability and asset planning and management, the use of internationally accepted accounting standards, and computerized integrated accounting and management information systems. These improve the basis for timely and cost-effective decision making.

## **Target Clientele**

### ***Concentration on Urban Clients***

Microlenders mostly serve urban and peri-urban clients. This category calls for easier management of lending costs and risks. The infrastructure and commodity markets in urban settings are normally more developed, providing a better environment for profitable microbusinesses than in rural areas. Urban clients have a higher degree of literacy. More frequent relations between bank staff and clients are likely to decrease the risk of loan default.

### ***Concentration on Financing of Trade Activities***

Microlenders provide small and short-term loans that need to be repaid in frequent installments. This implicitly means that microcredit concentrates on the financing of those activities that have a high turnover and generate regular income flows. Trading and services activities answer this criteria. In fact, they represent a large portion of the loan portfolio of most microlenders.

### ***Selecting Experienced Micro-Entrepreneur Borrowers***

Microlenders limit the risk of loan default by selecting borrowers with a proven track record. A customer whose business has survived for a minimum time period is more likely to be successful in the future. These borrowers also take their loan repayment obligations seriously and are potential long-term clients for microlenders.

### ***Decentralized Branch Network***

“Bringing the bank to the people” has proved to be a successful component of microcredit strategies. There are many ways to achieve this ranging from loan officers who regularly visit their clients, to the use of mobile bank units in branch offices or agencies. A decentralized delivery structure of financial services decreases information costs and reduces loan default risk. It also allows the growth and the diversification of the loan portfolio. It creates client confidence and promotes a sense of responsibility. For instance, the establishment of branch offices in markets, helps to better integrate financial institutions into their local communities. This facilitates the provision of higher quality services and contributes to the long-term sustainability of the microfinance institution.

### **Group Versus Individual Lending**

The problem of risk management differs by group and individual lending approaches.

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#### ***Group Lending***

Group lending builds upon the collective responsibility of group members to repay their loans. Proponents of group lending argue that this methodology enables lenders to reach more low-income clients at relatively low costs. However, borrower risk is greater since every group member bears his/her own risk and that of all other group members. The exposure to pay for fellow member loan defaults encourages borrowers to apply for the same loan size rather than fitting loans to the loan repayment capacity of individual group members. This may cause “negative solidarity” in the group, which means that the whole group defaults if one member fails to repay his loan.

Usually, group lending offers less flexible terms and loan repayment installments. All group members receive and repay their loans in the same cycle. Even when graduation to individual lending is permitted, the lack of sufficient written records on borrowers hampers individual loan appraisal.

Group information advantages and peer pressure are proportional to the diversity and proximity of the members. The greater the heterogeneity

of the group and/or in cases where group members live in dispersed locations the group influence is weaker. On the other hand, homogeneous groups may result in high covariant risks to the lender. There is also the potential for abuse of power and corruption by a powerful group leader. Conversely, if a good group lender leaves, then the group will be severely impaired.

### ***Individual Lending***

The main differences between the provision of microcredit to individual borrowers and conventional bank lending technologies include the use of collateral substitutes. These comprise co-signers, third-party guarantors, household goods and other proxies. Also the loan repayment capacity of prospective borrowers is appraised.

The personalized nature of individual lending facilitates the granting of loan products that fit the client demand and his/her loan repayment capacity. At the same time, this approach encourages the development of a closer relationship and strengthens the mutual trust between the lender and borrower. It may increase the compliance with contractual loan obligations. Better client knowledge also simplifies the appraisal of repeat loans and reduces the risk of loan default. Accumulated client information may reinforce current financial services and can lead to the development of new loan products.<sup>12</sup>

## **Adjusting the Lending Terms and Conditions**

### ***Equity Contribution***

Loans should never finance the total investment costs requested. Lenders require an equity contribution from the borrower to complement the external resources. This equity participation increases the stake that the borrower has in submitting a realistic loan application thus actively promoting the success of his business. In the case of small working capital loans, it may be difficult or even arbitrary to define investment purposes. As a result the calculation of equity participation may be difficult.

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<sup>12</sup> A potential drawback of individual lending is that a lower number of clients is served. Although individual lenders employ both conventional guarantees and loan collateral substitutes, the minimum guarantee requirements may still remain beyond the capacity of most low income households. Under these circumstances, the use of group loans may be the only alternative.

### ***Assessment of Loan Repayment Capacity***

Good microlenders examine the loan repayment capacity and the creditworthiness of new borrowers. In assessing the loan repayment capacity they consider all income sources and expenditures of the microenterprise household unit. The source of funds for repaying the loan does not need to be the income that will be generated by the investment that is financed with the loan. Loan officers who appraise loan applications should be properly trained, as they play a key role in the decentralized decision-making process.

Microlenders often rely on information from local networks to verify the reputation and creditworthiness of prospective borrowers. These networks can be equally useful for enforcing loan repayments. They effectively publicize information on delinquent borrowers. Community networks have proved their value in Indonesia as well as in other Asian countries. There, the system of local organization and the importance of personal reputation makes this approach particularly effective.

### ***Loan Repayment Schedules***

Frequent loan repayment installments, often weekly or monthly, facilitate a close monitoring of the borrower loan repayment performance. As clients build up a good track record, the loan duration and the loan repayment intervals for repeat loans are often lengthened. Some microlenders grant increasingly individualized loan products, once the borrower has established good creditworthiness. This is often referred to as “graduation” to a next product level or client status.

## **Loan Collateral Substitutes and Repayment Incentives**

### ***Loan Collateral Substitutes***

As most microcredit clients cannot offer conventional bank collateral, loan collateral substitutes are accepted (See *Individual Lending*). The personal value that the collateral substitute has for the borrower plays an important role. In view of the practical and legal problems that are associated with the seizure of these assets in cases of loan default, microlenders often place more emphasis on assessing the creditworthiness of a prospective borrower. They prefer to closely monitor his/her loan repayment performance.

### ***Loan Repayment Incentives***

Microlenders normally grant *small* first-time loans to new customers. Only when the first loan is paid back in time can the borrower receive a slightly larger loan. A track record of good loan repayment performance is accumulated. As a result the risk of loan defaults may be reduced. The possible access to new loans is a major loan repayment incentive for microcredit borrowers. Rewards for full and timely loan repayments on the one hand and charging of late payment fees and penalties on the other are effective means of promoting good borrower discipline.

### **Loan Portfolio Management**

#### ***Management Information Systems***

Accurate and timely information systems are crucial for good operational management. Successful microlenders have invested wisely in the acquisition of an adequate banking software to computerize their accounting and management information systems consistent with their specific requirements. The required sophistication of bank automation depends on the volume and the scope of the financial services. It also depends on the organizational and operational structure of the financial institution. Ideally, loan portfolio monitoring and reporting on loan disbursements and reimbursements of branch offices should be integrated with liquidity fund management. This ensures that the necessary information is available to the head office in a timely manner.

Computerized and integrated loan accounting and management information systems that produce frequent reports guarantee that loan officers and bank management can respond promptly to potential loan delinquency problems. It is the responsibility of field staff to examine the reasons for overdue loans. Based on their reports, an immediate decision should be taken on corrective follow-up actions. In cases where legitimate reasons for overdue loan repayments exist, loan rescheduling may be allowed.

#### ***Decentralized Decision Making***

Successful microlenders delegate loan authority and decentralize staff responsibilities in the financial institution. At the same time, adequate checks and balances need to be established to monitor decentralized

decision-making. In order to encourage the prompt collection of outstanding loans, staff performance bonuses should be based on pre-set loan recovery rates as well as on the number and the volume of loans that are granted.

### **2.3 LIMITATIONS OF MICROCREDIT LESSONS FOR AGRICULTURAL LENDING**

Despite the considerable achievements that a number of microfinance institutions have obtained, microcredit operations face some serious limitations. These refer to application of these practices beyond serving urban microentrepreneurs chiefly in the trading sector. The purpose of this section is to identify some of these constraints as they are related to rural and agricultural lending. Certain data introduced previously in this chapter will be recapped.

#### **Dependence on External Environment**

A favourable macroeconomic and market-oriented business environment together with sound financial sector policies contribute to a thriving financial system (Yaron *et al.*, 1997). Pre-conditions for the provision of sustainable financial services are stable macroeconomic policies and an adequate legal and regulatory/supervisory framework for financial sector development. In particular, deregulation of interest rates allows microlenders to charge lending interest rates that are high enough to fully cover the high costs of providing small and short-term loans to large numbers of low-income clients. Policy distortions that discriminate against a specific economic sector, such as agriculture, discourage financial institutions from serving it.

It is not surprising that the fastest microfinance growth has occurred in Bangladesh, Bolivia and Indonesia. In recent years these countries have experienced a stable macroeconomic environment with microenterprise development policies. Moreover, the microcredit urban and rural clientele in these countries are located in areas that have a high population density and low income people often engaged in non-farm activities. The

difficulties of microfinance institutions in other countries may be traced to less favourable conditions with fewer possibilities to invest in profitable non-farm income-generating activities.

Microfinance institutions with a narrow capital base also face serious problems to protect themselves against unexpected external shocks. For instance, there is little information on how microlenders cope with frequent floods in Bangladesh or with droughts in Africa. Insight into their ability to withstand adverse conditions would illuminate the strengths and weaknesses in their organizational and operational structure. It would also reveal the depth of their funding sources, specific lending technologies and risk management strategies. Perhaps the importance of external support mechanisms would be indicated. Financial support of donors has been vital in many cases to help these institutions overcome emergency situations. Today many efforts are made to expand the frontier of lending operations to a less profitable and more risky clientele.

### **Type of Clientele Served**

Some microlenders serve urban and rural customers. They tend to concentrate their activities in urban and peri-urban areas. The population density is higher and the provision of financial services is simpler and less costly than in rural areas. Many of these institutions serve women who, though usually poorer than men, comply better with their loan repayment obligations.

Although microfinance institutions often claim that they lend to the poorest of the poor, in practice most of them do not serve clients who belong to the lowest income groups (Hulmes and Mosley, 1996). Some require one year of operations for microbusiness activities before they will consider clients eligible for a first time loan. Others insist on evidence of stability and continuity in family household living arrangements.

In the future, competition in microfinance may become more intense if commercial banks decide to enter this market segment. Some of the more successful microcredit clients now demand larger loans. These funding requests may be too big to be managed conveniently by most

microlenders that use standard lending technologies. This situation has led some microlenders to revise their target market. They grant individual loans and/or serve a rural clientele.

Microfinance institutions such as the Financiera Calpiá in El Salvador and the Cajas Municipales in Peru have extended their lending operations beyond their current urban markets into rural areas. The new borrowers are mostly microentrepreneurs in small municipalities, but they have also started to serve small farmers. These microfinance institutions are using current microcredit technologies for this new type of clients. Institutions are starting with careful screening and selection of potential farmer-borrowers.

### **Loan Products and Lending Technologies**

Microcredit borrowers tend to be engaged in commercial activities such as street vending. Non-farm business activities generate more regular income and permit loan repayment in frequent and small installments. First-time loans are small to avoid encouraging borrowers to introduce potentially risky, major changes in their existing business activities to accommodate the receipt of a single loan. Relatively few microfinance institutions lend exclusively for farm activities. These have longer and less stable production cycles and often present a marked seasonality in their revenues.

Microlenders use a variety of strategies to reduce their lending costs and risks. Both individual and group lending technologies are used in an effort to normalize the high costs and risks associated with lending to low income people. However, costs and risks of servicing groups of urban microentrepreneurs are usually lower than working with small farmer groups.

### 3 AGRICULTURAL LENDING: LESSONS FROM THE FIELD

The extensive documentation and analysis of rural and microfinance institutions has generated a useful framework for assessing their performance. First, there are the examples of a number of successful agricultural development banks. Although there are few microfinance institutions currently engaged in agricultural lending, some of them have broken new ground. Their experiences are worthy of study and important lessons can be learned. The three case studies that have been selected for this study are: the **Bank for Agriculture and Agricultural Co-operatives (BAAC)** in Thailand; the **Financiera Calpiá** in El Salvador; and the **Cajas Municipales de Ahorro y Crédito (CMACs)** in Peru.

These institutions have widely different ownership structure, institutional and organizational set-up, duration of operations, size, credit technologies and type of clientele. They have also quite different backgrounds and mandates. BAAC is a state-owned agricultural development bank that has operated for over 30 years. During this period it has undergone a significant transformation. Its goal is to provide farm households with access to agricultural credit and other financial services on a nationwide basis. The BAAC lending activities were limited to farm production and agriculture-related activities until recently, unlike those of Calpiá and the CMACs. BAAC clients are exclusively rural including medium to low income farm households.

Field visits were carried out in 1997. There may have been changes in institutional policies, which are not included in the text.

Calpiá and the CMACs started their financial services and lending activities in urban areas and are newcomers to rural and agricultural lending. Their agricultural credit operations date only from 1993 (Calpiá seit 1995) so their rural and agricultural loan portfolios are still small. Their experiences are interesting since they employ a similar agricultural lending technology but have distinct institutional structures and operate in different environments. They represent successful urban microlenders which are expanding their operations into rural areas. They illustrate the adaptation of urban microcredit technology to the specific demand features of a rural clientele.

BAAC, Calpiá and the CMACs have been quite successful in their pursuit of outreach and sustainability. All are active in experimenting with new organizational and operational structures. They have developed credit technologies that deal with the high costs and risks that are associated with lending to small farm households.

This chapter focuses on those factors that are especially relevant to the management of costs and risks in agricultural lending. The chapter is divided into two sections. The first section provides a brief overview of the institutional profile, the clientele served and the performance of each of the three case studies.<sup>13</sup> The second section examines the strategies that are used to reduce the costs and to manage the risks in agricultural lending along the lines discussed in section 1.2.

### **3.1 INSTITUTIONAL PROFILES, CLIENTELE AND PERFORMANCE OF THREE AGRICULTURAL LENDERS**

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Bank for Agriculture and Agricultural Co-operatives (BAAC), Thailand BAAC was founded in 1966 by an Act of Parliament, with the mandate of supporting agricultural development. It operates under the supervision of the Ministry of Finance. The initial governing statutes required all clients to be farm households, but by the end of 1998 BAAC was allowed to lend to other rural households.

BAAC has continuously expanded its outreach and in 1997 it covered 3.4 million farm household borrowers on an increasingly self-sustainable basis, thus serving 43% of all farm households in the country.

BAAC's outreach and degree of self-sustainability rank it among the world's leading agricultural development banks. Clients are served through a network of 657 branches and sub-branches with over 850 field offices. Three-quarters of the total borrowers access loans through joint liability groups (JLGs). In 1998 BAAC disbursed loans to approximately 225 000 JLGs throughout the country. JLG loans accounted for 92% of the total number of BAAC loans. The size of the groups ranges

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<sup>13</sup> All three case studies are available on request to GTZ or FAO.

from 5 to 30 members, averaging 15. Higher income borrowers who can provide conventional loan collateral have direct access to individual loans.

While BAAC targets low-income small farm households, it also lends to middle and higher income farmers. Higher interest rates are charged on the larger loans to these farmers, who apply for BAAC loans because they lack ready access to other institutional sources of agricultural credit. Approximately 55% of the total loan portfolio are loans larger than US\$4 000. These loans go to medium-scale farmers who use new farm technologies and are able to collateralize their loans. Interest earnings on these loans are used to cross-subsidize the higher costs of providing small loans to low income farm households.

In 1996, more than two thirds of the BAAC clients were located in the poorest regions of the country. Few loans, however, reach very poor households and most BAAC clients are relatively stable farmers. The average loan size in 1996 was approximately US\$2 300. In addition, BAAC provides loans to poor farm households at concessional terms in special government programmes.

Apart from credit services BAAC provides savings deposit facilities and a range of complementary services, including marketing facilities which are available to borrowers and non-borrowers alike. Little attention was paid to savings mobilization until the mid-1980s, when the access of BAAC to low cost funds from the government and the Bank of Thailand was cut. Funds from the central bank were mainly mandatory deposits from commercial banks. Since then, the volume of savings deposits has expanded rapidly, increasing the BAAC deposit-to-loan ratio. This has helped to reduce the dependence of BAAC on government and external donor funding. In the case of international borrowings, it has decreased the exposure of BAAC to foreign exchange risk. This change in funding sources has accompanied the improved performance of BAAC.

BAAC has a strong client orientation and provides demand-led financial services. This is evidenced by the large number of repeat borrowers who have been clients for many years. The ability of BAAC to provide high

quality services depends on its extensive branch network and good loan administration. The recent utilization of special government credit lines for emergency operations reflects also the responsiveness of BAAC to the need to reduce farmer risks in the event of natural calamities and external price and market shocks.

Since its establishment, BAAC has benefited from a number of government subsidies and privileges. These include access to rediscounting facilities of the Bank of Thailand, exemptions from paying taxes and holding minimum reserve requirements. BAAC also enjoys privileged access to mandatory savings deposits from commercial banks. Although these preferential treatments have now diminished, BAAC continues to have access to certain loanable resources at concessional terms. Today, however, the main source of income of BAAC comes from earnings on the loan portfolio, which is proof of effective cost control and good loan portfolio performance. The bad debt provisions of BAAC are also lower than those of commercial banks.

The main challenge to the good performance of BAAC comes from government-mandated “special programmes”, which still grant subsidized agricultural credit to targeted beneficiaries. Recognition of the negative impact of these programmes on the performance of BAAC has led to a gradual reduction of their share in the overall loan portfolio. Serving low-income clients continues to be an important objective of BAAC. Continuous adjustments and development of new credit technologies are crucial in reducing loan administration costs and in improving loan repayment performance. Much to its merit, BAAC has managed to achieve strong financial performance despite the fact that it is under pressure from the government to administer a number of concessionary lending programmes.

### ***Financiera Calpiá, El Salvador***

The Financiera Calpiá started as a revolving loan fund of AMPES (the Salvadorian Association of Medium and Small Entrepreneurs), a local association of entrepreneurs. AMPES established, with the support of GTZ, a separate department, called the *Servicio de Crédito*, to manage its credit operations. In 1995, this organization was constituted as a joint stock company and licensed as a regulated financial institution, the *Financiera Calpiá*.

Calpiá is a formal financial institution that is regulated and supervised under Salvadoran banking law. Formalization and good performance have facilitated the access of Calpiá to commercial borrowings from local banks, and has reduced its dependence on government and donor funds. Calpiá is also allowed to mobilize deposits. In the future these will constitute a new source of loanable funds.

The initial goal of AMPES was to provide small enterprises in the capital city, San Salvador, with access to credit. In 1994 the lending mandate was extended to rural areas as a pilot programme. In 1995, operations on a nationwide scale became an objective. In fact, small farmers in El Salvador have limited access to formal financial services. At the time of the field research the rural and agricultural lending operations of Calpiá were still relatively small. In 1996, it served some 2 000 rural clients who represented less than 1% of the total number of small farm households in the country. However, the expansion rate of rural lending for both farm and non-farm activities is steadily increasing. By the end of 1997, Calpiá administered some 17 500 loans to 7 300 clients. Agricultural loans account for 92% of the total rural loan portfolio while the remainder finances small trade, services and agribusiness activities.

For the time being, Calpiá focuses on providing loans to “low risk, small farm households”. Although the average agricultural loan size in 1996 was less than US\$570 (97% of the total loans are below US\$2 300), clients are relatively stable farm households. Most borrowers possess farm assets with an approximate value of US\$7 000, have diversified income sources (including remittances from family members working in the USA) and live in areas that have a relatively good rural infrastructure and transport facilities. Although the ultimate goal is to reach lower income farmers who live in more remote rural areas, the short-term goal of Calpiá is to strengthen the loan repayment performance of existing borrowers.

AMPES has been highly subsidized since its inception and Calpiá continues to receive donor loan funds and support for institution and capacity building efforts. More recently, it has started also to access relatively low cost funds from commercial sources. This strategy to achieve self-sufficiency in loanable resources includes the objective of strengthening

lending efficiency and initiating the mobilization of savings. It requires each branch office and loan product to cover its full costs.

The current loan portfolio quality is good for urban and rural lending Activities. The initial expansion into agricultural lending resulted in a low rural loan portfolio quality. This was mainly due to the need to adjust current credit technologies plus the difficulties and costs encountered in serving rural clients. There was a poor credit culture and lack of discipline of rural borrowers as a result of subsidized loan programmes in the past. By 1997, Calpiá had recovered from these initial setbacks and 82% of its rural loans were allocated to agricultural lending. At that time, loan write-offs were less than 0.7% of the rural loan disbursements.

### ***Cajas Municipales de Ahorro y Crédito (CMACs), Peru***

The CMACs form a system of 12 independent regional savings banks that are located in municipalities outside the capital city, Lima. They were constituted by the Peruvian government in 1980 with the explicit aim of expanding financial services to low income people in outlying areas. The CMACs are owned and managed by the municipality in which they are located. The first CMAC was founded in Piura in 1982. In 1987, the Federación Peruana de Cajas Municipales de Ahorro y Crédito (FEPCMAC) was established as an umbrella organization of the CMACs. FEPCMAC provides technical assistance and training services and acts also as a clearing house to reallocate surplus liquidity funds between individual CMACs.

Most CMACs operate exclusively in urban areas and 65% of the loanable funds are allocated to small and microenterprises. However, in 1993, the CMACs in Sullana and Ica in rural Peru, also started rural and agricultural lending activities. The analysis of the CMACs in this publication concentrates exclusively on these two rural savings banks.

In 1996, 90% of the rural loans were used for agricultural lending purposes. The CMACs classify approximately 80% of their rural borrowers as low-income farmers, some without proper land titles. The remaining 20% own small or medium-sized farms. The average size of the agricultural loans is US\$1 600. Loans that are granted to larger farmers

generate earnings that cross-subsidize the relative higher costs of lending to low income farmers.

The CMACs are formal financial institutions that are subject to the regulation and supervision of the Central Reserve Bank and the Superintendency of Banks. Although they are non-profit financial institutions, they have the objective of providing effective financial intermediation services in the provincial districts that they serve. The German Technical Cooperation Programme and the Inter-American Development Bank (IADB) have supported the CMACs in their institution and capacity building. Currently, the CMACs are in the process of privatization. The CMACs have mobilized savings deposits since 1982 and deposits finance approximately 57% of the total loans. Mobilization of savings deposits constitutes also the basis for further expansion of the loan portfolios of the CMACs. While the CMACs have received concessional loan funds from the IADB in 1993, more recently they have borrowed additional funds at commercial terms.

CMACs provide different loan products such as loans to small enterprises, personal loans and pawn loans. All loans are granted to individual borrowers. Enterprise loans make up 65% of the total loans. The CMACs have achieved a rapid expansion and their total assets have increased from US\$9.4 million in 1992 to US\$90 million in 1997. This growth was made possible by the success of their savings mobilization and access to both concessional and commercial borrowings.

The growth of lending activities in urban and rural areas has substantially increased the revenues from financial operations. The expansion of the financial services offered produces economies of scale and reduces the financial transaction costs in relative terms. Loan officers serve a large number of clients, as they employ appropriate credit technologies. The CMACs, like Calpiá, have yet to achieve significant outreach in rural lending. In 1996, they served less than 1% of the total farm households in the country. Although the quality of the rural loan portfolio at times is better than in urban lending operations, loan officers still have to overcome the old subsidy mentality of farmer-borrowers. The following table presents a number of key indicators on the outreach and the sustainability of the three case studies of agricultural lending institutions.

Table 2

**Performance Indicators of BAAC, Calpiá and CMACs**

<b>OUTREACH</b>	<b>BAAC</b>	<b>Calpiá</b>	<b>CMACs</b>
No. of branches involved in agricultural lending (1996)	650 (850 field offices)	3 out of 6	6 out of 12
No. of rural borrowers (1996)	2 435 836	1 991	4 572
Outstanding loan portfolio to individual farmers (US\$ million) (1996)	5 589	1.4	7.3
Average agr. outstanding loan size per borrower (US\$) (1996, 1997 for Calpiá)	2 286	450	1 607
GDP per capita (US\$) (1996, 1997 for Calpiá)	3 024	1 909	2 545
Average agr. outstanding loan size as % of GDP per capita	76%	24%	63%
<b>SUSTAINABILITY</b>			
Outstanding rural loans per loan officer (1996)	400-500	77-350	325-583 Sullana / 400 Ica
Loan arrears in agric./rural lending (1996)	12.0% (>1day)	6.2% (<30 days)	4.6%(>1 day) Sullana / 3.7%(>30 days) Ica
Loan administration expenses as % of average outstanding loan portfolio (1996)	3.3%	20.4%	22.2%
Financial expenses as % of average outstanding loan portfolio (1996)	7.1%	9.1%	16.8%
Financial income as % of average outstanding loan portfolio (1996)	10.4%	39.4%	55.0%

## 3.2 COST AND RISK MANAGEMENT IN AGRICULTURAL LENDING

In this section, an assessment is made of the various strategies that the three case study institutions use to manage the specific costs and risks in agricultural lending. Guiding principles or “better” practices in agricultural lending have been drawn up from these experiences. It is firmly believed that there are really not “best” practices that can be applied to all circumstances. Instead, the development of better rural and agricultural lending technologies is seen as a dynamic and ongoing process that guides the lending institution towards meeting the specific demands of the rural clientele. The various items that are analysed here refer to the cost and risk categories, as developed in section 1.2.

### 3.2.1 Cost Reduction

#### *Dispersed Rural Clientele*

The population density and the location of rural borrowers have important implications for the organizational and operational structure of an agricultural lending institution. In fact, it is a costly business to serve a dispersed rural clientele. Many of the cost reduction strategies, as outlined below, involve heavy initial overhead costs. This implies that they do not produce a return in a short period of time and an assessment should be made of their long-term cost effectiveness. Main strategies to reduce the financial transaction costs include the following:

#### *A decentralized structure enables a broad client coverage*

Maintaining an extensive branch network costs more in rural than in urban areas. The three agricultural lenders have developed different ways of reducing these costs.

BAAC has developed a nationwide branch and field office network with the support of government-financed investments derived from sunk costs over many years. The lending operations of BAAC are highly decentralized. Over time it has set up an effective organizational structure and a management information and control system for its extensive rural branch network.

The CMAC model of regional savings banks has been effective in decentralizing financial services to outlying municipalities. However, significant challenges are now being faced in expanding the CMAC financial services to rural areas. For instance, the two CMACs that are active in agricultural lending have no rural branches. While there have been discussions on establishing sub-branches or field offices, the required high overhead and operational costs have deterred them from doing so. The Sullana CMAC plans field visits so loan officers can combine strategic follow-up visits to customers who have loan arrears with visits to potential new clientele areas. Security is also a serious problem in Peru and El Salvador, making the physical movement of money by bank staff challenging, if not dangerous.

Lending efficiency in rural areas depends on the possibility of effectively planning the workload of loan officers and organizing field transport. Calpiá staff transport their motorbikes on a pick-up to regional out-points to economize on transportation time and fuel.

The following box presents an example of a decentralized financial system in Mali. It highlights the trade-off between a lean organizational structure and the minimum required field staff capacity to effectively administer loans and monitor loan repayments.

*Delegation of loan authority can effectively cut loan administration costs*

The decentralized lending operations of BAAC favour a reliable, opportune loan appraisal and loan processing and effective loan administration by field staff. Loan officers appraise loan applications and recommend approval for loans of up to US\$2 500. Loan approval requires only a final clearance by the BAAC branch management. Loans above US\$2 500 need the approval of a special loan committee.

Loan officers of Calpiá are instructed to process first-time loan applications in less than one week. During this time, loan applicants are visited at home, a loan appraisal is made and the loan application together with the loan officer's recommendation are submitted for approval to the loan committee. Repeat loans are processed even faster, usually within

**Cost Reduction in a Decentralized Financial System*****Caisses villageoises d'épargne et de crédit autogérées (CVECA), Mali***

The self-managed village savings and credit banks in Mali were constituted in 1986 in the region of Dogon. The CVECA of Pays Dogon, the largest and most successful bank, served 21 495 clients (17% of the adult population of the region) at the end of 1996. At that time, its loan portfolio was growing by more than 50% p.a. with loan arrears of only 2% and a subsidy dependence index of 78%. Most loans were provided for trade and services activities with agricultural credit limited to 13% in 1996.

***Reducing costs in decentralized institutional structures***

The organizational structure, the loan products, the lending procedures and conditions are determined by each individual CVECA and decisions are based on a market survey. There is a large degree of local participation, since each CVECA is owned and operated by the village in which it is located. Transparency, simple administrative procedures and little paperwork are essential given the high rate of illiteracy in the rural areas.

A lean organizational structure significantly reduces costs. With a staff of two cashiers and a loan committee, the costs of overheads and loan administration costs are significantly reduced. Loans are approved by the CVECA Board after an assessment has been made of the loan applicant's character and, to a lesser extent, of the loan repayment capacity of the prospective borrower. Loan follow-up activities are limited and rely basically on local information. Traditional social structures are used for loan recovery and repayment enforcement.

This lean structure inhibits, however, the capacity of the CVECAs to effectively appraise and enforce loans. In some regions, second-tier institutions, that provide refinancing, training and auditing services, are being established to address these constraints.

2-3 days. Applications for repeat loans are appraised by using the baseline information that has been collected at the time of the first loan

application. Loans of up to US\$2 300 are approved by loan officers and the various levels of loan committees by loan size. Larger loans take more time as funding requires approval by the loan committee of the Calpiá Board in San Salvador.

The loan approval procedures developed by the CMACs give individual loan officers the authority to approve small loans. They are supported by an agricultural expert who acts as a technical loan appraisal advisor. This expert also trains the loan officers. For larger loans, loan officers are required to seek the approval from the various levels of loan committees by loan size. Loans of up to US\$5 000 are administered at the branch level.

*Qualified, well trained and highly motivated field staff has a positive impact on the lending productivity*

All three case study agricultural lending institutions emphasize the importance of appropriate field staff recruitment and training to successfully carry out decentralized loan appraisal and loan administration. Calpiá, for example, requires that loan officers working in rural areas have a solid background in agronomy with work experience in rural areas. Field staff should be prepared to serve rural people in remote areas. They are made responsible for all the stages of the loan process. Staff undergo extensive training in carrying out market studies, in the technical aspects of agricultural production and in the methods of financial analysis and loan appraisal. Newly recruited staff work alongside experienced loan officers who act as their tutors. Performance is evaluated during a three months probation period. Once new field staff have attained full officer status, their performance is closely monitored. Their remuneration can be topped up by significant performance-based bonuses.

Staff turnover is an issue of concern for decentralized financial institutions, since much has been invested in staff training. Calpiá and CMAC have experienced turnover of administrative staff and they have tackled this problem by introducing special incentive schemes. These include improved opportunities for promotion, participation in training programmes, profit-sharing, and project visits to enhance the understanding of field operations.

*Simplified loan appraisal procedures reduce the time required for loan processing, loan approval and loan disbursements*

BAAC relies on joint liability group leaders who select the group members and screen the loan applications of members. This significantly reduces the time that is required by BAAC loan officers for loan processing. Calpiá and the CMACs, on the other hand, invest considerable time in initial client screening and appraisal of individual loan applications. But this screening process is highly streamlined in cases of repeat loans. The aim of both institutions is to introduce the existing credit technology that is used in the Calpiá urban lending operations known as “crédito automático”. This system enables borrowers, who have successfully repaid four to five loans, to forego loan appraisal for subsequent loans. Instead, these clients are appraised once per year on their loan repayment performance. This reduces screening costs substantially by defining an automatic maximum loan amount. More time will be spent on monitoring the loan repayment performance of existing clients as well as on identifying and appraising new clients.

*Close contacts with local organizations and networks provides relevant client information*

The active involvement of local organizations and communities can reduce the time and the costs of client screening, loan appraisal and loan monitoring. Both Calpiá and the CMACs have established collaboration with local NGOs and agricultural extension staff. These organizations and resource persons can provide valuable information on local production potential, agricultural hazards and prospective borrowers.

Calpiá and the CMACs coordinate their financial services with non-financial support services that are provided by NGOs and government agencies. Calpiá, for instance, exchanges information with institutions such as CENTA (Centro Nacional de Tecnología Apropiada), government agricultural extension staff and producer co-operatives. CENTA has a good knowledge of local production conditions and prospective borrowers of Calpiá.

Also the CMACs collaborate with NGOs such as CEDEP (Centro de Estudios para el Desarrollo y la Participación) in Ica, that provides small farmers with agricultural extension services. CEDEP collaborates with the CMCA Ica in the technical appraisal of loan applications. It has also set up a joint loan guarantee scheme that supports borrowers who experience genuine distress.

*Effective management information systems provide crucial information*

BAAC, Calpiá and the CMACs utilize accurate and up-to-date information systems that facilitate a good loan portfolio management. The systems also allow a separate cost and revenue analysis of individual branch offices, thereby permitting adequate cost control in a decentralized financial institution.

***Agricultural Seasonality***

The productivity of agricultural loan officers, in contrast with urban lending activities, is subject to seasonal fluctuations.

*Diversification of the rural loan portfolio in terms of location and lending purposes helps to balance the uneven staff work load due to the seasonality in agricultural lending*

BAAC until recently was not allowed to lend for non-farm production purposes. However, national coverage and the heterogeneity in farming activities have contributed to off-set the seasonal fluctuations in the demand for agricultural credit. Thus the uneven workload of staff over the year has been moderated.

Calpiá and the CMACs provide rural loans for farm and non-farm activities. This enables loan officers to attend a larger number of clients and to grant different types of loans. This has increased staff productivity and has reduced the costs per disbursed loan. Loan portfolio diversification enables loan officers to stabilize their annual workload and to handle a larger number of loans.

***Heterogeneity of Farming***

The heterogeneity of farming needs to be considered in the planning of

the agricultural loan portfolio. The large heterogeneity in farming and management skills of farmers requires specialized field staff. A specialist can effectively appraise the risks of different agricultural production activities and screen prospective farmer borrowers.

*A solid background in agronomy, farm management and rural economy is a prerequisite for good loan appraisal*

Loan officers must have an adequate knowledge of agronomy and farm household economies in order to appraise loan applications from farm households. Both, the CMACs and Calpiá have added agricultural specialists to their staff in rural branches who assist and train loan officers in the appraisal of agricultural loan applications.

*Realistic agricultural loan demand assessment is crucial for a good loan portfolio planning and administration*

The CMACs and Calpiá classify farm households by farming systems. This classification enables a better assessment of the seasonal pattern in the financial requirements of different crop and livestock production enterprises. Market studies on potential agricultural loan demand support better loan portfolio planning and have a positive impact on the performance of the lending institution.

### **3.2.2 Risk Management**

#### ***Production, Market and Price Risks***

Assessing Agricultural Borrowers by Types of Risks

*An assessment of the specific risks that are associated with different agricultural production activities is essential in determining the potential risk exposure of lenders*

The classification of farmers according to farming activities, type and intensity of land use and scale of farm operations helps lenders to assess the potential risks of different types of farmer-borrowers. Lenders need to identify those agricultural activities that have higher lending risks due to variability in physical production and prices. Farmer-borrower risks and therefore lending risks are especially large where the farm income is based on a single production activity.

*Loan appraisal should include a thorough assessment of the borrower loan repayment capacity and his creditworthiness; also external risk factors of farm production should be taken into account*

BAAC simplifies the assessment of the loan repayment capacity of members of joint liability groups by limiting the loan size to a maximum of 60% of the borrower annual income. Selection and screening of the group members is coordinated by the group leader, who acts as liaison person with the BAAC loan officer. Loan officers verify if group members comply with the overall borrower eligibility criteria. Group members must live in the same location and borrow equal loans for similar production activities. These factors facilitate the assessment of the lending risks of group members.

Calpiá and the CMACs in their individual lending approach use more specific borrower eligibility criteria. They require that loan applicants: 1) have at least one year of experience in the agricultural production activity for which a loan is requested; 2) live in easily accessible areas that have low agricultural production risks (adequate and secure access to water); 3) have no overdue balances outstanding on previous loans; 4) can comply with the required loan collateral requirements (often consisting of a combination of land tenure titles, household assets, and guarantors); and 5) self-finance up to 30% of the total farm investment costs that will be co-financed with the requested loan funds.

Calpiá and the CMACs appraise loans by assessing the farm household cash flow and verify the creditworthiness or reputation of the prospective borrower. In the cash flow analysis all the sources of income, both from farm and non-farm activities, as well as the overall expenditures of the farm household are considered. As the net cash flow depends on all sources of income, farm households with diversified revenues have more possibility to obtain larger loans. These farmers can also repay their loans in more frequent installments and thus reduce the risk of loan default for the lender. The cash flow analysis assists the lender in designing a manageable loan repayment strategy.

Information on the creditworthiness of prospective borrowers takes a central place in loan appraisal. Transparency in client affairs and the

ability of the prospective borrower to present a realistic investment plan and loan application are crucial elements for the lender.

Calpiá and the CMACs appraise the production and management skills of prospective farmer-borrowers and consider all features that are of importance to agricultural production. Loan applicants should have: 1) secure access to production assets such as land and water; 2) knowledge about methods to reduce production risks; 3) market price information and ready access to inputs and output outlets; 4) adequate management skills in agricultural production and marketing; and 5) multiple income sources to finance their farm household expenditures.

The collection of detailed market and client information required for loan appraisal represents a costly up-front investment for agricultural lending institutions. It provides vital baseline information on first-time borrowers. At the same time, it facilitates and reduces the costs of subsequent granting of loans to well-known clients. As the income levels of borrowers expand, loan officers are also in a good position to estimate the growth in the loan repayment capacity and borrowing potential of existing clients.

*Collaboration with organizations which know farmers well, reduces client information costs and risks of lenders*

Agricultural lenders can reduce their credit risks by collaborating with local extension staff, NGOs and other non-financial support services organizations which have long-standing relationships with prospective farmer-borrowers. These collaborating agencies are able to provide useful information on the farming production conditions, management skills of farmers, as well as their creditworthiness. Farmers will be better credit risks for lenders based on the technical assistance that they receive. This is especially valid for borrowers who intend to expand or to diversify their farm production activities. As they adopt new production technologies, they also incur higher risks.

As mentioned above, both Calpiá and the CMACs collaborate with NGOs and agricultural extension staff. Although the three agricultural lenders provide only financial services, the box below shows another example. A cooperative financial institution is outlined that uses a “credit-plus” approach.

## *Managing Loan Portfolio Risks*

*Agricultural lending should start in production zones that present low risks; operations can then gradually be expanded to more risky areas*

Calpiá selects its pilot areas for agricultural lending on basis of the following criteria: 1) easy accessibility and proximity to an existing branch office; 2) concentration of a large number of prospective clients; 3) a relatively stable climate with reliable water supply. Once Calpiá has consolidated its lending operations in a pilot area, it gradually moves to areas that present higher risks. In this way, Calpiá intends to expand its agricultural lending operations from irrigated areas to rainfed agricultural production zones.

Similarly, the CMAC Sullana started its agricultural lending by granting loans to well established fruit orchard farmers. These investments were considered low risks. Initially, lending was for a relatively large amount (US\$2 000) and long term (up to 2 years). Farmers were required to provide conventional loan collateral such as mortgage of land. Only after that, short-term seasonal loans for annual crops were introduced, which soon constituted the largest share of the rural loan portfolio (90% in 1994). The size of the average borrower landholdings was also reduced from 3 to 2 hectares and the loan size fell to US\$800. Similarly, loan collateral requirements were relaxed in the course of time.

*Individualized loan products and loan repayment schedules that are set in accordance with the loan repayment capacity of the borrower reduce the risk of loan default*

BAAC uses a standardized loan repayment approach for its joint liability groups. This implies that it has less flexibility in adapting to the characteristics of individual borrowers. The growth in loan size will also be much slower than is possible in individual lending. This applies if loan repayments are delayed by loan delinquency on the part of some group members.

Calpiá and the CMACs in their individual lending approach set loan repayment conditions in accordance with the loan repayment capacity and the performance of the individual borrower. The loan term and

**Financial and Non-Financial Services*****Financiera de Co-operativas Agropecuarias (FINACCOOP), Honduras***

The Financial Institute of Agricultural Co-operatives (FINACCOOP) is an autonomous financial institution that was founded in 1992 to support agricultural co-operatives. Its clients are agricultural producers and, in particular, small farmers. At the end of 1997, FINACCOOP served approximately 15 500 farmers, both directly as well as through 60 farmers associations.

***Approaches to Risk Management***

***Loan Appraisal:*** FINACCOOP manages lending risks by screening prospective borrowers on past credit records and on their potential loan repayment capacity. It adheres to strict loan appraisal and estimates the farm household borrower net cash flow over a 15-month period. All sources of income and expenditures (both agricultural and non-agricultural) of the farm household are considered. Market information on current and forecasted prices for both agricultural inputs and outputs is also collected. As most borrowers are members of an agricultural co-operative, this organization is able to provide reliable information on prospective borrowers.

***Interest Rates:*** FINACCOOP sets its lending rates on the basis of the past loan repayment performance and provides strong incentives for the prompt repayment of loans. Clients who have loan repayment overdues will be charged higher interest rates on subsequent loans. At the same time, lower interest rates are charged to borrowers who comply with their loan contractual obligations.

***Promoting Good Loan Repayment:*** FINACCOOP provides loans that are tailored to the specific financial needs and the loan repayment capacity of each borrower. The high quality and the personalized nature of the loan products act as an incentive for clients to repay, as they are motivated to maintain future access to the financial services of FINACCOOP.

***Technical Assistance:*** Mandatory technical assistance, that is provided at a cost to the farmer, improves the production performance of the borrower and reduces the lending risk of FINACCOOP. While technical assistance increases the overall costs of the borrower, these costs are outweighed by the higher prices that are paid for agricultural commodities that meet international quality standards and can be certified.

***Insurance:*** Borrowers are required also to take life insurance and the premium is 0.06% of the monthly outstanding loan amount. The insurance covers, in the case of death or physical disability of the borrower, the payment of the remaining loan balance and the interest payments. Borrowers have to insure also their loan collateral against possible loss due to theft, fire or natural disaster at a premium of 1% of the collateral value.

repayment installments are tailored to the estimated net cash flow of the prospective farmer-borrower. Farmers who rely only on farm production activities normally pay back their loans in one installment after selling their farm produce. Others are capable of repaying their loans in periodic installments. These farmers have a more diversified income base with relatively stable monthly income flows from non-farm activities and salaries or remittances from other family members.

Farmers who repay regularly can establish their credit rating more quickly and may gain earlier access to larger repeat loans.

However, even when farmers are able to meet regular loan repayments, long distances from the branch office and difficult transport may convince them to opt for a “lumpy” loan repayment in order to minimize the number of required visits to the bank office. In that case, however, borrowers have less opportunity to demonstrate their loan repayment discipline and the lender has to give more attention to monitoring farmer-borrower performance and his capability to meet loan repayment commitments.

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*Loan portfolio diversification serves to protect agricultural lenders against covariant risks*

Agricultural lenders diversify their loan portfolio by financing a mix of loans with different lending purposes, loan terms and loan repayment schedules. They also serve separate types of borrowers who are located in distinct agroecological zones. Still, agricultural lenders need to set ceilings on the share and volume of total farmer loans by zone. They must limit the incidence of risks from pests, diseases and natural disasters on the overall loan portfolio.

Although BAAC until the end of 1998 was restricted to lending only for farming and agriculture-related activities, it succeeded to diversify its lending risks in three ways. First it provided working capital credit for a wide range of different crop and livestock farm activities. Second, it extended credit to small and larger-scale farmers who have different lending risk profiles. Third, in its agricultural lending operations, it covered the whole country and reduced its exposure to risks by serving different agroecological zones.

The loan portfolio of Calpiá is also highly diversified, as loans are granted to both urban and rural clients. Moreover, the rural loan portfolio covers both agricultural and non-agricultural activities. Agricultural loans do not exceed more than 20% of the total volume of loans. The coverage of different agroecological zones with distinct climatic characteristics and farming systems has helped to offset the problems that are associated with the seasonality and the covariant risks in agricultural lending. The diversified loan portfolio balances the workload of the loan officers. Also different types of borrowers are served, who have different income levels and demand a range of distinct loan products. Calpiá analyses the degree of diversification of the farm household income as an integral part of its loan appraisal. Farmers who have multiple income sources are able to access larger loans.

The CMACs also limit the share of agricultural loans to 30-35% of total loan portfolio with the remainder allocated to urban and non-farm rural loans. The clients of CMAC are more homogeneous than those of Calpiá. One third of the clients of the CMAC of Ica grow only one crop. As the CMACs are exposed to a higher concentration of agricultural lending risks, they insist on more stringent borrower eligibility criteria. These include the requirement that the farmer should dispose of irrigation facilities.

*Managing of external risks through loan rescheduling, agricultural insurance and emergency assistance can assist both the farmer-borrower and the agricultural lender*

When farmer-borrowers experience genuine distress of due to natural calamities, BAAC classifies missed loan repayments as “authorized arrears” and reschedules loan repayments without additional cost to the borrower. This ensures also that the future access of the borrower to credit is not affected. Moreover, BAAC administers an emergency fund, which is partially subsidized by the government on a case-by-case basis.

Roughly one third of all the agricultural loans of the Ica CMAC are supported by a loan guarantee fund operated by a local NGO. Borrowers have to pay a guarantee fee of 2% of the loan amount to the NGO for this service. In the few instances that the guarantee fund has been used, loans have been repaid and the guarantee fund has been replenished.

Crop insurance can be useful to lenders to protect themselves against widespread borrower loan default due to climatic and market-related risks. Experience has shown that agricultural insurance (similar to loan guarantee schemes) is difficult to administer. None of the three agricultural lenders studied have insurance schemes. Its eventual use as a risk management tool in agricultural lending merits careful study. The box below presents some guiding principles for effective crop insurance mechanisms as they have been developed by FAO.

*Staff incentives systems motivate staff and effectively increase their lending productivity*

The three studied agricultural lenders employ bonus systems to provide incentives to their staff. BAAC awards the productivity of loan officers for both lending and savings mobilization activities. The loan portfolio quality is an important reference point in performance-based incentives. Staff incentives include monetary rewards (up to five months base salary per year) as well as promotions. Branch offices are ranked according to loan repayment performance, collection of overdue loans, number of clients that are served, average loan size, volume of mobilized savings deposits, and net profits. These scoring rates are important in monitoring the efficiency of field staff and in determining their remuneration levels.

Calpiá staff can double their salaries through the receipt of bonuses, and their salaries can attain levels that are up to 50% higher than those of comparable positions in the private sector. The bonuses in Calpiá and the CMACs depend on the volume of disbursed loans, the profile of clients and the loan portfolio quality. In Calpiá, field staff lose their access to bonuses when overdue loans of more than 30 days exceed 3% of the loan portfolio. In the CMACs, on the other hand, loan officers lose their bonuses when loan arrears exceed 5%.

*Close monitoring of markets and exposure to lending risks is essential for agricultural lenders*

For BAAC, Calpiá, and the CMACs a continuous monitoring of market conditions constitutes a vital part of their risk management strategies. It

prompts them to make continuous adjustments in their lending strategies. The research department of BAAC monitors agricultural commodity markets and seasonal agricultural price fluctuations. The CMACs do not grant new loans for certain crops, if over-cultivation becomes apparent and the likelihood of future price fluctuations increases. Calpiá and the CMACs rely on their field officers for market monitoring, but they have to develop standardized systems for data collection and analysis of market trends.

### ***Moral Hazard Risks in Distorted Credit Cultures***

*Clear information should be given to borrowers on the financial conditions of loans and loan repayment obligations*

Calpiá and the CMACs face the problem of a subsidy mentality on the part of small farmer-borrowers. This is the outcome of subsidized loans that farmers received in the past from state-owned agricultural development banks and in some cases donor organizations. Both financial institutions emphasize client education and they organize regular information meetings for new clients. Prospective borrowers are informed on the lending conditions such as interest rates and fees, collateral requirements and loan repayment terms. Particular attention is given to remind future borrowers of their contractual loan obligations. The various loan repayment procedures and enforcement measures are explained to them. Information is also given on incentives that reward good client performance. The objective of client education is to promote a positive credit culture and to foster mutual respect between the lender and the borrower.

*Co-signing of loan contracts and moral persuasion are effective means to enhance good credit discipline*

The CMACs require that both husband and wife sign the loan contract. This extends the lender/borrower relationship to the whole household and it deepens the sense of obligation by the borrower. It draws on the experience from microcredit that has identified strong moral persuasion on the part of female borrowers.

Box 5  
Guiding Principles on Crop Insurance

Lessons from failed crop insurance schemes in the past indicate that, to be useful for farmers and to be institutionally sustainable, certain principles should be followed.

- Programmes should start modestly, focus on main risks and expand only gradually; new programmes should start with crops that have well-established marketing outlets such as in the case of cotton, bananas, oil seeds and tobacco;
- Schemes should be managed efficiently on a cost-recovery basis and, where possible, establish operational links with financial institutions;
- Voluntary insurance policies are subject to adverse client selection, as only investments that are subject to larger risks will be insured. This is a major reason why insurance schemes normally should be compulsory;
- Procedures for setting indemnity and premium levels must be based on actuarial principles;
- Loss assessment and adjustment procedures must be objective and transparent;
- Access to reserves/reinsurance is a *sine qua non*. Reinsurance carries also an additional benefit. Frequently, it is a source of valuable technical advice, since reinsurers of agricultural risks, generally, operate internationally and can therefore draw on experiences from other countries and regions;
- Programmes need to be adapted continuously to the real needs of farmer-borrowers and lenders with regard to decisions on the types of risk that will be covered.

*Close contacts between the lender and the borrower are conducive for an atmosphere of mutual trust that improves credit discipline*

Regular visits of loan officers strengthen the lending performance of the financial institution. Field staff of BAAC, Calpiá and the CMACs develop a personalized relationship with their borrowers which instills a positive attitude towards the bank. The social nature of this relationship and the engendering of mutual trust are key elements for a good credit discipline behaviour.

## ***Risks From Changes in Domestic and International Policies***

***Agricultural lending institutions should be free of political interference in their daily management.***

The government ownership and the governance structure of BAAC make the bank susceptible to political interests. Still, BAAC has enjoyed considerable autonomy in its lending operations. Sound bank management has neutralized the possible negative impact of political interests to a large extent. BAAC has faced pressure from the government for low interest rates.

The government has also insisted on their administration of special lending programmes at concessionary terms for low income target groups. New programmes for disadvantaged regions may have a negative impact on future loan repayment performance.

The ownership of the individual CMACs by municipalities presents a unique model that was designed to create financial institutions with a strictly regional operational focus. Municipalities are enabled to allocate a certain percentage of the retained earning generated by the savings bank towards local development projects. This instills an ownership feeling and strengthens the responsibilities of the local administration in the governance of each CMAC.

***Agricultural lenders as part of their risk management strategy need to monitor policy and market changes that affect their agricultural clientele***

The experiences of BAAC, Calpiá and the CMACs illustrate that agricultural lenders need to have an in-depth knowledge of the markets that they serve. As market conditions change over time, these changes may affect farm production and the capacity of the farmer-borrower to repay his loan. Both Calpiá and the CMAC Sullana emphasize the crucial importance of collecting and analysing new market information in order to plan and administer their agricultural loan portfolio.

### ***Loan Collateral Constraint Risks***

Rural low-income people normally lack the physical assets that are required as conventional bank collateral. For this reason, agricultural lenders have developed innovative approaches using different types of collateral substitutes. These types of collateral have more psychological than actual market value.

*Collateral substitutes replace more conventional types of loan guarantees and can provide important loan repayment incentives*

BAAC, Calpiá and the CMACs use a variety of loan collateral substitutes.

The joint liability group guarantee is the main collateral substitute that is used by BAAC in its group lending operations. Groups select group members who live nearby, know and trust each other. Group organization is kept simple and the group leader acts as a liaison with BAAC. There is no group fund and no separate financial transactions are carried out by the group. Instead, all financial transactions are conducted directly between BAAC and the individual group members. Peer group pressure, however, is activated at the time when loan repayments are due, as new loans will be only provided when all members have fully repaid their loans. Penalties are charged for late payments and late or missed payments limit the access of the whole group to new loans. The effectiveness of this mechanism is enhanced by the fact there are no alternative sources of institutional credit available to farmers. This induces borrowers to keep a good repayment record with BAAC.

Calpiá and the CMACs require that borrowers pledge assets as loan collateral. The type of loan collateral that is required depends on the size of the loan. In the case of small loans to low income borrowers, the assets involved have a limited market value, but they are highly valued by their owners who would have difficulty in replacing them. Typically, these goods include household appliances and furniture as well as farm equipment. Their effectiveness as collateral is based more on psychological pressure than on their value for the lender. Collateral with a higher real market value is required for larger loans.

Calpiá and the CMACs accept also more “symbolic” forms of loan collateral. These can include the physical possession of land title documents by the bank during the course of the loan. Pledges of future crop harvests and household savings are also accepted, although they are not legally enforceable. Symbolic collateral may cover up to 50% of the value of the loan up to a maximum of US\$570. Different loan collateral requirements are set depending on the size and the perceived risks of the loan.

Both financial institutions use co-signers or guarantors for loans of all sizes, although this is not an essential requirement. Two types of guarantors are used. “Moral guarantors”, who have a close relationship with the borrower household, are required for small loans. They are used mainly as a prevention against moral hazard. “Personal guarantors”, on the other hand, are appraised in the same way as the borrower and, in the case of loan default, they are responsible to meet all the loan obligations. Loan officers determine the specific collateral requirements for each loan product.

Medium-sized loans require a registered guarantee with a value that equals at least 120% of the value of the loan and that can be legally enforced. In addition, they require a personal guarantor. Large loans (above approximately US\$5 500) must be secured by a mortgage, a bank guarantee or long-term savings deposits. The assets that are pledged as loan collateral are evaluated on the basis of their current market value.

## 4 CONCLUSIONS AND REMAINING CHALLENGES

This study has examined the challenges that agricultural lenders face in designing and operating demand-oriented lending services. These systems should be widely accessible to small farm households and durable. Based on the preliminary guiding principles that have been developed for agricultural lending in Chapter 3 a summary is presented of the main lending strategies. These methods are used to reduce the high costs and risks of lending to small farmers. Selected annotations are provided for a number of key aspects.

Many challenges remain and this study concludes by presenting outstanding key issues. These establish an agenda for future research and pilot experimentation in agricultural lending.

### 4.1 COST REDUCTION AND RISK MANAGEMENT STRATEGIES

#### *Cost Reduction*

To secure a satisfactory out-reach and sustainability, agricultural lending institutions should be actively engaged in adopting cost-effective credit delivery strategies. Further they should develop appropriate loan products and lending technologies. Most of the cost-reduction strategies, outlined below involve heavy initial overhead costs. This means that they do not pay off immediately. In fact, a careful assessment should be made of their long-term cost effectiveness.

#### *Strategies to reduce agricultural lending costs*

- Use a decentralized operational structure and employ mobile loan officers and/or mobile branch offices;
- Delegate loan authority to field staff;
- Recruit staff with a solid background in agronomy, farm management and rural economics;
- Provide adequate staff training and use performance-based staff incentives;
- Simplify lending procedures;
- Screen potential clients and appraise loans by collaborating with local organizations and networks (agricultural extension staff, NGO and communities).

- Install an integrated banking software to produce accurate and timely accounts and constitute an effective management information system.
- Diversify the loan portfolio in order to balance uneven staff work load due to agricultural seasonality.

### ***Selected annotations***

- Agricultural lending institutions require an adequate operational structure to meet their client demand. This includes well-trained and motivated staff and appropriate loan products. The effective operation of a decentralized rural branch network depends on the delegation of loan authority to field staff, the existence of proper checks and balances plus the use of an adequate management information system. Performance-based staff incentives enhance the motivation and the productivity of loan officers. Collection of essential market information facilitates the identification of potential clients. Classification of farmers by farming systems, description of on farm production inputs and major agricultural commodities helps to define their effective demand for loan products. The high costs of collecting specific information on the creditworthiness and the loan repayment capacity of prospective clients can be reduced significantly by collaborating with local organizations. It is important to set the lending interest rates at market terms to cover the full agricultural lending transaction costs.
- The adoption of integrated banking software for the computerization of an accounting and management information system is highly recommended. Accurate and timely information is indispensable for decision making in a financial institution. The FAO MicroBanking System is a prominent example of such a software system. With appropriate banking software systems, a comprehensive and consolidated data base may be built from the files of branches. It contains fully integrated information on customers, different types of accounts and a general ledger. Such banking software is able to produce required financial accounts for separate branches as well as a consolidated account for the entire financial institution. Based on the integrated database it is possible to generate a variety of user-defined reports.

### ***Risk Management***

Active management on the part of the farmer-borrower as well as the financial institution is required to reduce the high risks associated with agricultural lending. Different factors affect exposure in agricultural lending. The kind and severity of risks that face farmers vary according to the type of farming system, agricultural production, weather conditions and the prevailing economic and agricultural policies. Agricultural lenders are confronted with high covariant agricultural credit risks and liquidity risks.

### ***Strategies to reduce agricultural lending risks***

- Enhance the required information base of agricultural lenders by:
  - identifying the risks of specific types of agricultural production activities;
  - collecting information on the credit history and creditworthiness of potential farmer clients;
  - appraising the loan repayment capacity of loan applicants;
  - monitoring policies and agricultural commodity markets that are relevant for farmers.
- Start agricultural lending in agroecological zones that present low credit risks and expand operations gradually to more risky areas.
- Commence with small and short-term agricultural loans and increase the loan size and term with repeat loans.
- Individualize agricultural loan products and loan repayment modalities in accordance with the loan repayment capacity and borrowing performance of farmer clients.
- Adjust, in case of group lending, the size and the composition of joint liability farmer groups in accordance with local conditions.
- Reduce agricultural credit risks through adequate asset and loan portfolio diversification.
- Manage external credit risks through prudential loan rescheduling; if feasible use commercially viable insurance mechanisms; mobilize, in cases of serious natural disasters, emergency aid to fund rehabilitation grants to affected farmer clients.
- Use staff remuneration incentives to encourage a high lending productivity and to reward good portfolio quality.
- Promote a good credit culture and discipline through client education and moral persuasion.

- Develop mutual trust between lender and borrower by establishing and maintaining close contacts between loan officers and farmers.
- Use appropriate loan collateral substitutes and provide borrowers with incentives that encourage good loan repayment behaviour.

### ***Selected annotations***

- The basis for good risk management is quality information. For instance, agricultural lenders should collect information on the incidence of drought, flood, plant and animal diseases and other risks that affect farm production. Lenders should know what risk-reducing mechanisms are available such as irrigation and insurance. They need to collect data on markets and prices of relevant farm inputs and agricultural commodities. They should monitor current economic and agricultural policies as well as policy changes. On the other hand, lenders have to build up specific client information on the creditworthiness and the loan repayment capacity of prospective farmer-borrowers. The lending operations and conditions of other financial intermediaries and the current and past experiences of agricultural credit programmes should be monitored.
- Once lenders have a rough idea of the effective demand for agricultural loans and the lending risks, they should choose the loan products and lending technologies to serve specific types of farmer-borrowers. It is recommended to set fairly standardized lending conditions and loan terms. Flexibility can be increased as the lender learns more about new small farmer clients. First-time borrowers should be granted small loans, even though the per unit costs of these loans are high. Similarly, interest rates should be kept simple and uniform for borrowers at the outset. Later differential rates can be set by type and size of loans. The frequency of loan repayment installments depends on the loan repayment capacity of the farmer-borrower. Overdue loans should be dealt with promptly. Both individual and group lending technologies can be utilized. They differ with regard to their method of client screening, loan appraisal, loan collateral requirements, loan monitoring and loan recovery. In general, lenders should be willing and able to adjust their lending technologies over time.
- Diversification of the loan portfolio serves to protect agricultural lenders against a concentration of covariant risks among farmer-borrowers. It is attained by granting loans to different types of farmers for distinct lending purposes at different loan terms. In addition,

farmers in various agroecological zones should be served. Still, lenders need to set ceilings on the volume and the share of agricultural loans. Limits should be defined by zone and in their overall loan portfolio, to restrict the incidence of concentrated risks due to unfavourable weather conditions, pests, diseases and natural disasters.

- Often agricultural lending institutions are faced with a subsidy mentality on the part of small farmer-borrowers who were accustomed to receive agricultural loans at concessional terms from state-owned agricultural development banks, donor agencies, and NGOs. For this reason, rural financial institutions need to emphasize client education by informing prospective borrowers on loan application procedures and lending conditions. In particular, farmers have to be reminded of their loan repayment obligations and the various loan repayment enforcement mechanisms. Specific incentives that reward good loan repayment behaviour should also be explained to them. The overall aim of client education is to promote a positive credit culture in which mutual trust and respect is built up between the lender and the borrower.

## **4.2 REMAINING CHALLENGES IN AGRICULTURAL LENDING**

The granting of loans to small farm households remains a tricky business. Costs and risks are high and diverse. The dispersed location of rural clients, the difficulties and high costs of transportation and communication, the heterogeneity in farming activities and management skills make small farm lending a costly endeavour. The high agricultural production risks further complicated by the sensitive political nature of agriculture and domestic food production, explain why lending to agriculture is risky. There is limited availability of risk-mitigating mechanisms. Many challenges still remain to constitute an agenda for future research.

### **Need for an Adequate Agricultural Finance Policy Framework**

Structural Adjustment Programmes have been successful in generating a more favourable macroeconomic environment in developing countries.

Still ongoing market reform and privatization have not yet produced appreciable improvements in the provision of agricultural support services. Nor have they increased farming profitability. If anything, small farmers often have less access to rural banking and institutional agricultural lending facilities than before. A major reason is the absence of an adequate rural and agricultural finance policy framework. The generation of agricultural finance policies is also complicated because agriculture is a politically sensitive sector. Rural people and farmers are affected by three different policy-making areas: macroeconomic policy, financial sector policy and agricultural sector policy. The essence of a successful agricultural finance policy is skillfully integrating these three policy areas. The regulation must capture the views of all stakeholders involved in policy formulation, delivery, monitoring and feedback. In an earlier publication of the Agricultural Finance Revisited Series, AFR No. 2 - "Agricultural Finance: Getting the Policies Right", FAO and GTZ have addressed this subject. A Diagnostic Methodology has been developed that can be used to assess a given agricultural policy-making system in a country. This tool can also assist in developing the machinery for generating a new, rural and agricultural finance policy at national level.

### **Heterogeneity of Farming**

The variety in farming activities and farm management poses challenges and opportunities to agricultural and rural lenders. As the use of standardized agricultural lending products and lending conditions is unrealistic, the design of individualized loan products will increase the transaction costs of the lender. The availability of viable farm and non-farm investment provides opportunities to meet the effective demand of farmers and rural clients for a wide range of loan products and other financial services. This diversifies the loan portfolio and thus reduces the concentration of agricultural lending risks. Lenders need to be willing and able to develop new loan products. They need to adopt lending technologies that respond to the demand and the loan repayment capacity of potential farmer-borrowers. To attain this, lenders must have good knowledge of farming systems, agricultural commodity markets, and rural and farm household economy. Initially, those farmer clients should be served who present low risks.

## **Loan Appraisal and Loan Follow-up**

An innovative use of loan appraisal techniques and close loan follow-up can contribute to reduce agricultural lending risks. Yet, the problem of high agricultural lending costs persists. This is due to a dispersed rural client location, high transportation costs, high overhead costs to start-up a decentralized rural branch network, and high information costs.

Collaboration with local organizations can be extremely useful to reduce client information costs. Farmer-borrowers can be provided with essential non-financial support services such as agricultural extension, and business and financial management training.

## **Lending Technologies**

The choice between the options of individual or group lending is closely related with the type of clients that will be served, the operational structure and outreach of the financial institution and the relative importance of cost or risk-reducing strategies. For instance, agricultural lenders which work with joint liability groups should be aware that group size and group homogeneity have a direct impact on the effectiveness of peer group member solidarity and pressure. In general, rural borrower groups need to be smaller than urban ones. There are high potential costs for group formation, organization, intra-group information and loan monitoring by fellow group members. High covariant risks of farm and rural incomes suggest that heterogeneous rural groups may be more effective in reducing lending risks. However, too much group heterogeneity can give rise to the problem of demand for different loan products, loan sizes and loan terms between group members. In any case, lenders must be willing to change their lending technologies over time. Individual borrower graduation should be made possible for group members who progress more rapidly than others and who are capable of servicing larger loans.

## **Potential for the Use of Electronic Banking Products**

New information technologies provide significant scope for the adoption of innovations in bank automation, electronic data processing and

development of new agricultural loan products. For instance, a rural bank in India sponsored by the Bank of Baroda has launched a credit card scheme. Farmers who are credit card clients may get advances up to a certain limit per acre of land without additional formalities. Another example is the use of smart cards that allow farmers to draw loans on retailers of fertilizers and other agricultural inputs. For the lender, significant cost efficiency can be effected by using this form of loan disbursement.

### **Term Lending Facilities**

Agricultural loans are required for relatively long terms, which makes matching of assets (loans) and liabilities (sources of funds) a key issue to be addressed. The difficulty of mobilizing sufficient longer-term loanable resources at reasonable financial conditions limits the capacity of agricultural and rural lenders to meet demand for medium and long-term loans. Ways of securing longer-term loanable funds are the increase of equity of a financial institution by retaining earnings, the negotiation of long-term borrowings from development organizations and multilateral development finance institutions. This may also happen through the issuing of medium and long-term debentures or bonds and the creation of a subsidiary merchant bank, such as the Co-operative Bank of Kenya (see AFR No. 4).

### **Liquidity Management**

Mismatching the term of loan assets and liabilities exposes a financial institution to high liquidity risks. Good liquidity management requires priority attention in agricultural lending. The liquidity position of agricultural lenders is affected, in particular, by agricultural seasonality. Careful liquidity management is also needed in the event of large changes in agricultural commodity prices, or natural disasters. Under these circumstances withdrawals of rural savings and new loan demand of farmers occur at the same time. Agricultural lenders need reliable information on the timing of required loan disbursements and scheduled loan repayments to properly plan and manage their cash requirements. Sufficient funds should be available at the beginning of the planting season, while the high costs of keeping loanable funds idle should be minimized as much as possible.

## **Interlinked Agricultural Credit Arrangements**

Today, with the breakdown or restructuring of agricultural development banks and the withdrawal of the state and donor and development agencies from agricultural and rural finance, interlinked credit arrangements provided by non-financial institutions often offer the only way to finance the on-farm production of small farmers in developing countries. For instance, both traditional trade finance as well as more sophisticated forms of agribusiness arrangements like outgrower schemes and contract farming have (re-) emerged recently in many African countries. Interlinking the supply of agricultural inputs with credit and output marketing, presents farmers with the advantage of market orientation and better outlets for farm products. Small farmers, with weak bargaining positions, may be paid unfair low prices for their produce. Essential support services will be required in developing appropriate market intelligence systems and providing farmers with better market information and business advisory services. At the same time, they may be assisted in proper farmer organization. Much more research on this subject is needed.

The Marketing and Rural Finance Service of FAO has recently launched an initiative to prepare a Guidebook on Contract Farming. The different types of contractual arrangements, the advantages and disadvantages to both the farmer and the contractor, the various funding sources, and the key preconditions for successful arrangements will be examined in this study.

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