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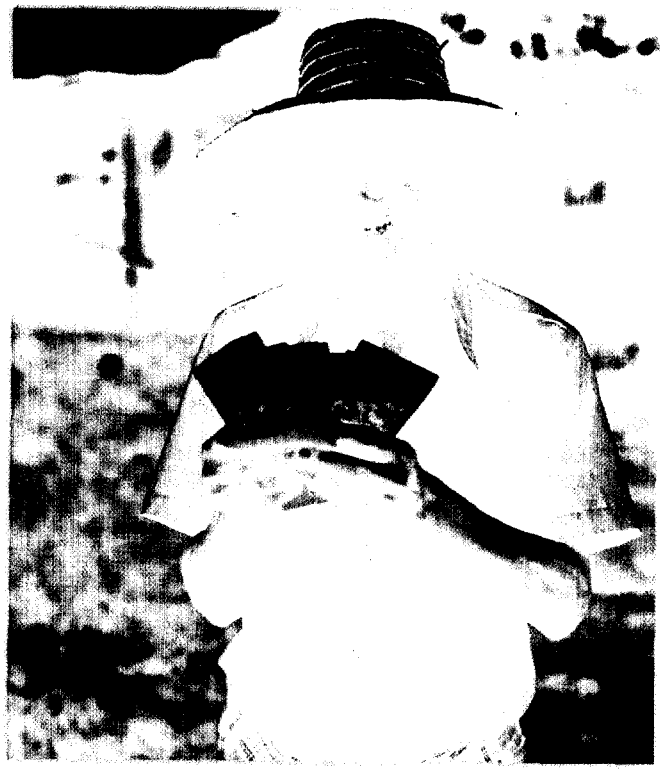
Rural Finance

Issues, Design, and Best Practices



Jacob Yaron
McDonald P. Benjamin, Jr.
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Jacob Yaron is rural finance advisor in the Rural Development Department of the World Bank. McDonald P. Benjamin, Jr., is a financial economist in the East Asia and Pacific Region, Finance and Private Sector Development Unit, of the World Bank. Gerda L. Piprek is a consultant to the World Bank.

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DEVELOPMENT STUDIES AND MONOGRAPHS SERIES 14
Rural Development

Rural Finance

Issues, Design, and Best Practices

Jacob Yaron
McDonald P. Benjamin, Jr.
Gerda L. Piprek

The World Bank
Washington, D.C.

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Foreword

This volume is intended to serve as a sourcebook to aid decisionmakers as they seek to create an environment conducive to the development of rural financial markets. As a sourcebook, it explores both the traditional and new approaches that governments have taken to rural finance.

First, the report outlines the traditional approach to rural finance, which relied heavily on supply-led, state-owned agricultural credit institutions. Second, it highlights how widespread, urban-biased policies impeded rural development and the promotion of rural financial markets. These policies included overvalued exchange rates, inflexible price controls on food produce, underinvestment in rural infrastructure, and protection of domestic industries against import competition.

The volume then illustrates the emerging new approach, which focuses on creating an environment to promote viable rural financial markets. Specifically, it focuses on creating a favorable policy environment in terms of the macroeconomy, agricultural and financial sectors, rural development, and the legal and regulatory framework.

Moving from the macroeconomic and sectoral to the institutional level, the report offers two primary criteria—outreach and self-sustainability—as the bases for assessing the performance of rural financial institutions. It reviews and analyzes the modes of operation and performance of three successful rural financial institutions: the Grameen Bank of Bangladesh, the Bank of Agriculture and Agricultural Cooperatives (BAAC) in Thailand, and the Bank Rakyat of Indonesia, Unit Desa (BRI-UD). The analysis illustrates the phenomenal growth and development that these institutions underwent over the past decade. An understanding of their modes of operation could be useful in designing interventions in rural financial markets elsewhere.

Ismail Serageldin
Vice President
Environmentally and Socially Sustainable Development

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Abstract

The provision of affordable financial services to the rural population has been a prime component of development strategy for several decades. Governments, development agencies, and other donors have supported various rural financial institutions, with the aim of accelerating growth and reducing poverty.

In recent years it has become clear that the promotion of rural financial markets should be done in the overall context of rural development and integrated financial markets. This approach implies an important, market-friendly role for governments in creating an environment conducive to the development of rural financial markets.

This volume is offered as a sourcebook for decisionmakers seeking to create such an environment. It first outlines the traditional approach to rural finance, which relied heavily on supply-led, state-owned agricultural credit institutions. Next, it presents the emerging new approach and proposes a framework for determining the most appropriate role for governments, identifying the most effective sequencing of policy reforms, and selecting the most suitable forms of intervention. On the institutional level the report presents a framework for assessing the performance of rural finance institutions and suggests guidelines for the development and effective management of these institutions. Finally, the volume reviews and analyzes the performance of three successful rural finance institutions. These three case studies provide valuable insights for the design of future interventions.

Abbreviations

ACB	Agricultural Credit Bank of Jamaica
BAAC	Bank for Agriculture and Agricultural Cooperatives (Thailand)
BIS	Bank for International Settlements
BKK	Badan Kredit Kecamatan
BRI	Bank Rakyat Indonesia
BRI-UD	Bank Rakyat Indonesia–Unit Desa
CGAP	Consultative Group to Assist the Poorest
DFI	development finance institution
EBRD	European Bank for Reconstruction and Development
ERR	economic rate of return
ESW	economic and sector work
FI	financial intermediary
FIL	financial intermediary loan
FRR	financial rate of return
FSD	Financial Sector Development Department, World Bank
GAAP	generally accepted accounting principles
GATT	General Agreement on Tariffs and Trade
GB	Grameen Bank (Bangladesh)
GDP	gross domestic product
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
IREQ	internal rate of return on investor's equity
MIS	management information systems
NGO	nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
OED	Operations Evaluation Department, World Bank
PSD	Private Sector Development Department, World Bank
RFI	rural financial institution
RFM	rural financial market
ROA	return on assets
ROE	return on equity
ROSCAs	rotating savings and credit associations
SACI	specialized agricultural credit institution
SAL	structural adjustment loan
SBP	Sustainable Banking with the Poor
SDI	subsidy dependence index
SECAL	sectoral adjustment loan
SLA	savings and loan associations
TAL	technical assistance loan
TSE	transitional socialist economy
WWB	Women's World Banking

Executive Summary

Rural financial markets, in particular those involving state-owned agricultural credit institutions, have been at the center of government interventions in most developing countries over the past five decades. With the support of various donor agencies governments have channeled sizable resources into these programs to ensure a continued flow of cheap credit to agricultural entrepreneurs through an abundance of financial intermediation mechanisms. The outcomes of these interventions have been generally disappointing. In contrast, developments during the past decade in the provision of rural financial services (both savings and credit) have demonstrated that proper institutional design and adherence to appropriate policies pay off handsomely and have the potential to generate substantial achievements in terms of greater institutional outreach and self-sustainability.

Several challenges continue to face rural financial intermediation—challenges of selecting the set of institutional design and policy alternatives that is most effective in different socioeconomic environments. These challenges include the selection of proper modes of operation that differ significantly from the old pattern of (a) using concessional interest rates (often negative in real terms), (b) favoring agricultural rather than rural operations, (c) ignoring or oppressing the creation of savings deposits, and (d) implementing costly and inefficient service delivery mechanisms. By implementing best practices in rural finance similar to those that have surfaced over the past decade, by carefully adapting them to the socioeconomic and cultural setting, and by reducing or fully eliminating the heavy fiscal costs associated with inefficient and inequitable agricultural credit programs, it is possible to further promote efficient rural financial markets in many more countries.

In this report the emphasis is on identifying the challenges facing rural financial intermediation, evaluating the traditional approach to rural finance, looking at how rural finance can contribute to both income expansion (that is, growth) and poverty reduction, asking what constitutes a favorable policy environment and a supportive legal and regulatory framework for improved rural financial intermediation, and reviewing the role of government. The performance of rural financial institutions (RFIs) is assessed and guidelines are proposed for building institutional capacity in RFIs. Three successful RFIs are examined and the operating methods and common features that contribute to their success are identified.

More than 1.3 billion people around the world live in poverty—the vast majority in rural areas. Although most of the rural poor depend on agriculture and agriculture-related activities for their meager incomes, undernourishment is severe in many rural areas. General economic growth is often insufficient to eradicate poverty and undernourishment. Growth must be shared by poor rural communities, particularly by smallholders and

women. Efficient rural financial services contribute to poverty reduction, particularly when supported by hospitable rural development policies.

Like their urban counterparts, rural communities have a bankable demand for credit, savings, and insurance services. Insurance and access to income-smoothing financial services can contribute significantly to the welfare of rural communities by mitigating the impact of seasonality and natural disasters on their incomes. Savings and credit facilities can help to make lumpy investments affordable and allocate resources to potential investments with the highest returns. Indeed, the central role that financial systems play in most economic activities makes them an essential component of economic development, and the depth of the financial sector is an excellent predictor of long-term economic growth.

Yet the rural poor have been largely neglected by formal financial intermediaries. This neglect stems from distorted macroeconomic and sectoral policies, the lack of economic and political power of the rural poor, and the perception among formal for-profit financial intermediaries that rural markets are not potentially profitable. Successful rural financial intermediation requires a favorable policy environment, a supportive legal and regulatory environment, and strong, autonomous rural financial institutions.

This volume identifies the challenges facing rural financial intermediation, evaluates the traditional approach, looks at how rural finance can contribute to income expansion and poverty reduction, asks what constitutes a favorable policy environment and a supportive legal and regulatory framework for improved rural financial intermediation, and reviews the role of government in rural finance. The report reviews and analyzes how the performance of rural financial projects is assessed and proposes guidelines for building institutional capacity in RFIs. In closing, the report examines the operating methods of three successful RFIs and identifies common features that contributed to their success.

The Challenge for Rural Financial Intermediation

Rural Financial Intermediation Faces Several Challenges

- *Obstacles to financial intermediation.* Financial markets are often highly integrated with (and affected by) other markets. The main problems preventing financial markets from operating efficiently are unsound macroeconomic policies, distorted financial policies and market rigidities, and legal and regulatory constraints.
- *Urban-biased policies.* The past decades were characterized by policies that were implemented in pursuit of accelerated industrial development. These policies often adversely affected rural areas and hampered rural development. The following "eight pillars" of urban-biased policies have often hampered the development of rural communities and the promotion of rural financial markets:
  1. Overvalued exchange rates
  2. Low, controlled, and seasonally invariant prices for agricultural products
  3. High effective rates of protection for domestic industry, the outputs of which are used as agricultural inputs
  4. Disproportionately high budgetary allocations for urban over rural infrastructure (roads, electricity, and water supply)
  5. Disproportionately high investment in human resources in urban over rural areas (health and education)
  6. Usury laws that rule out the loans typical in rural areas: small, risky, and high-cost loans
  7. Underdeveloped legal and regulatory provisions regarding land titling and collateral for typical rural assets (land, crops, and farm implements) relative to urban assets (cars, durables, and homes)
  8. Excessive taxes on agricultural exports.

- *Distinguishing features of rural financial markets:* Poverty, low population density, isolated markets, highly covariant risk, and seasonality often result in high transaction costs, lack of traditional collateral, high income fluctuations, and limited opportunities for risk diversification. These features differentiate rural financial markets from urban ones and often scare off traditional for-profit financial intermediaries. However, these challenges also underscore the benefits the rural poor would gain from access to efficient consumption-smoothing mechanisms and financial services that could help them out of poverty. To this end, special products and operating methods are required.
- *Poorly designed interventions.* Well-intended rural financial interventions, such as subsidized credit targeted exclusively to agricultural development, have generally hampered the development of rural financial markets. As a consequence, the poor still have inadequate access to credit, savings, and insurance services.

The Traditional Approach to Rural Finance

The traditional approach usually implied a high level of government intervention in the form of targeted credit, with government-owned and managed RFIs receiving concessional loans and on-lending to customers at below-market interest rates. This form of intervention was often based on serious misconceptions of the real challenges facing rural communities and was directed toward the symptoms rather than the causes of inadequate rural financial intermediation. For example, low participation in formal financial activities was erroneously seen as resulting from the inability of the poor to save or to pay market rates of interest.

While these interventions had some positive effects, the objectives of income expansion and poverty reduction were not met. In fact, some of these interventions have compounded the distortions, thereby worsening the condition of rural communities. Traditional strategies usually pursued short-term objectives aimed at achieving agricultural production gains rather than long-term objectives aimed at sustained rural income expansion. The sole, disproportionate emphasis in RFIs on *disbursing agricultural credit* led to general neglect of portfolio quality, nonfarm rural development, savings mobilization, and efficient rural financial intermediation.

- Rural communities have been perceived as too poor to save, so efforts have been concentrated almost exclusively on the provision of credit, ignoring the perhaps more crucial benefit of rural monetary savings facilities.
- Subsidized interest rates have led to RFIs often being perceived as governmental disbursement windows rather than solid financial institutions. Such perceptions have led to a poor loan repayment culture. Subsidies in the form of concessional lending rates and a high tolerance for defaults have often been captured by well-to-do and influential farmers, thereby crowding out poor farmers and further reducing the poor's access to credit.
- The traditional approach has focused on lending for agricultural purposes while ignoring small nonagricultural rural enterprises and neglecting opportunities for risk diversification and growth.
- Subsidized agricultural credit has at times resulted in production inefficiencies by targeting the wrong products. For example, by encouraging the adoption of excessively capital-intensive farming technologies, low-interest loans displaced agricultural laborers and increased rural unemployment.
- The poor design and performance of state-owned RFIs and their access to concessional funds discouraged private, for-profit financial intermediaries from engaging in rural financial intermediation.

The disappointing outcome of the traditional approach led critics to question whether scarce public resources could be applied more efficiently in other ways in pursuit of rural income expansion and poverty reduction.

The New Approach

A radical change had long been advocated by a few lone voices. The new approach gradually became mainstream thinking, however, as evidence of "success stories" became known during the 1980s. The new approach focuses on the primary goals of rural development: income expansion and poverty reduction. It recognizes that providing rural finance may not always be the most cost-effective way of reaching these goals and that effective rural financial intermediation should often be complemented by other government actions, such as increased investment in rural infrastructure and in human development.

The new approach proposes an active role for government in establishing a favorable policy environment to facilitate the smooth functioning of rural financial markets, but a more limited role in direct interventions in rural financial markets.

Income Expansion

Approaching the objective of income expansion calls for knowledge of the underlying causes of depressed growth. Obtaining such knowledge requires an assessment of the efficiency of markets, including rural financial markets, and a determination of the causes of market inefficiencies. These inefficiencies can be the result of some combination of poor macroeconomic and sectoral policies, a weak legal and regulatory framework, and market failure. Since markets are highly interrelated, distortions in one market often have spillover effects in other markets.

Once the causes of market inefficiencies have been identified, the government can review the options available to promote more efficient rural financial markets and use cost-benefit analysis to select the most appropriate actions. *Policy reforms* should take first priority to ensure the effective functioning of markets. *Legal and regulatory reforms* can also be undertaken immediately, even if policy reforms are yet to be implemented.

Removing the causes of market failure may require direct government intervention. Common causes of market failure in rural financial markets are imperfect information and poor communication of information. Cost-effective methods of dealing with market failures should be identified and evaluated. If a market failure cannot be removed cost-effectively, direct interventions aimed at income expansion are not justified. The issue of direct intervention remains controversial because the socially optimal level of financial services for a particular community is hard to determine.

Poverty Reduction

Rapid growth in rural economies is often the most promising way to reduce rural poverty. Creating a favorable policy environment and pursuing reforms in the legal and regulatory framework should therefore receive the same priority as they do for income expansion.

However, raising average rural incomes may not be sufficient to reduce poverty if economic growth is not appropriately shared. A program of targeted interventions for poverty reduction interventions may be justified, irrespective of whether market failures (or cost-effective interventions to remove the market failures) have been identified. The severity of poverty may compel immediate (perhaps short-term) actions, such as food relief or financial assistance following natural disasters.

Creating a Favorable Policy Environment

The main measures in maintaining a favorable policy environment for rural financial intermediation are maintaining macroeconomic stability, removing urban-biased policies, and promoting integrated and resilient financial markets.

Establishing a Favorable Macroeconomic Environment

Macroeconomic instability affects rural financial markets directly through monetary vari-

ables such as real interest rates, or indirectly through effects on the RFIs' clients. Inappropriate macroeconomic policies have often undermined efforts to strengthen financial sectors. Persistent distortions in key macroeconomic variables (such as overvalued exchange rates) distort price signals, causing financial markets to channel excessive resources to inefficient sectors instead of to sectors with comparative advantage.

Both external and internal factors may generate macroeconomic instability. External risks, such as terms of trade shocks, can be diversified internationally by opening domestic markets to foreign investors, or they can be hedged in international options and futures markets. Internal factors include volatile fiscal and monetary policies, as well as political risk. The goals of prudent fiscal and monetary policies should be price stability and sound, well-aligned exchange rates.

Removing Policy Biases against Agriculture and Rural Development

Rural development in most developing countries has been slowed by policies that favor industry over agriculture and urban over rural sectors. Such policies reduce the profitability of agriculture and nonfarm rural enterprises and devastate rural financial markets. Countries with the highest degree of discrimination against agriculture have had the lowest rates of economic growth.

In addition to the adverse effects of urban-biased policies on rural welfare and promotion of rural financial markets, policies often favored large wealthy farmers over smallholders and poor subsistence farmers, thereby worsening income distribution in agricultural and rural sectors.

Working principles for creating an improved environment for agricultural and rural development include establishing a more nearly neutral trade regime between agricultural exportables and importables, removing nontariff barriers, realigning overvalued exchange rates, reducing excessive industrial protection, shifting public investment priorities toward rural areas, and increasing participation in community development. These reforms will improve the efficiency of the rural sector and enable rural communities to earn a higher return on their investments.

Promoting Efficient Financial Markets

Rural financial intermediaries are exposed to risks that can lead to crises, as are other financial intermediaries. These risks include inadequate prudential regulation and supervision, inappropriate direct interventions in financial markets, and financial repression. Governments can promote financial markets by strengthening the supervision and prudential regulation of financial intermediaries, and by introducing measures supporting financial liberalization, including deregulating interest rates, reducing high reserve requirements, and relaxing credit controls.

In rural markets governments can establish special regulatory frameworks for semiformal institutions. Inefficient policies, such as requiring that banks lend a large proportion of their funds to unremunerative sectors of the economy (such as agricultural parastatals), should be abolished.

The Legal and Regulatory Framework for Rural Financial Markets

In many countries deficiencies in laws, regulations, and institutions prevent the formal sector from delivering credit to farmers and rural businesses. These impediments may make it difficult for the formal sector to lend to the informal sector and for banks and other financial institutions to lend to nonbank creditors (typically traders) who have many advantages in efficiently reaching poor rural borrowers.

Lenders need a system through which claims against property can be created, publicly established, or perfected and enforced. The more uncertain and expensive this process, the less willing are lenders to lend. Problems can arise in creating a mortgage or a claim on movable

property because of untitled land, high registration costs, and the absence of legal provisions for future interests. When *perfecting* a claim, there may not be clearly designated, easily accessible registries, and search costs may be high. *Enforcement* of claims on mortgaged land or property can be extremely costly, lengthy, and uncertain. Other laws and regulations that constrain rural financial intermediation include exempting property provisions that prevent rural smallholders from using their smallholdings as collateral and usury laws that rule out small, high-interest loans from formal financial intermediaries.

The legal, regulatory, and institutional changes needed to expand access to credit in rural areas include titling and registering land; reforming the law on secured transactions; reforming legal registries and expanding the scope for private operation; lowering the costs of registration and foreclosure; drafting specific, clear, and limited homestead provisions; and removing interest rate ceilings.

Well-designed programs that have reformed the laws of secured transactions have resulted in increased supplies of credit and lower lending interest rates. These benefits have produced gains that have been estimated at several percentage points of gross domestic product (GDP); the costs of such legal reform programs are usually remarkably low.

Direct Interventions

There is no single optimal level or form of intervention. The most appropriate intervention will depend on the objective of the intervention and on such variables as the demographics of the target clientele and the socioeconomic environment. In designing interventions, governments can mix and match *instruments*—such as by supporting pilot programs or providing seed capital; *institutions*—such as specialized agricultural credit institutions, nongovernmental organizations (NGOs), or state-owned RFIs; and *products*—such as credit, savings, guarantees, or insurance to targeted clientele.

Government interventions should aim at removing the *causes* of market failure or poverty. For example, market failure caused by imperfect information can be addressed, where appropriate, by providing seed capital for the establishment of RFIs in remote areas. The high transaction costs associated with the small loan and deposit amounts of the poor can often be lowered through subsidies sharing a portion of the transaction costs on a declining basis, or by assuming the costs of training staff in modes of operation known to reduce transaction costs.

Interventions should always aim to complement, facilitate, or improve the *market* over the long term. The management of a state-owned RFI requires full autonomy and should be accountable: no special privileges should be accorded to such an institution, and competition from private RFIs should be encouraged. Subsidies or grants could be restricted to seed capital or have a sunset clause. The cost of an intervention should be monitored continuously in order to assess the cost-effectiveness of the intervention while maintaining a level playing field among participating financial intermediaries, irrespective of their ownership.

Analysis of the informal financial market will help to determine the demand for formal financial services and methods of operation that may be acceptable to the specific clientele. The presence of rotating savings and credit associations (ROSCAs) may indicate an acceptance of group-based schemes and demand for savings facilities. Interventions could be designed to complement these schemes, for example, through savings accounts with positive returns for the deposits of ROSCAs.

Two widely used products that have generally performed poorly are credit guarantee schemes and crop insurance. Guarantees have often failed because they did not adequately cover credit risk and administrative costs and, in some instances, discouraged financial discipline and collection efforts. Crop insurance schemes generally failed because they provided multiperil coverage for uninsurable risks; some schemes have also been undermined by political interventions. Given the

alternative uses to which funding for guarantee schemes and crop insurance could be put, it is often difficult to justify either with confidence.

Performance Criteria for Rural Financial Intermediation

Evaluations of the impact of agricultural credit projects on the farm level are fraught with methodological problems relating to the fungibility of money and the assessment of additionality. Rigorous econometric studies are costly and often highly specific, making generic application of their findings impossible.

A framework was introduced in 1992 for assessing the performance of RFIs. It has gained wide acceptance among practitioners and academics. The framework proposes two primary criteria, *outreach* and *self-sustainability*. It is based on the assumption that RFIs that provide a broad range of services to the target clientele in an efficient manner are likely to have the desired impact of expanding incomes and reducing poverty. Evaluating the performance of RFIs based on these criteria could serve as an easily quantifiable proxy for the impact of rural financial intermediation.

Outreach is measured by several indicators, such as number of clients, average loan size (as proxy for income level), and percentage of female clients. *Self-sustainability* is assessed by calculating an RFI's subsidy dependence index (SDI), which indicates the percentage by which an RFI's prevailing average on-lending interest rate would have to increase to make it self-sustainable (that is, subsidy independent). The SDI also indicates the cost to society of subsidizing an RFI measured against the interest earned by the RFI in the marketplace. The main factors that contribute to self-sustainability are adequate on-lending rates and interest rate spreads, high rates of loan collection, high levels of savings mobilization, and low administrative costs.

Building Institutional Capacity

The focus has shifted dramatically from nurturing subsidized government-run institutions with cheap credit to developing institutional capacity and improving institutional performance for a broader range of RFIs. Institutional capacity refers to the degree to which operating procedures and regulations are embedded in the daily activities of an organization. Building this capacity is a continuous process aimed at improving the performance of an RFI and requires adherence to sound business principles.

There is no single formula for a successful RFI. The most appropriate modes of operation will be determined by the needs and socioeconomic characteristics of the target clientele, as well as by the physical, economic, and regulatory environment.

A growing number of successful RFIs provide potentially replicable or adaptable methodologies. These successes indicate ways of developing institutional capacity that will ensure responsive, sustainable, and efficient services to rural clients. An understanding of informal financial markets in a particular community can provide guidance on the range of workable practices within the community and identify market opportunities to better meet the demand for financial services in that community.

Perhaps the most important factor that determines the success of RFIs is ensuring appropriate governance. The powers and responsibilities of all decisionmaking entities and individuals must be clearly defined, and the boundaries of roles and responsibilities must be fully understood and consistently enforced. Management must have autonomy and be held accountable for operational decisions, and clients' interests must be fully represented. The appropriate form of supervision and prudential regulation in an RFI will depend on the size, type, and ownership structure of the institution. External supervision becomes particularly important when the institution mobilizes voluntary deposits from the general public.

Other key requirements for successful RFIs involve personnel, lending policies designed specifically for local clienteles, savings mobilization, and monitoring and information systems.

- Clearly defined strategies and objectives.
- Motivated and skilled staff. Staff training and incentive systems are essential for improved performance.
- Innovative low-cost systems and procedures that meet the special needs of the target clientele. Examples are mobile banking for improved delivery of financial services and joint liability lending. These systems reduce transaction costs and provide security for loans in the absence of traditional forms of collateral.
- Positive interest rates on loans and high loan repayment rates. Flexible loan terms and conditions, careful monitoring of loan repayments, and incentives to clients for early repayment could improve loan repayment performance.
- Savings mobilization through flexible and accessible savings facilities and positive interest rates.
- Risk diversification through lending for both agricultural and nonagricultural activities, geographic diversification, and integration with the broader financial system.
- Advanced management information systems (MIS) that enable the monitoring of loans, individual client records, and staff performance.

Best Practices: Three Success Stories

Three RFIs widely perceived as successful with respect to the primary performance criteria of outreach and self-sustainability are the Bank for Agriculture and Agricultural Cooperatives (BAAC) in Thailand; the village banks (unit desas) of Bank Rakyat Indonesia (BRI-UD); and Grameen Bank (GB) in Bangladesh. All three institutions have attained high levels of market penetration in their target markets, and their clientele now numbers in the millions. The BRI-UD became financially self-sustainable in 1988, and both the BAAC and the GB have made substantial progress towards self-sustainability, as measured by the remarkable decline in their SDI in recent years.

While their operating methods differ, reflecting their client needs and the particular socioeconomic and legal environment of the countries they serve, certain common features can be identified. These include a high degree of management autonomy in the formulation of operational policies, intensive staff training and advanced staff incentive programs, innovative low-cost distribution networks, positive real on-lending interest rates, close monitoring of loan performance and high loan recovery rates, increasing savings mobilization and declining reliance on donor funding, relatively low and declining administrative costs, effective MIS, and macroeconomic stability and growth.

Conclusion

The traditional approach to rural finance proved ineffective in achieving income expansion and poverty reduction. It was characterized by an active direct role for government through interventions involving the provision of cheap agricultural credit through heavily subsidized, state-owned RFIs. The new approach suggests a minimalist, market-oriented role for government and focuses on creating a favorable policy environment and a supportive legal and regulatory framework for rural financial intermediation.

A consensus is forming on this new direction, but the appropriate level and form of direct government intervention remains a contentious issue. In pursuit of income expansion direct interventions are justified only if an identified market failure can be removed cost-effectively. In practice it may be difficult to identify and measure the extent of market failure. In pursuit of poverty reduction direct government interventions may at times be justified by social objectives. While interventions aimed at poverty reduction do not invariably produce net (unweighted) economic benefits, they should at a minimum reflect the most cost-effective way of reducing poverty for the target group.

Much agreement has been reached on improving financial intermediation at an institu-

tional level. The building of institutional capacity is essential for RFIs striving toward greater outreach and self-sustainability. The most important requirement for developing institutional capacity is a high level of management autonomy and accountability for the performance of an RFI. No special privileges should be extended to state-owned RFIs—rather, all RFIs should be guided by commercial imperatives, and competition should be strongly encouraged. If subsidies are warranted, these should be provided irrespective of the RFI's ownership.

Proposed Areas for Future Research

This summary has provided a static view—a landscape of an important subsector. From this *tour d'horizon* one can, however, identify key issues and opportunities that will have to be explored:

- *Institutional development.* Explore strategies for selecting the appropriate institutional design and modes of operation to serve a specific target clientele given the political and economic setting, the degree of maturity of the rural and financial sectors, and the social and cultural conditions. This research requires a focus on the following issues:
  - Is there an appropriate institution in operation that could be approached to expand its operations with respect to the target clientele?
  - What policy measures could be taken to facilitate improved performance or to expand the product lines of the existing institutions?
  - What should be the role of apex on-lending institutions, commercial banks, NGOs, and rural savings schemes?
- *Role of government.* Develop guiding principles for the types of intervention required, if any, in view of a country's socioeconomic conditions, the type of clientele targeted, and the products to be delivered. Research implementation and sequencing issues for the reform of rural financial and legal sectors and for institutional development.
- *Informal market.* Determine what lessons can be learned from the performance of informal markets. How can formal finance best complement informal financial activities?
- *Cost-benefit analysis and performance indicators.* Develop a framework for conducting cost-benefit analyses of financial intermediation and nonfinancial intermediations, interventions, and alternative rural financial intermediation aimed at income expansion and poverty reduction. Define key performance indicators to measure the cost, effectiveness, and impact of projects over time.
- *Impact studies of selected schemes.* Conduct econometric studies to better understand the impact of selected rural financial schemes on income, production, and consumption smoothing.

Introduction

Rural financial markets in developing countries are different from other financial markets. Four main differences prevail: the underdevelopment of complementary markets and related institutions, the meager availability or absence of reliable collateral security, the covariant risks and seasonal fluctuations in demand for and supply of short-term financial resources, and the high cost associated with serving rural clients in low density areas. These problems are far more serious in rural financial markets in developing countries than they are in the sophisticated financial markets of industrial countries.

In recognizing the limitations of rural financial markets in developing countries, states pursuing both growth and more equitable income distribution have often considered intervention to be inevitable. These interventions have taken many forms, but have focused in particular on augmenting the availability of agricultural credit and on reducing the burden of farmers' interest payments.

Agricultural credit programs, including the widespread establishment of and ongoing state support to specialized agricultural credit institutions, have been at the center of government interventions in rural financial markets. Donors have supported these interventions by assisting in their design and by channeling substantial financial resources for on-lending in pursuit of accelerated growth in agricultural production and poverty reduction.

The often disappointing performance of many rural financial projects can be ascribed largely to (a) insufficient knowledge and misconceptions about the real problems of rural financial markets, such as information asymmetry, segmented markets, and high covariant risk; (b) the effects of historically distorted, urban-biased macroeconomic and financial policies on the rural sector; and (c) poor management of rural financial institutions.

However, a few recent successful developments in rural financial markets that emphasize the efficient delivery of savings and credit services to the rural population have demonstrated that adherence to appropriate policies, proper institutional design, autonomy of management, creative incentives, and efficient modes of operation can generate substantial social returns.

Improved rural financial intermediation has been receiving increased attention from governments and donors as a policy tool with which to address the plight of rural populations. The importance of encouraging healthy rural financial markets is increasingly acknowledged in the quest to foster rural development, accelerate growth, and reduce poverty.

Purpose of This Volume

The purpose of this volume is to develop broad guidelines for improved rural financial intermediation and to highlight areas that require

further research. The findings presented here have been derived from an analysis of past rural financial intermediation efforts and recent developments in economic theory. The report sets out to answer the following questions:

At the policy level

- What are the specific challenges to rural financial intermediation that differentiate it from urban financial intermediation?
- Under what circumstances should support for rural financial intermediation be considered as a policy option for the expansion of rural incomes and the reduction of rural poverty?
- What is the impact of macroeconomic, financial, and agricultural sector policies on rural financial intermediation? Considering these policies and the legal and regulatory framework of a country, what would constitute a favorable policy environment for rural financial intermediation?
- What type of direct and indirect measures are available to governments to facilitate improved rural financial intermediation?

At the institutional level

- How can the economic impact of rural financial intermediation be evaluated?
- What constitutes sound business principles for conducting rural financial intermediation at an institutional level?
- How can the performance of rural financial institutions be assessed?

Audience

The report is intended for government policymakers, task and project managers at the World Bank, other donor agencies and nongovernmental organizations, and managers of rural financial institutions (RFIs) who wish to expand or improve their operations in rural areas. Policy-related issues may be of particular interest to policymakers; issues at the institutional level may be of greater interest to practitioners. The report is therefore arranged in the form of a "sourcebook," with chapters that are largely self-contained to enable readers to draw directly on sections of particular interest.

Layout of the Volume

Part One. An Overview of the Traditional Approach

Chapter 1 describes the problems associated with financial markets in general and rural financial markets in particular. Chapter 2 gives an overview and assessment of the traditional approach to rural financial intermediation, which dominated the world until the mid-1980s.

Part Two. Policies for Improving Rural Financial Intermediation

Chapter 3 discusses the new approach to rural financial intermediation and provides a systematic approach to determining the role of government in pursuing rural income expansion and poverty reduction. The approach is illustrated by two decision trees: "Income Expansion" and "Poverty Reduction." Chapters 4 and 5 develop recommendations on the role of government in creating a favorable policy environment. Chapter 4 focuses on the macroeconomic, rural, and financial sector, and chapter 5 on creating a supportive legal and regulatory framework. Chapter 6 discusses the types of direct rural financial interventions that can be implemented by governments to improve rural financial intermediation in pursuit of income expansion and poverty reduction.

Part Three. An Overview of Rural Financial Institutions

Chapters 7 to 9 review successful rural financial intermediation at the institutional level. Chapter 7 discusses the problems inherent in assessing the impact of rural finance projects and proposes a framework for assessing the performance of RFIs as a proxy for evaluating

the success of rural finance projects. Chapter 8 proposes guiding principles for managing RFIs and developing institutional capacity to improve the performance of RFIs. Finally, chapter 9 analyzes the performance and operating methods of three successful RFIs: the unit desas of Bank Rakyat Indonesia, the Bank for Agriculture and Agricultural Cooperatives of Thailand, and the Grameen Bank of Bangladesh. The common features identified in their operations can prove useful in the design of future interventions.

PART ONE

An Overview of the Traditional Approach

The formulation of policies for improved rural financial intermediation calls for a thorough analysis of the problems underlying rural financial markets and a clear understanding of the dynamics of financial markets in general and rural financial markets in particular. In addition, past performance should be analyzed to identify the underlying policies and methodologies that contributed to achievements and failures.

Chapter 1 develops the problem statement, which can be used as a checklist in the design of future projects. Chapter 2 provides an overview of the policies and outcomes of the traditional approach, which largely dominated thinking on rural finance until the late 1980s.

CHAPTER 1

The Challenge of Rural Financial Intermediation

The challenges of rural financial markets are broadly related to (a) obstacles to and shortcomings of financial markets in general, (b) urban-biased policies, (c) systemic weaknesses of rural financial markets, and (d) poorly designed interventions.

Obstacles to Financial Intermediation

Various obstacles prevent financial markets in general, and rural markets in particular, from operating efficiently.[1] These obstacles all have a direct impact on the effectiveness of rural financial markets. Most of the obstacles are related to the promissory feature of financial contracts. For example, a bank will lend to a client in exchange for a *promise* of repayment with interest over a given period.[2] Because of the promissory feature and the time dimension of financial contracts, financial intermediaries and their clients require good information to determine the riskiness of transactions, need a reasonably stable political and economic environment to extend contract maturities over time, must be free to price perceived risks appropriately, and must be able to exercise remedies when contractual terms are not honored.

These conditions are rarely met. The main problems are:

- *The macroeconomic environment.* Unsound macroeconomic policies adversely affect the performance of financial markets, and negative external shocks could aggravate the resulting situation.
- *The sectoral policy context.* Government price controls, trade policy, and public investment priorities frequently distort the allocation of resources by financial intermediaries.
- *Financial market constraints.* Financial market rigidities, imperfect information, and in some instances social barriers to financial transactions preclude an optimal allocation of resources.
- *Legal and regulatory constraints.* Problems with enforcing claims increase uncertainty and reduce the expected returns to creditors from financial transactions, thereby increasing transaction costs and reducing the supply of credit and deposits.

These constraints are generally more binding on financial transactions in the rural sector because of the effects of widespread, distorted sectoral policies and the unique characteristics of rural markets.

Urban-Biased Policies

Widespread urban bias exists in sectoral policies and in the orientation of the legal and regulatory framework. (This bias is outlined in chapter 4, box 4.1: "Eight Pillars of Urban-Biased Policies.") Examples of these policies

include restrictive price controls on agricultural produce; excessive agricultural export taxes; overprotection of domestic industry; low investment in rural infrastructure and human resources; and collateral laws that are better defined for urban assets, such as consumer durables, than for farm implements. In many countries with a comparative advantage in agriculture macroeconomic policies that result in overvalued exchange rates are also urban-biased because the policies encourage excessive food imports and thus depress agricultural producer prices and rural incomes.

Systemic Weaknesses of Rural Financial Markets

Rural populations are generally poorer than their urban counterparts. They generally work in agriculture or agriculture-related activities, and they live in areas in which overall population density is low. These factors, combined with poor infrastructure and lack of integration with urban markets, cause rural inhabitants in many countries to live in relative isolation. These characteristics are related to the following problems in rural financial intermediation:

- Low population density, small average loans, and low household savings increase transaction costs.
- Rural clientele often lack the traditional forms of collateral required by commercial banks.
- Poor communication and lack of integration with other markets result in highly fragmented markets, which create information barriers and limit risk diversification.
- Seasonality of the rural agricultural business cycle and the high probability of covariant production price and income shocks add to the risks of rural financial intermediation.

Because of inadequate collateral (and the perception that rural financial markets have a high risk and low profitability), commercial banks have largely avoided servicing rural areas. Often, the only financial services available are those provided by the informal sector, which offers a limited range of services along with limited availability of funds. Cases in which households have paid to have their savings placed in safe keeping are well documented.

Poorly Designed Interventions

Governments responded to the perceived shortage of financial services in the rural sector by creating a range of different institutions, such as specialized agricultural credit institutions, intended to channel government and donor funds to rural clients, especially farmers. Though well intended, some of these initiatives were misdirected and did not address the real problems. Indeed, some exacerbated the problems. A few examples:

- Subsidized below-market ceiling rates of interest often led to the crowding out of poor farmers because the subsidies were captured by wealthier, better-connected farmers, increasing the income disparity between rich commercial farmers and poor subsistence farmers and reducing the poor's access to credit. In many instances subsidized credit also became highly politicized, and it was consequently difficult to eliminate.[3]
- Inefficient business practices often resulted in substantial losses and further reduction in access to financial services by the poor. Rural financial institutions were often treated as disbursement windows rather than as financial institutions, and recipients sometimes viewed "soft" loans as grants that did not have to be repaid.
- The focus on lending exclusively for agriculture increased the risk carried by RFIs and reinforced the perception that lending to rural areas is a special activity, not to be integrated with the broader financial market.

Conclusion

These problems have resulted in rural communities, particularly their poor members, being underserved by the formal financial sector. *Consequently, rural households often have less access to adequate credit, savings, and insurance services than urban ones.* The underlying causes of the problems are interrelated and call for an integrated solution, taking into consideration macroeconomic, microeconomic, sectoral, and institutional issues.

Chapter 2 discusses in more detail the successes and shortcomings of the traditional approach to rural finance. Part 2, chapters 3 through 6, proposes a framework for developing an integrated approach to improved rural financial intermediation.

CHAPTER 2

The Traditional Approach to Rural Finance

Throughout the world, financial markets are subject to government intervention. During the 1980s government loans and guarantees accounted for about 25 percent of all lending in the United States (Schwarz 1992). The largest Indian commercial banks are government owned, and smaller private commercial banks in India have had up to 60 percent of their resources preempted by the government or locked into directed lending. Until 1988 the Soviet Union's entire banking system consisted of just two state-owned banks: a savings bank (Sberbank) and a lending monobank (Gosbank). The degree of intervention has varied by country, but in no case has any government refrained from intervening in the rural financial sector.

Governments have intervened in financial markets to protect depositors, ensure the solvency of financial intermediaries, promote competition, ensure macroeconomic stability and growth, and pursue social and political aims. To achieve these ends, governments have used various instruments to regulate, direct, increase, complement, and supplant the provision of financial services by privately owned financial intermediaries.[4] These interventions have sometimes been indirect, aimed at improving the policy environment (by promoting macroeconomic and financial sector stability, for example), in other cases they have been direct and have included actions such as establishing state-owned financial intermediaries and subsidizing interest rates.

Government-intervention instruments include financial accounting standards, prudential regulations, deposit insurance, loan guarantees, interest floors or ceilings on loans and deposits, interest subsidies, fiscally motivated preemption of funding (for example, through unremunerative reserve asset requirements or liquidity ratios), and supervisory mechanisms (contracted or implemented directly by governments). Governments have also intervened in financial markets by acting as lenders of last resort to maintain the liquidity of the system; prohibiting loans to particular groups (for example, shareholders or insiders); restricting entry and exit of banks from particular sectors; directing concessional loans to given sectors; directing loans to particular clients; establishing new government banks; and nationalizing, expropriating, or prohibiting privately owned banks.[5]

It is widely accepted that without indirect interventions there would be widespread failures in financial markets. However, the case for direct interventions is more controversial and is at the core of the difference between the traditional approach that dominated economic thought on rural finance until the 1980s and the new perspectives on rural finance that have emerged since 1980 (see chapter 3).

The Traditional Perspective on Rural Finance

The traditional perspective on rural finance envisages a government active in rural financial

markets and leans heavily toward direct interventions. It dates from the 1950s, when Keynesian economic thinking was inspiring successful interventions at the macroeconomic level. Over the next thirty years policymakers identified a host of problems in rural financial markets, which they tried to resolve by targeting, providing subsidies, and applying government controls. They hoped that these measures would stimulate growth and reduce rural poverty. The (perceived) problems included:

Lack of Credit in Rural Areas

Private banks avoided lending in rural areas because they viewed the sector as risky and unprofitable. They particularly avoided long-term loans with grace periods, which are important for certain agricultural investments (see box 2.1). As a result, governments established RFIs, notably specialized agricultural credit institutions, to provide credit to farmers. Some countries (India in 1969 and 1980, and Mexico in 1982) nationalized commercial banks to increase lending to agriculture. Other countries (Morocco and Thailand) mandated that commercial banks allocate a specified portion of their portfolio to agriculture or to government-owned specialized agricultural credit institutions for on-lending to agriculture.

Lack of Modern Technology in Agriculture

Rapid growth in agricultural productivity was essential to keep pace with rapid population growth. Policymakers believed that the best way to increase agricultural productivity was to encourage the use of modern pesticides, fertilizers, and farm equipment.[6] Because farmers were viewed as risk-averse and cash-

Box 2.1 Merits of long-term finance

Does lack of long-term finance prevent firms in developing countries from investing in potentially profitable growth opportunities? The answer appears to be yes. An empirical study investigated the question of using firm-level data on thirty industrial and developing countries for the 1980–91 period. The evidence shows that use of long-term credit by firms is important in facilitating their growth. Interestingly, the study finds no evidence that government subsidies to firms are associated with the ability of firms to grow faster. To the contrary, the evidence indicates that although the ability of firms to enter into long-term debt contracts is associated with greater numbers of firms growing at higher than predicted rates, the result is reversed when governments subsidize credit.

A firm's external financing needs depend on the magnitude of its internal cash flows relative to its investment opportunities. Both the firm's cash flows and its optimal investment level are endogenous. The ratio of cash flows to optimal investment may differ systematically across countries, even for similar firms employing the same technology. Thus, for example, a firm with capital-intensive technology may need to finance large investment expenditures in order to grow. If the firm has sufficient market power or faces high demand, it may be able to generate sufficient cash flow internally to finance investment, whereas a similar firm in a more competitive economy may require external financing to grow at the same rate.

To control for this endogeneity, the authors of the study estimated for each firm in their sample a predicted growth rate that could be attained by relying on self-financing and short-term credit only. They show that the proportion of firms that grew at rates exceeding this predicted rate is related to the development of financial markets—both long-term debt and equity—and legal institutions in the economy. Thus the underdevelopment of financial markets and institutions prevents firms in developing countries from investing in potentially profitable growth opportunities. However, government subsidies to industry do not increase the proportion of firms growing at higher than predicted rates, and the positive effect of long-term debt is reversed to the extent that the debt is subsidized. Thus, although the study found evidence to support the premise that "availability of term finance affects firm growth" (an argument used to justify many directed-credit programs), it also found that government intervention in providing such finance has generally not been successful, possibly due to weaknesses in design and underlying institutional infrastructure.

Source: Demirgüç-Kunt and Maksimovic 1996.

constrained, interest rate subsidies were used to accelerate adoption of these technologies.

Pursuit of Industrial Growth at the Expense of Agriculture

Influenced by dualist theories of economic development and by the example of the wealthy industrial economies, policymakers in developing countries looked to industry rather than to agriculture as the vehicle for rapid growth.[7] Agriculture was often heavily taxed through price and budgetary mechanisms to subsidize industrial expansion. However, for equity reasons (and to ensure adequate food supplies for urban consumers) policymakers sought to compensate farmers for this heavy taxation by providing credit subsidies.

Prevalence of Usurious Moneylenders

Interest rates in the informal sector were considered to be unconscionably high (often more than 100 percent a year). It was argued that poor agricultural borrowers could not afford these rates of interest and should not have to pay them. Subsidized, government-directed lines of credit were introduced to drive usurious moneylenders out of business and reach farmers with loans at "reasonable" rates of interest.

Low Savings Capacity in Rural Areas

Rural communities were traditionally viewed as too poor and subject to too many shocks of nature to be able to save. Policymakers relied on budgetary funds and on external donors to provide loanable funds for government rural credit programs.

Political Pressure

Although immediate political pressure on governments tended to come primarily from urban populations, governments had to do something, or at least be seen to attempt to do something, to address the concerns of rural populations. Interest subsidies and debt forgiveness offered visible means of meeting this objective and placating rural voters. The benefits of the subsidies and loan write offs accrued primarily to wealthy and influential rural borrowers, but this was an acceptable outcome to many governments (Ladman and Tinnermeier 1984).

Assessing the Traditional Approach

Experience has varied across countries, but the results of the traditional approach have generally been poor or modest at best. This conclusion is based on an assessment of the traditional approach against three criteria: (a) the success of traditional strategies, such as targeting and subsidization, in addressing the perceived problems; (b) the cost-efficiency of traditional methodologies; and (c) the success of the traditional strategies and objectives in achieving the broader goals of income expansion and poverty reduction.

Success of Traditional Strategies in Addressing the Perceived Problems

It is difficult to assess the effects of targeted credit because of several methodological problems (see box 2.2). First, it is not clear how much liquidity a borrower might have had in the absence of a particular "directed" loan. That is, in the absence of the loan the borrower might have obtained the funds from other sources. This lack of clarity is a problem in assessing "additionality." Other methodological problems are examined in chapter 7.

Impact on access to credit. The additionality of directed credit programs for agriculture cannot be quantified, but in the short run the programs often result in increased investment and seasonal credit that benefit agriculture. However, the subsidies are often captured by the rich (see box 2.3). In addition, because of government budget constraints the potential number of borrowers decreases as the subsidy per borrower increases, limiting the potential impact on access to credit.

Box 2.2 Assessing the performance of agricultural credit projects

States, donors, and managers of rural financial institutions have used different methods to assess the performance of agricultural credit projects. The World Bank's Operations Evaluation Department (OED) provided several guidelines on such matters:

> When there are strong and well-substantiated doubts about the commitments or capability of the financial intermediary or government to implement a project, the World Bank should defer lending until doubts are dispelled. Going ahead with a project prematurely can lead to far greater problems than those caused by delaying it. (World Bank/OED 1989)

The OED has highlighted the need for a thorough assessment of institutional strengthening at the completion of projects, particularly of the financial impact of Bank operations on intermediary institutions and on farming. In a 1990 report the OED asserted that "as a working proposition, the OED approach is to require favorable outcomes on both of these counts in order for a credit project to be evaluated as satisfactory" (World Bank/OED 1990).

Attributing "production gains" to access to formal credit might be misleading unless inherent measurement difficulties are overcome. Frequently, production gains are attributed to formal credit in an exaggerated and unjustifiable manner. The financial performance of the participating intermediaries, however, has often been unambiguous:

> Traditional credit projects sought to provide credit to farmers in need of support. Criticisms that these projects failed to address systemic problems are substantiated, as are assertions about the poor performance and lack of financial viability of many credit institutions represented in the portfolio. Failure to raise collection rates was nearly universal. Some institutions, dependent on portfolio and government transfers that are no longer reliable, are at risk. Criticism of the banking side of traditional agricultural credit operations is mostly valid. (World Bank/OED 1996)

Source: Authors' findings.

Impact on agricultural production. The effect of traditional strategies on agricultural production has been hotly debated. The "Ohio School" (Adams, Graham, and Von Pischke 1984) believes that the methodological problems of evaluating the impact of credit render such an assessment futile because of the fungibility of money (see chapter 7). However, the World Bank's Operations Evaluation Department (OED) argues in a study on rural finance that the fungibility of farm finance does not invalidate attempts to relate credit to incremental physical output and that difficulties in measuring the impact of credit do not mean that credit has no impact (World Bank/OED 1993). The study notes that directed credit programs were associated with the adoption of modern technologies, such as greenhouses in Morocco and tube wells in northwest Bangladesh, and that these innovations were associated with production gains.

Box 2.3 Credit and income redistribution in Costa Rica

Subsidized agricultural credit has been extended in Costa Rica by four commercial banks, all government owned and all well positioned to reach the small farmer. By the mid-1970s the three smaller banks had more than 30 regional offices, and the largest bank (Banco Nacional) had more than 100. Two-thirds of these branches were rural offices that specialized in credit for small farmers.

Data for Banco Nacional, which accounted for 60 percent of agricultural credit disbursed in Costa Rico in 1974, showed that only 10 percent of the bank's agricultural loans that year accounted for 80 percent of the total agricultural credit extended by the bank. The distribution of the agricultural credit (and hence subsidies) disbursed by Banco Nacional was actually more skewed than the distribution of income and land. Low-interest rates on the loans implied subsidies equivalent to 4 percent of gross domestic product and almost 20 percent of value added in agriculture. This suggests an average credit subsidy of $10,000 on each of the big loans that accounted for 80 percent of Banco Nacional's credit. In 1974 a family with an income of $10,500 was in the top 10 percent of income distribution.

Source: Adapted from World Bank 1989.

In India state-owned RFIs were associated with significantly deeper rural financial markets and with measurable production gains. These gains were, however, achieved at tremendous cost in efficiency (see box 2.4). The cost of forgone intermediation by private rural financial intermediaries that result from distortions in the state-owned rural finance system cannot readily be estimated, even in the most solid empirical work.

Impact of misdirected credit. There is evidence that governments have often directed credit to the wrong products. In some formerly planned economies credit was distributed as a matter of policy to the weakest performers to sustain their operations. In other cases distorted policy environments made some crops profitable for farmers, even when countries lacked a comparative advantage in those products. Under these circumstances increasing the supply of credit is harmful to the economy, and production gains may be a misleading measure of development impact. Box 2.5 presents an extreme example of how production gain could result in net economic loss.

Impact on production technologies. Traditional credit was often provided as part of a package of services, including agricultural extension, inputs (fertilizers, pesticides, and high-yielding plant varieties), and farm equipment (irrigation pumps, tractors, and combines). Formal credit often accelerated the adoption of modern technologies when large investments were involved. However, adopting modern technologies, such as improved seeds, fertilizers, and pesticides, requires capital in amounts that are often available and affordable to farmers even without access to concessional, directed credit schemes.

These interventions might have achieved considerably more had attention been paid to designing mechanisms to encourage sound investments. The below-market interest rates and leniency on loan collections that still char-

Box 2.4 Impact of formal finance on the rural economy of India

A recent study of rural finance in India analyzes data for the agricultural years 1972–73 to 1980–81 for eighty-five rural districts (Binswanger and Khandker 1995). The study found that the Indian government pursued a policy of rapid, forced expansion of commercial banks into rural areas. This expansion resulted in a rapid increase of nonagricultural rural employment and a modest increase in the rural wage rate. By inference the study concludes that the policy must have significantly increased the growth of the nonagricultural rural sector. These findings suggest that the expansion of commercial banks into rural areas eliminated severe constraints in rural financial markets and led to significant rural financial deepening.

The Indian government also pursued a policy of directing commercial banks and the cooperative credit institutions to lend specifically for agriculture. The study found that the expansion of rural and agricultural credit volumes had a small positive impact on aggregate crop output. This small increase is accounted for by a large increase in fertilizer use and by increased investments in animals and irrigation pumpsets. At the same time agricultural employment declined. This implies that the policy of forced lending to agriculture had more impact on the substitution of capital for labor than on agricultural output, a clearly counterproductive outcome when the abundance of labor in India is considered.

The modest increase in agricultural output is compared in the study with the costs to the government of the directed and modestly subsidized credit to agriculture. The government costs include rough estimates of the transaction costs, interest subsidy, and loan losses in the system. Assuming a default rate of 10 percent, the findings suggest that the value of the extra agricultural output triggered by the targeted credit almost covered the government's cost of providing it. Of course, farmers have additional costs in making their investments that are not included in the government's costs.

These findings indicate that deepening the system of rural financial intermediation in India had high payoffs in rural growth, employment, and welfare, but that specifically targeting credit to agriculture was of doubtful benefit.

Source: Binswanger and Khandker 1995.

Box 2.5 Impact of wheat subsidies in Saudi Arabia

Until the early 1980s Saudi Arabia imported most of the wheat that it consumed. In 1981 it produced 187,000 tons. The Saudi government then began to encourage wheat production by guaranteeing farmers artificially high prices, free land, and low-interest loans for machinery, fertilizer, and seed. Less than a decade later, production had increased fifteen fold to 3 million metric tons per year, two-thirds of which was exported. Domestically produced wheat cost about US$1,000 per ton when wheat could be imported for about US$80 per ton. Agriculture consumed more than 80 percent of the kingdom's water, mostly from aquifers that are not naturally replenished and may soon be exhausted (in twenty years or sooner, according to some experts).

Source: Excerpted from Yarbrough and Yarbrough 1991.

acterize most traditional credit programs increase incentives for substitution of formal loans for other resources, or even outright diversion of credit to nontargeted, nonproductive uses. Some critics of the traditional approach note that subsidized agricultural credit has often resulted in the adoption of excessively capital-intensive technologies. The classic example is concessional lending for farm mechanization in Pakistan, where tractors displaced agricultural laborers and deepened poverty in rural areas (Khan 1977). It is now widely accepted that if the goal is to reduce poverty, and the principal asset of the poor is labor, then a subsidy on capital through below-market interest rates is counterproductive.

Impact of urban-biased industrial growth practices. Credit subsidies clearly provided some compensation to rural producers who were powerful or lucky enough to gain access to them. However, total compensation from input subsidies amounted to only a fraction of the value of losses in agriculture that occurred because of policy distortions (Schiff and Valdés 1992). Compensation in the form of subsidies through the credit system reached only a small proportion (usually much less than 30 percent) of all the rural producers affected by discriminatory urban-biased policies. In Mexico, notwithstanding a network of more than 500 agricultural bank branches and billions of U.S. dollars in directed credit programs through both a state agricultural development bank and nationalized commercial banks, a recent Bank study found that formal credit reached only 8 percent of rural enterprises, and direct government loans reached less than 1 percent of rural enterprises (Chaves and Sanchez 1995).

Impact on activities of usurious moneylenders. In many countries directed credit programs have largely failed to displace moneylenders. The share of informal finance remains large or even dominant, and interest rates remain high despite below-market rates on formal loans (Ramola and Majahan 1996).[8] In India, however, evidence from credit surveys suggests that the share of formal finance grew from about 33 percent in the 1950s to 55 percent in the 1980s as a result of state efforts to curtail the operation of moneylenders. Nonetheless, despite the decline in the share of informal rural lending, the absolute volume of such lending rose over the same period. The prevailing high interest rates charged by moneylenders, despite the expansion of formal (often concessional) credit, can be explained at least partly by the adverse selection of clients: the more creditworthy clients opted to borrow from the formal sector.

Impact of political objectives. Stiff political resistance in many countries (Bangladesh, Tunisia, the United States) to the removal of agricultural credit subsidies suggests that credit subsidies have achieved their explicit and implicit political objectives. However, the subsidies are part of an overall urban-biased strategy that has, even if unintentionally, depressed rural incomes and accelerated rural-urban migration.

Cost-Efficiency of Traditional Methodologies

The financial performance of virtually all government-owned RFIs has usually been ex-

tremely poor. Most RFIs have remained highly subsidy-dependent. In India arrears as a proportion of amounts due and overdue hover at around 50 percent in most states. The recovery rate of Mexico's BANRURAL was around 25 percent in the late 1980s (ignoring recoveries from the loss-making national agricultural insurance company). Recoveries for the Smallholder Agricultural Credit Agency in Malawi plummeted from almost 90 percent to less than 20 percent during the most recent elections; the agency was subsequently declared insolvent. Inflation eroded the real value of the equity of government-owned RFIs throughout Latin America during the 1980s because of poor loan collection and agricultural on-lending rates that failed to keep pace with inflation.

The economic cost of this dismal performance has been enormous and has often put macroeconomic stability at risk. For example, agricultural credit subsidies totaled 2.2 percent of Brazil's GDP in 1980, and 1.7 percent of Mexico's GDP in 1986 (see box 2.6). In several cases, the subsidies could not even be measured because of poor accounting practices. Many governments do not know the full fiscal and quasi-fiscal cost of maintaining directed, cheap rural credit programs, let alone the associated opportunity costs.[9]

The reason for the poor performance is evident: the interventions invariably have been, and generally still are, characterized by a lack of managerial autonomy for the RFIs and by poor operating procedures.

Lack of managerial autonomy. Lack of managerial autonomy enables politicians to respond to populist political objectives rather than sound management principles. For example, favored clients obtain special treatment, and promises of debt forgiveness are made during elections. Such practices have led to the collapse of RFIs during election years in Jamaica (1980), Malawi (1994), and elsewhere.

Poor operating procedures. The consequences of poor operating procedures, such as lack of incentives for the clients and staff of RFIs, below-market interest rates, and poor information systems, include:

- Insufficient interest rate spreads to cover RFIs' overall costs, including provisions for doubtful loans.
- Negative real on-lending rates (or below-market rates) that oblige RFIs to pay below-market returns on savings, resulting in the decapitalization of RFIs. Subsidies inherent in below-market rates encourage rent seeking by borrowers and RFI staff.
- Obligatory lower on-lending rates for poorer clients—who actually demand access to credit, not subsidized loans—that have reduced lending to the poor and made it less rewarding for lenders.
- Support for state-owned cooperatives with compulsory membership, that ignores the merits of voluntary association based on self-selection principles and discourages financial discipline.

Box 2.6 Fiscal burden of rural finance in Mexico

The Mexican government transferred almost US$23 billion (measured in constant 1992 U.S. dollars) to its agricultural finance institutions over the period 1983–92 (World Bank 1994c). Most of these transfers consisted of budgetary support from the Ministry of Finance and below-market rate rediscounts from the Central Bank to the government's two agricultural development banks (FIRA and BANRURAL). About US$3.8 billion (17 percent) went to the loss-making agricultural insurance companies owned by the government (ANAGSA and AGROASEMEX).

During the late 1980s the transfers became unsustainable. Macroeconomic stabilization and adjustment policies led to an almost 30 percent real decline in the federal budget between 1986 and 1992. In the process federal funds were reallocated away from RFIs, causing fiscal and quasi-fiscal transfers for rural finance to fall from the equivalent of 4 percent of the budget to less than 1 percent. Relative to agricultural and total GDP, these transfers declined from a peak of 18 percent of agricultural GDP (1.7 percent of total GDP) in 1986 to 2.7 percent of agricultural GDP (0.2 percent of total GDP) by 1992.

Source: World Bank 1994c.

- Tolerance for financial indiscipline in managing RFIs and for high loan losses over many years.

To sum up, the poor design of traditional in- terventions has seriously compromised the efficiency of the interventions themselves and hindered the promotion of rural financial markets.

Success of the Traditional Approach in Expanding Income and Reducing Poverty

Critics of the traditional approach have often suggested that policymakers focused on production objectives rather than on financial sector objectives and that this imbalance should be redressed (Adams, Graham, and Von Pischke 1984; González-Vega 1984; World Bank 1993). This dichotomy between financial and real sector objectives is more apparent than actual since improving the financial sector ensures that resources are allocated optimally to achieve the greatest possible gains in real income and poverty reduction.

The true dichotomy is between a narrower, short-term approach that focuses on immediate *agricultural production* gains and a broader, long-term approach that focuses on large and sustained expansion in *rural incomes*.[10] Directed credit may achieve the former, but efficient rural financial markets are essential for the latter. A key criticism of the traditional approach is that by neglecting financial sector imperatives, it placed insufficient emphasis on longer-term rural development objectives.

Traditional focus on *disbursing agricultural credit* had three misplaced emphases:

1. *Disbursement.* In focusing on disbursement, the traditional approach has emphasized quantity of lending over quality. However, treating banking institutions more as disbursement windows rather than demand-driven, full-service institutions has resulted in loan portfolios plagued by defaults and high arrears. This approach has reduced financial deepening and constrained long-term economic growth (Levine 1994).[11] Only by emphasizing the quality of lending can

Box 2.7 Focus of the intervention: rural versus agricultural development

Best practice in rural financial markets indicates that efforts should be aimed at increasing access to financial services in rural areas at large. This objective diverges from widely observed policies directed at providing credit to agriculture itself. These policies may have promoted an unbalanced overall development. The idea behind rural—as opposed to agricultural—development is that development should occur on a regional or location basis and not on a sector or activity basis. There is nothing magical about agriculture itself. The assumption seems to have been that the majority of people who live in rural areas work in agriculture and that this activity thus generates most of rural income. Even if these assumptions were true, the implied strategies may be counterproductive because they could cause an unbalanced development of the rural sector while promoting underdiversification of rural households' sources of income.

In any event, because of recent interest in understanding the entire rural economy, evidence has been found that agriculture may not be as important in rural areas as traditionally thought. For example, a recent World Bank study in Mexico showed that in the rural area surveyed only 37 percent of self-employed people were devoted exclusively to agriculture and directly related activities (Chaves and Sanchez 1995). The majority of rural entrepreneurs (55.6 percent) were dedicated to other nonagricultural activities, and the remaining 7.5 percent of the self-employed combined agriculture activities with other nonagricultural businesses. The survey also found that agriculture was not the main source of rural cash income, generating only 32 percent of the aggregate nonwage income of rural entrepreneurs.

Targeting credit to agriculture may not even be possible because of the fungibility of credit. Attempts to prevent borrowers from diverting credit resources to other activities will most likely be futile and will impose unnecessary costs on borrowers (avoidance costs, for example) and to lenders (supervision costs). In brief, the policy is unsound and may not be implemented at a reasonable cost.

Source: Chaves and Sanchez 1995.

the quantity of lending be expanded in a rapid, efficient, and sustainable manner.

2. *Agriculture.* In focusing on agriculture, the traditional approach has neglected significant opportunities for growth and risk diversification (both for RFIs and for rural clients) in *nonfarm rural enterprises* (see box 2.7 and chapter 4).
3. *Credit.* In focusing on credit, the traditional approach has ignored *savings mobilization,* the "forgotten half of rural finance" (Vogel 1984). All three successful RFIs analyzed in chapter 9 mobilized large amounts of savings, and there is little doubt now that the rural poor can save. RFIs that have a high share of savings relative to government borrowings in their total liabilities are likely to be more careful and efficient in their allocation of loans (Cuevas and Graham 1984).

Conclusion

Even though the traditional approach was not entirely without benefits, particularly at the farm level, it had serious shortcomings. Essentially, the goals of rural income expansion and poverty reduction were not met, and in some cases interventions may have exacerbated the problems of rural areas and worsened the plight of rural communities.

New perspectives on rural finance have emerged from recent developments in economic theory and from the analysis of current best practices in rural financial intermediation. These new perspectives are examined in part two.

PART TWO

Policies for Improving Rural Financial Intermediation

The new perspective on rural finance that emerged during the 1980s has enabled the formulation of broad guidelines on rural financial interventions. These guidelines are by no means conclusive; many aspects require further testing and research.

The overriding goals of the new approach—income expansion and poverty reduction—do not deviate from those of the traditional approach. But important differences can be found in the objectives, strategies, and methodologies applied to attain these goals. The new approach proposes a more limited, market-friendly role for government, with the focus on optimizing the efficiency of markets. A summary of the differences and commonalities of the old and the new approaches appears in table 3.1.

Chapter 3 provides a systematic approach to assessing the role of government in pursuing the goals of income expansion and poverty reduction. The approach is illustrated by two decision trees (one for each goal). Chapters 4 and 5 develop the government's role in creating a favorable policy environment through indirect interventions, and chapter 6 proposes forms of direct interventions aimed at promoting improved rural financial intermediation.

CHAPTER 3

New Perspectives on Rural Finance

This chapter identifies some of the basic empirical analyses and policy decisions needed to develop rural financial markets with the primary goals of (a) increasing growth by expanding rural incomes and (b) reducing rural poverty. The policies recommended to attain each of these goals are similar. The key differences are in the approach to direct government intervention. This chapter first considers the approach required to achieve income expansion; it then recommends policies for reducing poverty.

Policy Goal I: Expand Rural Income

To expand rural incomes, it is essential to ensure that markets are efficient and complete (figure 3.1). This report focuses on ways of promoting deep and efficient rural financial markets. Governments can of course play an important role in promoting nonfinancial markets (for inputs, goods, and services), but an analysis of policy options in those markets is beyond the scope of this volume.

If markets are found to be inefficient, measures may be required to create a more favorable policy environment, to improve the legal and regulatory framework that supports the markets, or to address identified market failures in a cost-effective manner. This chapter considers the importance of efficient and complete markets, identifies typical sources of inefficiency, and proposes measures that can be taken to improve the operation of markets.

Importance of Efficient and Complete Markets

Besley (1994) defines a market as efficient "when it is not possible to make someone better off without making someone else worse off." Thus, in efficient markets participants undertake all possible exchanges that yield a positive net economic benefit at the margin until there is no scope for further improvement.[12] Perfectly efficient markets require participants to be fully informed and to fully account for all the costs and benefits of their actions in maximizing their returns.

The growth rate of an economy is highly dependent on the competitiveness and efficiency of its markets. For example, average growth rates are typically 1 to 2 percentage points higher for economies with relatively undistorted foreign exchange markets than for economies with high exchange rate premiums (World Bank 1991). Economies with deep financial markets are likely to achieve significantly higher long-term growth rates than economies with limited financial intermediation (figure 3.2).[13] This association suggests that *the first objective of any program that aims to expand rural incomes must be to enhance the efficiency and completeness of markets.* This objective can be achieved through improved risk diversification and resource allocation, thus facilitating the integration of the rural economy with the rest of the economy.

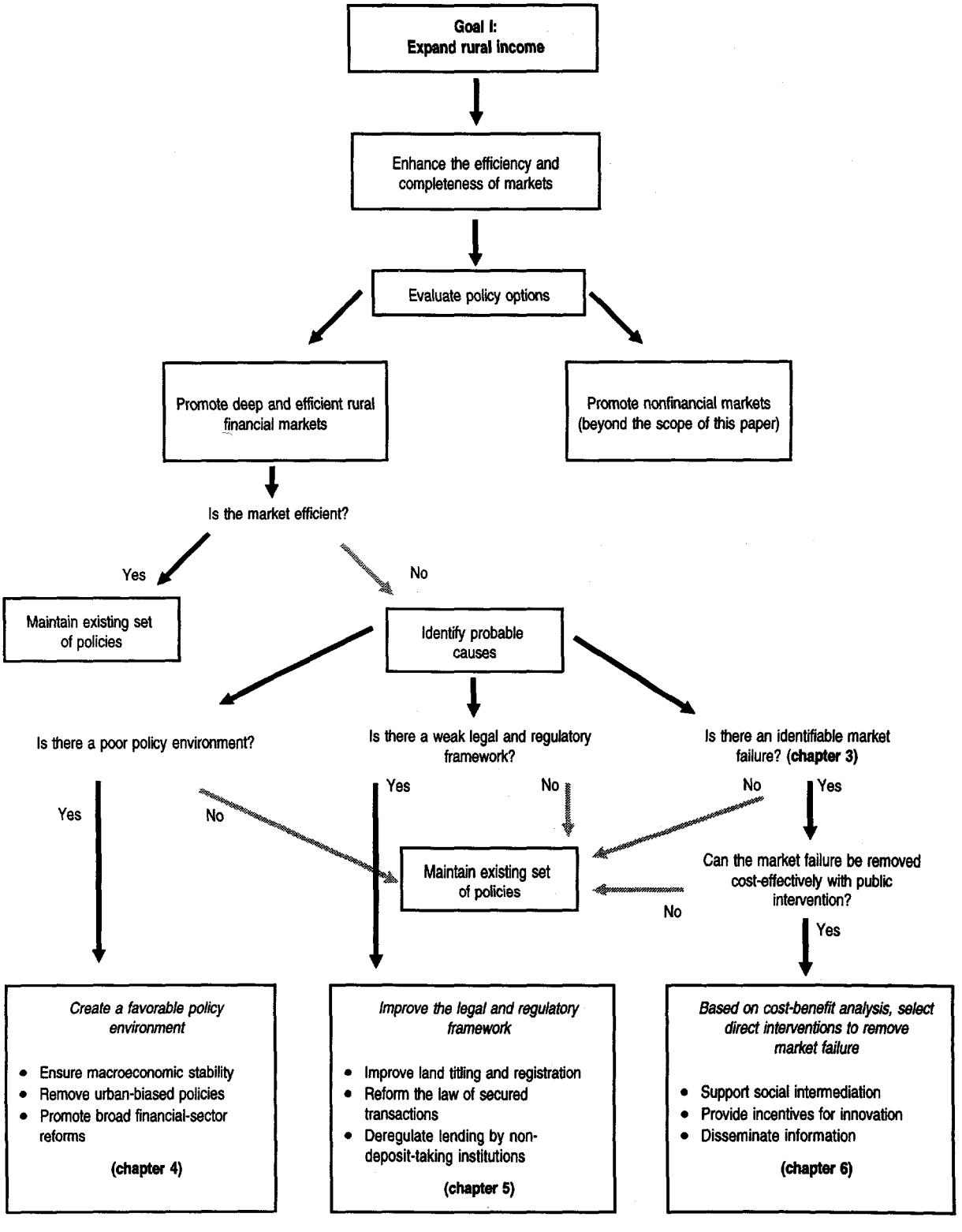
Table 3.1 Characteristics of old and new approaches to rural finance

Old	*New*
Primary goals	
• Growth and income expansion (frequently pursued by introducing modern technologies with concessional credit).	• Growth and income expansion.
• Poverty reduction.	• Poverty reduction.
Working assumptions	
• Accelerated economic development requires controlled commodity and financial markets (such as control of food prices and interest rates).	• Accelerated economic development requires enhanced competition in goods and financial markets (through flexible prices, for example).
• Small farmers and rural entrepreneurs cannot pay commercial interest rates.	• Small farmers and rural entrepreneurs can pay commercial, market rates of interest.
• Small farmers and rural entrepreneurs cannot save.	• Small farmers and rural entrepreneurs can and want to save.
• Access to *concessional credit* is essential to growth and poverty reduction.	• Access to nonsubsidized *financial services* is essential to growth and poverty reduction.
Role of government	
• To directly intervene in and control the agricultural sector and agricultural credit.	• To create a favorable policy environment, while minimizing direct intervention in and control of the agricultural sector and agricultural credit.
Mechanisms of government intervention	
Policy environment	*Policy environment*
Rely on the eight pillars of urban-biased policies:	*Introduce and maintain a policy environment to promote rural financial markets:*
• Maintain an overvalued exchange rate to ensure a cheap supply of agricultural produce.	• Support macroeconomic stability through market-determined exchange rates.
• Control prices of agricultural products.	• Maintain a level playing field among economic subsectors (including the agricultural and rural sectors) and enhance competition.
• Levy excessive taxes on agricultural exports.	• Deregulate the financial sector and support a competitive environment.
• Protect domestic industries whose outputs are used as agricultural inputs.	• Introduce legal, regulatory, and enforcement mechanisms that address the specific requirements of the rural population.
• Enforce usury laws that (despite their good intentions) hamper the provision of financial services to the rural poor.	• Eliminate urban-biased policies that discourage rural development and impede the development of rural financial markets.
• Enforce laws and regulations that do not take into account the unique features and requirements of the rural economy.	
Direct rural financial interventions	*Direct rural financial interventions*
• Introduce a legal ceiling on deposit and on-lending interest rates.	• Remove ceilings on deposit and on-lending interest rates; encourage market-determined rates.
• Establish state-owned rural financial institutions, primarily specialized agricultural credit institutions (SACIs): formal financial services to rural communities are mostly provided by these institutions.	• Provide financial services through various RFIs (and not exclusively through SACIs).
• Provide financial services primarily to the agricultural sector, thereby discriminating against rural nonagricultural entrepreneurs.	• Provide financial services to all rural entrepreneurs (not only to agriculture-related activities).
• Focus on providing (agricultural) credit; savings in monetary instruments is discouraged in rural areas.	• Encourage domestic savings mobilization by providing savings facilities with positive interest rates.

Old	*New*
• Provide special benefits and concessional funds to state-owned RFIs; subsidize on-lending interest rates to RFI clientele to compensate for urban-biased policies. • Cover loan losses of RFIs and frequently bailout loss-making institutions. • Support poorly administered crop insurance and credit guarantee schemes.	• Revitalize and restructure SACIs and other RFIs to encourage sound management principles; transform SACIs to RFIs to serve a broader rural clientele. • Privatize RFIs (or segments of their operations) where appropriate and shut down inefficient and unsalvageable RFIs. • Support early innovators; provide seed capital and auction subsidies to new (pilot) or existing credit unions, NGOs, and other RFIs that meet strict eligibility criteria and are capable of providing efficient rural financial services; partially cover start-up costs (the "infant industry" approach). • Support institution building; assist in staff training, development of management information systems, research, and dissemination of information about successful institutions or practices in specific socioeconomic and cultural settings. • Extend limited subsidies to RFIs to compensate for distorted policies (now being removed); cap and gradually phase out subsidies. • Introduce adequately priced and well administered crop insurance and review effectiveness of credit-guarantee schemes.
Policy variables and outcomes	
• Underinvestment in rural public infrastructure (for example, roads and water supply) and in rural human resources (for example, education and health) is acceptable.	• Improved rural infrastructure and educational and health facilities are necessary.
• Subsidized interest rates are used primarily as a compensatory mechanism rather than an allocative one.	• Positive real interest rates serve as an allocative mechanism.
• Subsidies mostly benefit the agricultural sector, and mainly well-to-do, influential farmers.	• Interest rates are sufficiently high to ensure sound spreads between lending and deposit rates.
• Nonagricultural rural entrepreneurs have limited access to financial services, causing rural development to slow down.	• All rural entrepreneurs have access to financial services.
• Insufficient provision of savings facilities and artificially low deposit interest rates (because of interest rate ceilings) result in limited savings mobilization.	• RFIs' dependence on borrowed funds from donors and governments is reduced as domestic savings mobilization becomes the main source of finance, improving financial self-sustainability.
• RFIs depend on rediscounting facilities and donor and budget funds to back their (subsidized) loan portfolios.	• RFIs enjoy autonomy in introducing efficient operating methods.
• SACIs and other RFIs do not enjoy autonomy; most operational decisions (such as on-lending interest rates, cost of borrowed funds and staff policies) are dictated.	• No special privileges are extended to state-owned RFIs; a level playing field is maintained and competition among RFIs is encouraged; access to subsidies (when warranted) is not contingent on an RFI's ownership.
• Special privileges are often extended to SACIs, resulting in dependence on concessional funds, lack of competition, and no incentives to improve performance; SACIs are often perceived as disbursement windows.	• Institution building and financial discipline is encouraged through management's accountability for RFI performance; poor loan collection is not tolerated.
• No commercial imperatives exist for (state-owned) RFIs; management is not accountable for RFI performance; financial indiscipline and poor loan collection prevail. • Lack of staff incentives result in poor performance by unmotivated staff.	• Improved performance and productivity by RFI staff is encouraged; staff is motivated by advanced performance incentive systems.
• RFI performance is evaluated in terms of traditional financial profitability ratios (return on equity and assets), ignoring the cost of subsidies; the real cost to society of maintaining an RFI is not known.	• RFI performance is evaluated in terms of *outreach* to its target clientele and financial self-sustainability (as measured by the subsidy dependence index): these criteria make it possible to assess the real impact and cost of an RFI.

Source: Authors' findings.

Figure 3.1 Decision tree for expanding rural income



Source: Authors' findings.

Efficiency of Rural Financial Markets

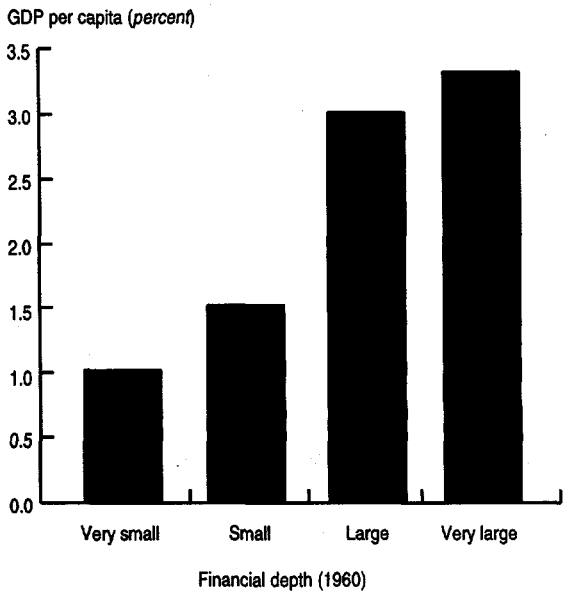
Rural financial markets are efficient if they enable participants to take advantage of all opportunities for exchange that yield positive net economic benefits. Thus credit markets are efficient when loans cannot be reallocated to make anyone better off without making someone else worse off, and a borrower would therefore have no incentive to resell a loan to another borrower and in so doing become a lender (Besley 1994). Efficiency requires that markets be competitive, that participants be fully informed, and that there be a full set of markets (for example, no externalities). When these requirements are violated, as is generally the case, rural financial markets are likely to be inefficient. Because markets are highly integrated, inefficiencies in rural markets may also stem from (or be exacerbated by) inefficiencies in other markets.

Assessing the efficiency of rural markets. The efficiency and level of development of rural financial markets can be assessed on the basis of criteria such as:

- Are rural clients able to insure themselves against variations in their individual incomes? Can they easily defer consumption (save) or advance it (borrow) and so smooth consumption as their individual incomes vary?[14]
- Are financial markets highly segmented? Are rural financial institutions (RFIs) readily able to address problems of liquidity surpluses or shortfalls through financial transactions with other RFIs?
- What are the differences in spread and on-lending rates for loans to similar clients from similar types of RFIs in a given area?
- Do spreads reflect the real economic costs (including credit risk) of engaging in financial intermediation, or merely rent seeking or market power?
- Can financial products not currently provided but demanded by rural clients be profitably provided by RFIs?

Because money is fungible and efficient rural financial markets will channel loanable funds to the most productive potential uses, the focus of these questions is on the efficiency with which funds flow through rural financial markets and not on the application of funds. Economic studies, such as Udry (1990) and Rashid and Townsend (1994) can be used to check for the symptoms of inefficiency suggested by these questions.

Figure 3.2 Financial depth in 1960 and GDP growth per capita from 1960 to 1989



Source: Levine 1994.

Market research and the evaluation of previous or current interventions in rural financial markets can also be useful in identifying the factors that contribute to the efficiency or inefficiency of rural financial markets. Assessing the circumstances under which interventions have been welfare-enhancing could highlight the inefficiency addressed by the intervention. Some of this work is currently being spearheaded by the World Bank through its efforts in microfinance and banking with the poor. The two main initiatives are a comprehensive World Bank study on sustainable banking with the poor, and the establishment of the Consultative Group to Assist the Poor by the World Bank and other donors (boxes 3.1 and 3.2).

Box 3.1 Consultative Group to Assist the Poorest

The Consultative Group to Assist the Poorest—A Micro-Finance Program (CGAP) is the product of an agreement reached by donor agencies at the 1993 Conference on Hunger. CGAP was launched in June 1995 by nine donor agencies; its membership has since increased to nineteen. Its objectives are to strengthen donor coordination in microfinance, disseminate microfinance "best practices" to policymakers and practitioners, improve and increase World Bank activity in this area, and support innovative microfinance institutions through a grant facility. The ultimate goal is to expand access to financial services for the poor.

The CGAP secretariat administers a core fund, supported by a World Bank contribution of US$30 million, from which it disburses grants to microfinance institutions that meet eligibility criteria. A policy advisory group of practitioners from leading microfinance institutions around the world advises the donor group and the secretariat on strategies for providing support to the poor. The current chairperson is Muhammad Yunus, managing director of the Grameen Bank.

CGAP issues a note series called *Focus*, and a biannual newsletter on key policy and technical issues in microfinance. CGAP plans to conduct policy-level workshops on a regional and national level on best practices in microfinance. The notes, newsletter, and other announcements are posted on the CGAP home page on the World Wide Web:
www.worldbank.org/html/cgap/cgap.htm/

Source: Mohini Malhotra, CGAP.

Assessing inefficiencies in rural markets. Efficient rural financial markets are rare. Rashid and Townsend (1994) found evidence in Indian villages of individual consumption variations associated with idiosyncratic shocks to incomes. These consumption variations were exacerbated by the absence of credit and insurance markets. Rural areas are also affected by highly covariant risks of crop yields, prices, and incomes. The covariance makes it more difficult to insure against crop risks locally, and the problem of intertemporal risk diffusion is likely to be severe for farm households. Missing markets for risk sharing at the national level in the Gambia are evidenced by the significant weight loss of Gambian farmers during the "hungry season" (World Bank 1990). Hettige and Steel (1996) found evidence of significant financial market fragmentation in Africa.

Binswanger and Rosenzweig (1993) found that covariant shocks to income are reflected in reductions in food consumption in poor households. Even when households use the available risk-diffusion mechanisms (extended family networks, remittances from migrants, diversified production, and reliance on equity rather than debt for investments), they are unable to smooth their consumption of food. Poor households alter their investment behavior to reduce their income risks by choosing investments that have relatively low risks and low returns. Large farmers are sufficiently well insured through their assets, social networks, and access to financial markets to avoid such sacrifices. Their agricultural investment portfolios are designed to maximize expected profits rather than to mitigate risk.

Money-lending is ubiquitous in rural financial markets and is often associated with extremely high interest rates. Although it has been argued that moneylenders may just be covering the costs of their operations (Bottomley 1963), it is likely that the information advantages they enjoy allow them to extract monopoly rents (Virmani 1982). The market imperfection results in loans that are priced above the marginal cost to the lender and in the provision of insufficient credit from an overall economic (as opposed to privately optimal) perspective.

Causes of Inefficiencies in Rural Markets

When evidence is found of inefficiencies in rural financial markets, the cause of the inefficiencies should be identified to enable the government to select the most appropriate policy to improve market efficiency. *The main causes of rural market inefficiencies are a poor policy environment, a restrictive legal and regulatory framework, or market failure.*

Box 3.2 Sustainable banking with the poor

The objective of the World Bank's study of sustainable banking with the poor is to improve the ability of donors, governments, and practitioners to design and implement policies and programs to strengthen the financial sector and build sustainable financial institutions that reach the poor. A systematic gathering of evidence is required to identify and understand the factors that determine successful financial intermediation with the poor. Although the main audience is Bank operational staff, the study will reach policymakers, managers of financial institutions, governmental and nongovernmental organizations involved in providing financial services to the poor, women, and other underserved groups.

The study program includes:

- More than two dozen field-based case studies of innovative rural financial institutions in Asia, Africa, and Latin America that have reduced the costs and risks of providing financial services to a large number of low-income clients.
- The preparation of a worldwide inventory of microfinance institutions. A draft report has identified about 750 programs or institutions with at least three years of operations and 1,000 clients. Thus far, about 10 percent have responded to survey questionnaires. Further updates of the study are planned when more questionnaires are received.
- A Sourcebook on sustainable banking with the poor, as the final product of the study. The sourcebook, which will be completed in 1997, will integrate the findings that emerge from the case studies and distill lessons for program design, implementation, and policy formulation. A "tool kit" section of the sourcebook will provide a decision tree presenting a step-by-step approach to the design of financial services projects.
- A monthly seminar series.
- Working papers and technical papers based on the case studies, which will precede the completion of the sourcebook.

Source: Bennett, Cuevas, and Yaron 1996.

Assessing the policy environment for rural financial intermediation. The first potential cause of inefficiencies in rural financial markets is an unfavorable policy environment. The main problems associated with inefficient rural financial markets, as well as recommendations and sequencing for implementing reforms, are discussed in chapter 4. The main measures required to establish a positive policy environment are:

- The introduction of macroeconomic stability and the reduction of macroeconomic distortions
- The removal of urban bias in pricing, trade policies, and budgetary allocations
- The promotion of competitive, integrated, transparent, and resilient financial markets.[1]

Assessing the legal and regulatory framework for rural finance. The second potential cause of inefficiencies in rural financial markets is an unsupportive legal and regulatory framework. An unsupportive framework can lead to problems with enforcing contracts; it can also limit the scope of financial services that various types of financial intermediaries can provide (see chapter 5). The main measures required to improve the legal and regulatory framework are:

- Improvement of land titling and registration
- Reform laws governing secured transactions
- Deregulation of lending by non-deposit-taking institutions.

In terms of sequencing, legal and regulatory reform is an area in which corrective measures can be undertaken immediately, even if policy measures have yet to be implemented to remove major distortions in the macroeconomy, the real goods sector, and the financial sector.

Assessing evidence of identifiable market failure. Although the policy environment and the legal and regulatory framework may be favorable, there may still be failures in rural financial markets. About financial markets Besley (1994) notes, "A market failure occurs when a competitive market fails to bring about an efficient allocation of credit."

Market failures arise in rural financial markets when RFIs are unable to internalize the full costs and benefits of establishing rural banking services.[15] In the presence of externalities and public goods, there are likely to be potential gains from trade that are not captured by private exchanges. Even if the government faces the same information constraints that the private sector faces, it can intervene in ways that increase welfare because it is able to internalize *social* costs and benefits (Greenwald and Stiglitz 1986). Because financial markets cannot operate efficiently without good information, and because there are significant externality and incentive problems associated with information (free riding, moral hazard, adverse selection), financial markets are by their nature likely to be characterized by market failures (see box 3.3).

Direct measurement of the existence and extent of market failure is difficult and uncommon.[16] Some studies have shown that consumption is volatile for given individuals or groups. But some volatility may be unavoidable, given the need to provide effective incentives to avoid moral hazard (see box 3.4). For example, measures aimed at smoothing consumption and production patterns might discourage farmers from maximizing their production. Often, uncovering the degree of market failure, and thus the scope for improving welfare, requires considerable research and piloting under a wide variety of circumstances.

A more manageable task is to document the existence of factors that economic theory suggests lead to market failures. These include barriers to trade in existing markets, including imperfect information, imperfect enforcement, and social barriers; externalities; and market power (see box 3.5). Where these factors pre-

Box 3.3 How information externalities can generate market failures

It is widely and wrongly believed that if a given activity were profitable, someone in the private sector would have done it already. As Besley (1994) notes, "An inefficiency might develop if individuals hang back waiting for others to try things out. The slow diffusion of certain agricultural technologies has often been attributed to a reluctance to be the first user. An obvious role for government intervention is to subsidize early innovators. Thus experiments in institutional design, such as the Grameen Bank in Bangladesh, might serve as prime candidates for subsidization. Such arguments appear only to justify subsidizing new ventures, however, and subsidies should be phased-out along the way."

Source: Besley 1994.

Box 3.4 Two obstacles to financial transactions: moral hazard and adverse selection

Moral hazard arises when one party to a contract (usually referred to as the principal) cannot observe the actions of the other party to the contract (usually referred to as the agent), and the agent's actions (or lack of action) affect the expected returns to both parties. For example, a borrower's effort may be largely unobservable to a lender; the lender cannot readily determine to what extent unfavorable outcomes of projects can be attributed to the borrower's lack of effort by the client, and to what extent to bad luck. A lender who could observe the borrower could relate the terms of the loan contract to the effort put in by the borrower. Because the borrower's effort is not observable at reasonable cost, the best the lender can do is to set the terms of the contract so that they are acceptable to the borrower and encourage behavior that the lender prefers. Doing so usually means putting more risk on the borrower (by being less willing to forgive loans when things go wrong) than the lender would do if provided with better information.

Adverse selection arises when clients' characteristics (rather than their actions) are unobservable. For example, an insurance company may not be able to tell risky clients from safe ones without incurring enormous costs. Risky clients have an incentive to pretend to be safe in order to pay lower premiums. Because the premiums that the company charges affect the mix of clients in ways that the company cannot readily observe (higher premiums drive out safe clients more rapidly than risky ones), the company cannot price risks optimally by tailoring contracts (premiums and deductibles) to the characteristics of its clients.

Source: Rees 1985a, 1985b.

Box 3.5 The problem of social barriers to trade

There are abundant examples of the effects of social barriers on trade. Akerlof (1984) developed a model to explain how caste barriers can persist as a result of sanctions against trade across castes, even though such trade would lead to gains. The caste barriers could be broken if a sufficient number of agents were to generate additional exchanges causing the net loss from violating the sanctions to be outweighed by the benefits of exchanges across castes. Violating the sanctions is however unprofitable for the initial few agents who do so.

Social barriers take many forms and are often reinforced by sanctions such as social ostracism and economic boycott. The most important barriers are based on differences in socioeconomic class, caste, ethnicity, and gender. Gender barriers are particularly difficult to overcome because they operate at the societal level and within the household. Other important impediments to trade include language, literacy, and numeracy barriers, which aggravate information barriers.

The lack of interaction across social groups adds to the information barriers that hinder effective intermediation, particularly for poor and female clients whose access to financial services is already severely constrained by limited acceptable collateral. Restricted access is sometimes the result of social barriers or legal and regulatory deficiencies. Chapter 5 surveys these problems and makes recommendations for improving restrictive laws and regulations.

vail, policy and intervention options derived from research and feasibility studies can be weighed in addressing them.

Assessing the problem of imperfect information. Imperfect information results in less than fully competitive markets because information has public good features: nonexcludability (the very act of a bank lending to a particular client gives other banks signals about the quality of that client) and nonrival consumption (if one depositor learns that a given bank is weak, another depositor can acquire the same information). Because of these features, the acquisition of information leads to externalities. When a particular institution bears the costs of acquiring information, the benefits accrue to that institution and to others. Because a single institution is not likely to internalize all of the benefits, investment in obtaining information is likely to be undersupplied. Acquiring information usually involves incurring fixed costs (for an RFI the cost of establishing a bank branch in a relatively sparsely populated rural area), which can lead to imperfectly competitive market structures (Stiglitz 1993).

The heterogeneity of production conditions and the spatial dispersion of producers result in severe information problems. It is often costly and difficult to determine whether farmers' crops failed because of factors beyond the farmers' control or because of negligence, lack of skills, or other inadequacies. Asymmetry of information between RFIs and clients creates severe moral hazard and adverse selection problems in crop insurance and credit transactions (see box 3.4).

Options for Addressing Market Failure

If an identifiable market failure exists, the government should consider interventions that would directly address the failure and conduct a cost-benefit analysis to determine (a) whether the market failure could be dealt with cost-effectively and if so (b) what the most cost-effective intervention would be. Interventions may include subsidizing the start-up costs of RFIs, or providing innovative financial services in rural areas, rediscounting loans provided by private RFIs to target clients, or establishing and operating state-owned RFIs to address the problem of missing markets.

The interventions should directly address the cause of the market failure. For example, the problem of imperfect information can be addressed by implementing mobile banking, initiating group lending, or providing financial incentives or technical assistance to RFIs opening branches in remote areas. These and other interventions will succeed only if governments are fully committed to developing rural financial markets. Options for direct interventions by governments are discussed in detail in chapter 6, and initiatives that can be taken by

RFIs to overcome market failures are discussed in chapters 8 and 9.

Assessing the effects of imperfect communication of information. Even when there is good local information about the actions or characteristics of certain people, that information may not be widely available outside the community. Limited access to information can lead to the segmentation of financial markets into "islands of information." Information about rural areas with few infrastructure links to the wider economy is especially likely to be limited. Under such circumstances local creditors with information better than that available to lenders outside the community can extract monopoly rents from their clients (Virmani 1982).

Assessing the viability of intervention. Market failure (and the resultant inefficiency) is not always amenable to correction. So it is useful to introduce the concept of *constrained efficiency.* That is, sometimes the source of the market failure is not changeable in an economically viable way, and consequently intervention cannot be justified economically. A cost-benefit analysis should therefore always be conducted when considering the correction of a market failure. Cost-benefit analyses of rural financial interventions should take into account their *opportunity costs.* Analyses should also take into account the probable *incentive effects* on private participants in the market to avoid crowding them out or creating spillover effects for them (such as weakened credit discipline resulting from poorly executed state interventions). Finally, potential interventions should be evaluated against the benefits and costs of general financial and nonfinancial interventions, such as public investment in rural infrastructure, education, and public works.

Government interventions are frequently subject to major, costly failures arising from incentive problems, poor governance, and other factors (see chapter 2). A poorly designed intervention usually does more harm than good and needs to be addressed urgently, but discontinuing the intervention cannot eliminate the market failure that triggered the intervention in the first place. The problem of how best to address the market failure remains.

While there is broad consensus that market failures are likely to arise in financial markets, what governments should do in addressing these failures remains an area of contention (see box 3.6).

When the primary goal of rural financial intermediation is *income expansion,* and there is no identifiable market failure (or no known cost-effective intervention to address an identified market failure), the government should maintain existing policies. The government

Box 3.6 Two perspectives on market failure: the argument for intervention

Stiglitz (1993) and Besley (1994) provide two perspectives on market failure and government intervention:

> There *is* a role for the state in financial markets; it is a role motivated by pervasive market failures. In developing countries, market failures are almost undoubtedly greater than in the more developed countries. While limitations on markets are greater in less developed countries than in developed countries, so too, many would argue, are limitations on government. We have argued that government policies can be designed which are attentive to those limitations. What is clear is that a simple ideological commitment to financial market liberalization cannot be derived ... from economic theory or be justified by an examination of a broad base of experience (Stiglitz 1993).
>
> In summary, there may be good arguments for intervention, and some may be based on market failure. But as one unpacks each argument, the realization grows that, given the current status of empirical evidence on many relevant questions, it is impossible to be categorical that an intervention in the credit markets is justified. Empirical work that can speak to these issues is the next challenge if the theoretical progress on the operation of rural credit markets is to be matched by progress in the policy sphere (Besley 1994).

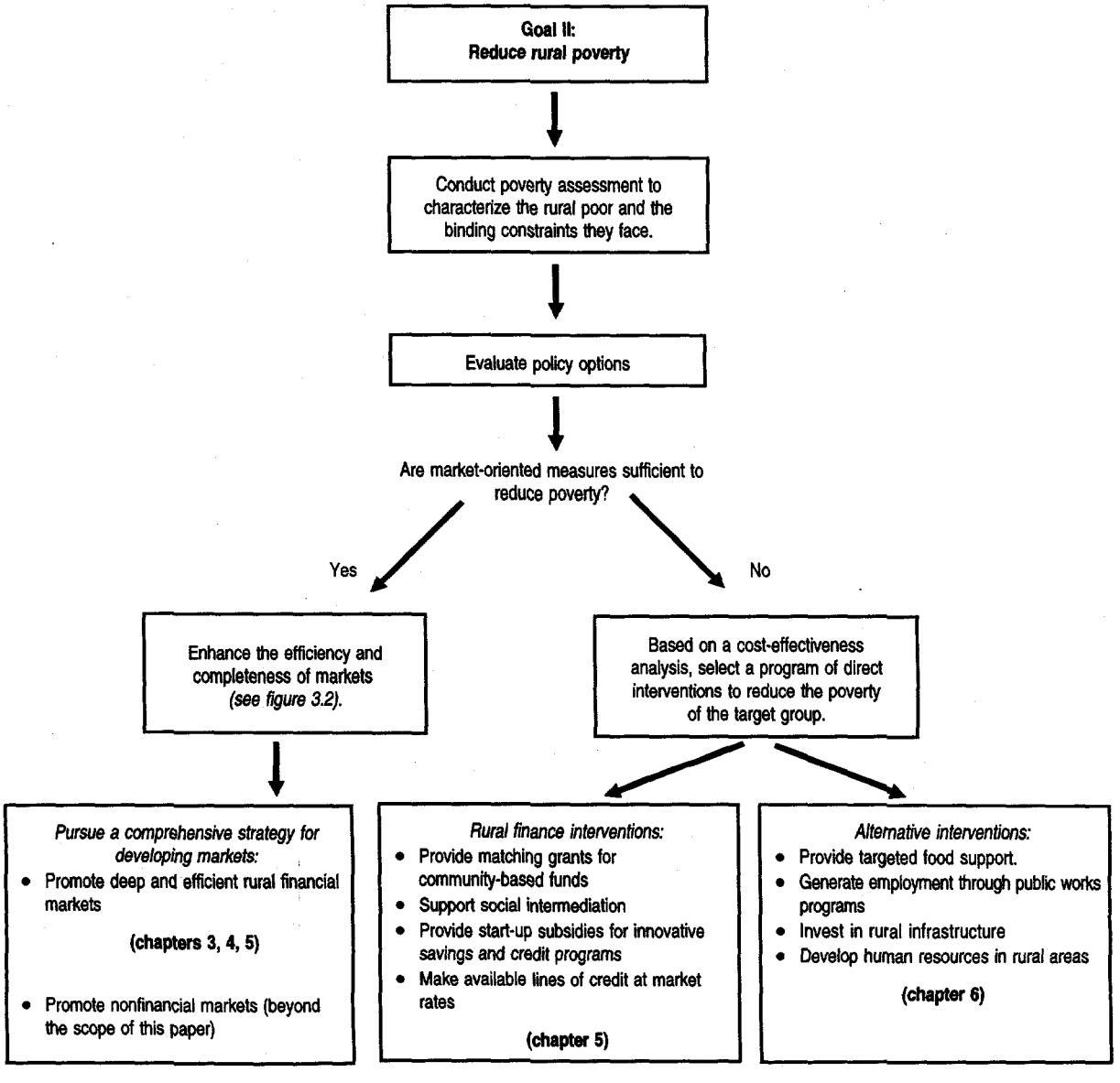
should not, however, necessarily do so when the overriding goal is *poverty reduction.*

Policy Goal II: Reduce Rural Poverty

The second overriding policy goal of most governments is to reduce poverty in rural areas (see figure 3.3). During the 1950s and 1960s the theory of economic dualism suggested that the way to eliminate poverty was to assimilate labor from the backward, rural subsistence sector into the modern, urban industrial sector. This trickle-down approach failed to reduce poverty substantially in rural areas. More recent approaches have placed greater emphasis on addressing poverty at its roots in rural areas. In general rapid growth in the rural economy is the most promising avenue for reducing poverty. Expanding rural incomes by promoting efficient and complete markets is essential to addressing the goal of poverty reduction.

Increasing average incomes in rural areas may not be sufficient to decrease poverty because the growth in incomes may not be shared

Figure 3.3 Decision tree for reducing poverty



by all. Consequently, poverty reduction may call for a special intervention *that is a program of targeted interventions may be justified, irrespective of whether (a) the policy environment is sound, (b) market failures can be identified, or (c) cost-effective interventions can be identified to address market failures.*

The potential benefits and costs of targeted interventions to reduce rural poverty should be evaluated in relation to an intervention's effect on the *target group*. Sometimes an intervention may produce a benefit for the target group but not result in a net economic benefit for the country as a whole because no cost- effective way of improving the efficiency of the market could be identified. However, measures that address inefficiency in rural financial markets will be particularly beneficial to those who have the least access to financial services, such as the rural poor. Income expansion and poverty reduction measures will frequently coincide.

Policy Options for Poverty Reduction

Governments, donors, and nongovernmental organizations can draw on several instruments to address poverty effectively in target groups. These instruments include rural financial interventions and nonfinancial public interventions, such as labor-intensive public works projects; means- tested food supplements; food subsidies; family planning; rural primary education and health care projects; rural roads, electricity, and water projects; and support for low-income housing.

The rural poor are not homogeneous, and given instruments will vary in efficiency under different social and economic conditions. For example, credit and savings facilities may help poorer clients smooth production and consumption patterns, but there may be limited opportunities for clients to use credit and savings facilities productively unless a broader set of nonfinancial services and rural infrastructure is also provided.

Improving rural roads and electricity, or providing matching grants for village-determined investments, such as watershed management, to increase the earnings capacity of poor households is often more cost-effective than providing financial services, particularly where infrastructure is underdeveloped. Similarly, providing or upgrading rural primary education and health facilities can achieve longer-term benefits for the rural poor, especially for the poorest of the poor, by increasing the productivity of labor, the main asset of the poor. Empirical research by Mosley (1995) suggests that credit interventions to reduce poverty have failed to raise the incomes of the poorest beneficiaries—those below the poverty line. The same interventions have, however, been successful for clients above the poverty line (see box 3.7).

When the initial objective is to ensure that a drought or other calamity will not cause a sharp downswing in rural incomes, public works programs are often cost-effective vehicles for reducing poverty. When the programs are properly designed (when they create efficient incentives that attract only the target clientele), they also offer a more efficient long-term safety net for the ultra-poor than do interventions in financial markets, such as targeted microfinance or rural credit programs (see box 3.8).[17]

Just as too high a wage on public work programs attracts less needy beneficiaries who often crowd out poorer ones, subsidized interest rates on loans designed to reduce poverty are likely to attract less poor clients and crowd out the target clientele. The incentive problems, and the leakages associated with targeted benefits, apply to both financial and nonfinancial interventions and should be considered when developing a program of interventions to reduce poverty.

An analysis to determine the cost-effectiveness of a program must assess the probable reduction in poverty that will occur as a result of the program, measured by poverty gap or headcount indices per dollar invested in the program, compared with the reduction in poverty that other interventions would achieve. When the benefits are similar, cost-minimization must be analyzed. If the nature of the benefits differs for different interventions, then a full cost-benefit analysis is required. Such an

Box 3.7 Credit beneficiaries below the poverty line

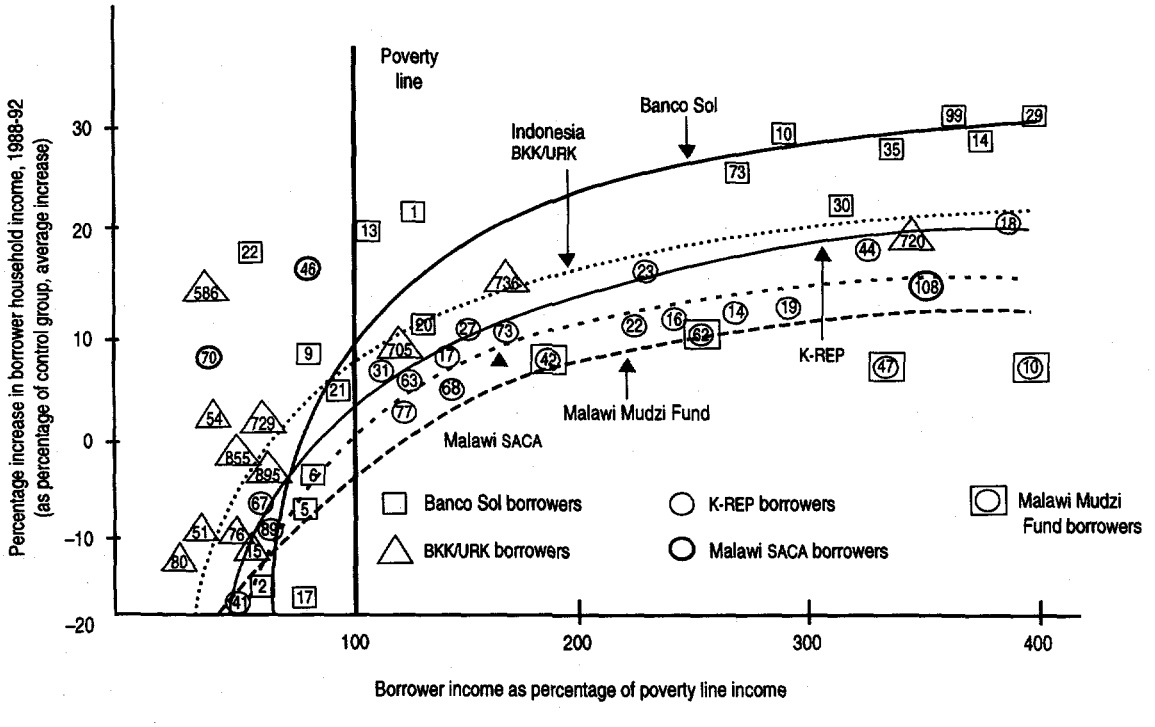
Since the 1980s credit schemes have been advocated as a way to reduce poverty. Recent findings by Mosley (1996) call the effectiveness of such schemes into question. Using data from microfinance institutions in seven countries, Mosley compared increases in borrowers' incomes with increases in the incomes of a control group. To minimize problems with comparing similar clients, the control group consisted of successful loan applicants who had not yet received their loans. Mosley found that:

- All loans in the sample increased average borrower incomes.
- More profitable RFIs generally had a larger impact on their clients' incomes.
- Richer clients generally had larger increases in income than poorer clients.
- Clients below the poverty line were worse off than the control group.
- Clients above the poverty line did better than the control group.
- The impact possibility frontier for each microfinance institution in the study could have been shifted by upgrading the financial performance of the microfinance institution. The frontier relates potential impact on clients' incomes to their preloan incomes. In this study it was upward sloping and concave.

It appears that the poorest clients use loans for risk-reducing purposes (consumption and low-risk production technologies). The study does not explore whether the risk-reducing benefits of the loans outweighed the costs to the poorest clients of relatively lower incomes (access to credit might have come at a cost in terms of income but might have yielded more stable incomes than for the control group). Most of the less poor clients (those above the poverty line) used loans for more risky and productive investments, including technological transformation.

While credit may be an effective vehicle for boosting the incomes of the poor, it may be less effective, or even counterproductive, in helping the poorest of the poor to raise their living standards. Alternative poverty reduction mechanisms are probably advisable for this group.

Box figure 3.7 Loan impact in relation to borrower income: within-scheme data



Note: Only a few specimen data points, together with the regression line for each organization, are indicated. Full data are available from the authors on request.

Source: Hulme and Mosley 1996.

Box 3.8 Is credit the solution to poverty?

Credit schemes aimed at reducing poverty have been a popular response to the perceived lack of credit for poor people and to the perceived inadequacies of indigenous village-level credit and insurance arrangements. Many different credit schemes have been tried, including (first generation) agricultural credit banks and (second generation) microenterprise finance schemes.

The evidence on effectiveness of these schemes in reducing poverty is fragmentary. Ex post evaluations have often been biased. For example, when a means test is applied to determine eligibility, some loan recipients confirm ex post that their income was indeed below the means test cut-off at the time of the loan, but that their income is now far higher. It is consequently difficult to assess what incomes would have been without the loans. It should not be assumed that the investment would have otherwise been impossible; an approximation to credit and insurance markets is often possible without any intervention, as a trip to almost any village will confirm. Assessments of targeting have often ignored the heterogeneity of the poor, by assuming, for example that all the rural poor are landless. Estimated rates of return can be seriously biased unless the evaluation is carefully designed.

The evidence suggests that efforts at targeting credit to the rural poor have had mixed results. Even when a means test is applied, the outcome can fall far short of the targeted goal. For example, a comparison of participation by consumption group in the credit-based and income means-tested Integrated Rural Development Program, in Maharashtra, India, shows that the scheme is far less well targeted than that state's Employment Guarantee Scheme, which involves neither credit nor a means test.

Even the better microfinance schemes have had limited impact on the poorest groups, who are often risk-averse and incapable (for reasons of education or health) of taking advantage of credit for self-employment activities. The poorest may have no access to complementary inputs, including infrastructure. Gains tend to be higher (as a proportion of income as well as absolutely) for the less poor. It is also unclear whether targeting credit is the best way to promote investment by poor people; even the poor can save out of labor income to finance self-employment activities, and they can consume out of credit. Other (noncredit) direct interventions to relieve poverty can be designed to encourage the poor to escape poverty by their own means in the longer term. Credit schemes are clearly not the only way to foster investment by poor people.

From what we now know about the causes of poverty, it is hard to maintain that poverty can be solved by targeted credit schemes alone. Chronic poverty does not appear to be due mainly to market failure in credit or other markets, but rather to low factor productivity and low endowments per person of nonlabor factors. If such conditions prevail, even perfect markets may have substantial chronic poverty. To the extent that well-designed credit interventions can efficiently improve access to credit by those among the poor who are liquidity-constrained, the interventions should be welcomed. Sound program design can often enhance an intervention's effect on poverty. But this type of intervention seems unlikely to be the main route out of poverty.

Source: Ravaillon 1996.

analysis may be difficult to conduct because information on the benefits of an intervention may be lacking. Solid empirical work (such as an assessment of poverty) is required to determine what blend of interventions will be most cost-effective under various scenarios.[18] When rural finance is found not to be the most cost-effective approach, alternative poverty reduction programs should be adopted and their effectiveness should be observed and evaluated.

Evidence suggests that, in general, credit interventions are likely to be more cost-effective in areas with relatively high population densities, profitable agriculture (irrigated, double-cropped lands, for example), and access to active markets. They are also more likely to succeed when RFIs can hire staff with a good knowledge of the community and solid finance and accounting skills. Finally, credit interventions are most likely to be cost-effective when directed at entrepreneurial clients, although properly designed credit schemes based on savings and mutualist principles can be used effectively for poorer clients (as shown by Grameen Bank).

The selected intervention should be closely monitored during implementation so that policymakers can judge whether it makes economic sense to maintain a particular level of intervention. For example, for food stamps

the relevant indicator is how much it costs to deliver one dollar of benefits to a target beneficiary. For financial services the subsidy dependence index offers a way of assessing the social costs of supporting a rural financial intermediary that is not self-sustaining (Yaron 1992a). Box 7.3 in chapter 7 illustrates how the merits of credit and other interventions might be compared using this index.

Financial Interventions for Poverty Reduction

Targeted financial interventions include rural credit programs directed at small-scale farmers and fishers and microfinance programs directed at nonfarm rural households, particularly rural women. When rural financial programs are seen as a cost-effective means of reducing poverty, interventions should be designed to minimize problems with information and incentives. Guidelines for the design of these interventions are discussed in chapter 6.

Conclusion

New perspectives on rural finance emphasize the need to build efficient rural financial markets to achieve rapid and lasting increases in rural incomes and significant and irreversible reductions in rural poverty. This chapter has advocated a market friendly approach that underscores the importance of creating a positive environment for promoting rural financial markets. It has also called for a judicious choice of well-targeted interventions.

When the objective is to expand incomes, the focus should be on enhancing the efficiency and completeness of markets. In most cases programs for developing rural financial markets should focus on creating the best environment for rural financial intermediation. Analyses of rural financial markets (particularly of barriers to exchange or of degree of volatility in consumption patterns owing to income shocks) can point to the existence of market failures and inform policy decisions on the best approach to resolving them. Direct interventions through targeted loans or grants or through state-owned RFIs should be considered only when market failures are clearly identified and when the net economic outcome of government interventions is firmly expected to be positive.

When the objective is to reduce poverty, the first step should be to conduct poverty assessments of rural areas with vulnerable groups and identify some of the key constraints to

Box 3.9 Targeting the poor: infrastructure

"Although the relationship between infrastructure and poverty is pivotal, infrastructure is nevertheless a blunt instrument for intervening directly on behalf of the poor. Adequate budgetary allocations to particular sectors or to poor regions, removal of price distortions which support biases against the poor, and the selection of appropriate standards and design are generally the most effective ways to ensure that infrastructure realizes its potential for fostering labor-intensive growth and helping the poor to participate in the growth process. Subsidized provision of infrastructure is often proposed as a means of redistributing resources from higher-income households to the poor. Yet its effectiveness depends on whether subsidies actually reach the poor, on the administrative costs associated with such targeting, and on the scope for allocating budgetary resources to this purpose without sacrificing other socially beneficial public expenditures."

"Price subsidies to infrastructure almost always benefit the nonpoor disproportionately. In Bangladesh subsidies on infrastructure services are roughly six times larger for the nonpoor than for the poor. A study of five Latin American countries found that water and sewerage subsidies are directed more to richer than to poorer households. Even in formerly centrally planned Algeria and Hungary, the rich have received more than the poor in the way of infrastructure service subsidies. When the poor lack access, as is frequently the case, they do not receive the lifeline rate and typically end up paying much higher prices for infrastructure services or their substitutes. Subsidizing access to public infrastructure services is often more useful for the poor than price subsidies."

Source: World Bank 1994a.

increasing the well-being of these groups. In addition to improving the efficiency of markets to expand incomes in rural areas, a variety of programs can be used to directly target the poor. Many programs (food stamps, public works, and so on) do not involve rural financial intermediation. The decision about whether to use rural finance interventions or alternative programs to reduce poverty should be based on cost-benefit analysis.

The selected program should be reviewed regularly. Carefully designed indirect and direct government interventions have been successful under a wide range of circumstances. The key features of successful indirect and direct interventions are described in chapters 4, 5, and 6.

CHAPTER 4

Creating a Favorable Environment

Rural financial markets require a favorable environment in which to develop. This includes establishing the right macroeconomic conditions, removing policy biases against agriculture and the rural sector, and establishing an integrated and efficient financial market.

Establishing a Favorable Macroeconomic Environment

There are important, two-way links between the macroeconomy and rural financial markets.

Macroeconomic Volatility Hurts Rural Financial Markets

Instability in the macroeconomy affects rural financial intermediaries directly through monetary variables, such as real interest rates, and indirectly through effects on clients.[19] Volatility affects both the assets and the liabilities side of the balance sheet. On the assets side domestic financing of fiscal shocks in thin financial markets can lead to credit crunches, especially for rural clients, because profit margins on rural loans are often thin. These credit crunches will in turn reduce the loan collection rates of financial intermediaries if anticipated rollovers of farm credit are not forthcoming. On the liabilities side uncertainty in the domestic economy may lead to capital flight, liquidity crises, and increases in the cost of funds for RFIs. These shocks can spill over to the assets side, since it may not be easy to curtail or recall loans to meet depositors' withdrawals without jeopardizing borrowers' cash flows and the quality of the portfolio as a whole.

Even macroeconomic changes that appear positive can have adverse effects on RFIs in the short run. A sharp decline in the rate of inflation can lead to defaults on loans if farmers are locked into long-term debt at nominal interest rates adjusted to a previously expected rate of inflation (Corden 1989). Indeed, since macroeconomic stabilization almost invariably leads to high real interest rates, macroeconomic mismanagement can severely reduce farm profits and RFIs' collection performance. This chain of events was illustrated in the United States during the early 1980s when poor macroeconomic policies led to unusually high real interest rates, which triggered massive farm failures (especially for more highly leveraged farms) and a crisis in the farm credit system (Drabenstott and Barkema 1993).

Persistent Macroeconomic Distortions Hurt Rural Financial Markets

Exchange rate distortions are particularly damaging to rural financial markets. Exchange rate pegs that do not reflect macroeconomic fundamentals distort foreign price signals, causing financial markets to channel excessive resources to inefficient sectors and insufficient resources to sectors with a comparative advantage. The liquidity and solvency of RFIs may be

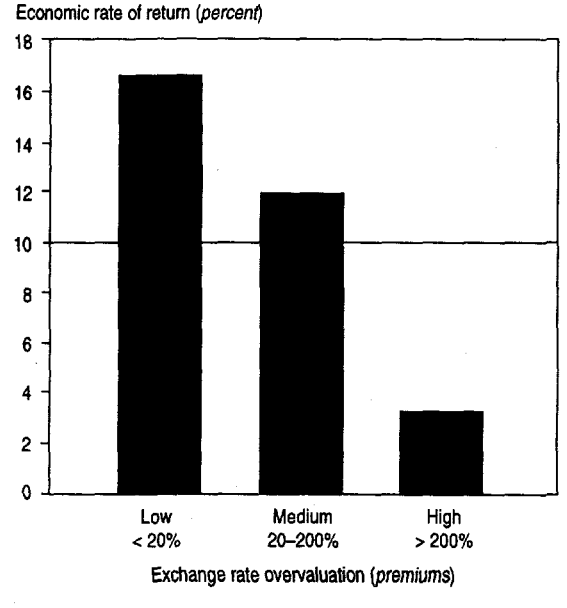
undermined if they base credit decisions on relative prices that are later realigned significantly. The same is true if a significant share of RFIs' liabilities are denominated in foreign currency (often true for many state-owned RFIs that benefited from external donor lending).[20]

The risks of supporting agricultural sector projects in the presence of persistent foreign exchange distortions are illustrated in figure 4.1. Other things being equal, the higher the black market premium for foreign exchange, the lower the return on agricultural investments.[21]

Poorly Performing Rural Financial Markets Hurt the Macroeconomy

The link between macroeconomic and rural financial sector performance goes both ways. Crises in rural financial markets can strain government budgets and thus macroeconomic stability. The principal sources of fiscal burdens and deterioration are interest subsidies, loan delinquencies and defaults, and actuarially unsound crop insurance and loan guarantee schemes. These problems were illustrated clearly in Mexico in the late 1980s, when macroeconomic stabilization made transfers to the state agricultural banks unsustainable (see box 2.6). Containing government outlays on interest subsidies and other such items is warranted for macroeconomic reasons, particularly because these policy instruments are usually dysfunctional (they tend to obstruct rather than assist in achieving their objectives).

Figure 4.1 Foreign exchange premiums and economic rates of return on bank-supported agricultural products



Source: Isham and Kaufmann 1995.

Prudent Fiscal and Monetary Policies Reduce Volatility

Policymakers can pursue measures to reduce macroeconomic volatility and persistent distortions in macroeconomic variables (Khan and Knight 1982; Corden 1989; and Mills and Nallari 1992). The key is to pursue prudent fiscal and monetary policies to achieve price stability and to maintain a sound, well-aligned exchange rate policy. Pursuing such policies are warranted even without regard to their positive effect on rural financial intermediation. Until reasonable stability is achieved (until, for example, inflation and foreign exchange premiums fall below 30 percent and real interest rates fall below 10 percent but remain positive), interventions in rural financial markets should generally focus on piloting and providing support for institutional development—rather than on introducing large-scale credit programs. Because the links between rural financial markets and macroeconomic stability go in both directions, the fiscal impact of rural financial policies, especially with regard to subsidies, should be minimized.

Removing Policy Biases against Agricultural and Rural Sectors

Rural development has been held back in almost all developing countries by policies that favor industry over agriculture and urban areas over rural ones. The effect of these policies on formal rural financial markets has been calamitous.

Urban-Biased Policies Hurt Rural Financial Markets

The performances of financial and real goods markets are closely interrelated. Because competitive financial markets are guided by price signals, distortions in prices for real goods lead to the misallocation of resources by financial markets. For years most developing countries subjected their rural sectors to heavy taxation through a blend of direct and indirect policy measures. The eight pillars of urban-biased policies have had a devastating effect on the profitability of agricultural and nonfarm rural enterprises (box 4.1). For example, Schiff and Valdés (1992) estimated that in a sample of eighteen countries during 1960–84, direct and indirect interventions depressed domestic agricultural terms of trade by 30 percent and effected an income transfer out of agriculture equivalent to 46 percent of agricultural gross domestic product. They found this "plundering of agriculture" shortsighted, because the countries with the highest degree of discrimination against agriculture had the lowest rates of economic growth, and vice versa.[22]

Because indirect, rather than direct, interventions accounted for most (74 percent) of the unfavorable terms of trade effects, policymakers may not have been aware of the full extent of the damage to agriculture caused by the blend of policies they pursued.[23] Indeed, policymakers often regard government controls as the solution to depressed agricultural production, not the source of the problem. (Knudsen and Nash 1990). Nonetheless, the use of government controls has clearly contributed to the misgivings of formal financial intermediaries about extending rural credit and has severely reduced the flow of resources (in both directions) between formal financial intermediaries and rural clients.

Subsidized, Directed Credit Does Not Correct the Adverse Effects of Urban-Biased Policies

To mitigate the adverse impact of urban-biased policies, governments have established subsidized credit programs for the agricultural sector. These programs have often been administered by state-owned specialized agricultural credit institutions. Governments have also subsidized agricultural inputs, such as fertilizers, pesticides, seeds, water, and electricity. This "compensation" for a poor policy environment has not worked.

- Schiff and Valdés (1992) found that from 1960 through 1984 income transfers through all input subsidies averaged only 2 percent of agricultural GDP for the eighteen countries in their study. Whereas indirect interventions resulted in

Box 4.1 Eight pillars of urban-biased policies

Urban-biased government policies and public investment priorities pervade development efforts. This approach to development is usually linked to the goal of rapid industrialization as well as to political pressure for low food prices from a vocal urban population. Here are the eight pillars:

1. Overvalued exchange rates
2. Low, controlled, and seasonally invariant prices for agricultural products
3. High effective rates of protection for domestic industry, the outputs of which are used as agricultural inputs
4. Disproportionately high budgetary allocations for urban over rural infrastructure (roads, electricity, and water supply)
5. Disproportionately high investment in human resources in urban over rural areas (health and education)
6. Usury laws (that rule out the loans typical in rural areas: small, risky, and high-cost loans)
7. Underdeveloped legal and regulatory provisions regarding land titling and collateral for typical rural assets (land, crops, and farm implements) relative to urban assets (cars, durables, and homes)
8. Excessive taxes on agricultural exports.

This approach has stifled agricultural and rural development in most developing countries for several decades. Eliminating these urban-biased policies and investment priorities is essential to increasing the well-being of most of the world's population.

negative transfers of 15 percent of agricultural GDP.
- Policy distortions affect entire agricultural sectors, but compensation is usually captured by only a few farmers. For example, formal agricultural credit on concessional terms rarely reaches more than 30 percent of the farming sector.
- Wealthy, well-connected farmers have captured most of the subsidies (see box 2.2); very few subsidies have reached the most needy farmers.
- Inefficient state-owned enterprises intervene in areas that the private sector can handle better (such as input supply and marketing), while investment in essential public goods (such as rural roads, agricultural research and public registries) have been neglected.

Well-Established Principles Help to Create a Preferred Policy Environment for Development

There are well-established principles for creating the preferred policy environment for agricultural and rural development. These principles include establishing a more nearly neutral trade regime between agricultural exportables and importables, realigning overvalued exchange rates, reducing excessive industrial protection, shifting public investment priorities toward public goods and rural areas, and increasing participation in community development. Taking such measures will increase efficiency and greatly enhance the value of the principal or only asset of most poor people—their labor.[24]

Policy reforms will benefit RFIs by improving the welfare of their clients. However, because policy distortions have not been uniform, some protected subsectors may become much less profitable when the distortions are removed (as has happened with maize in Mexico). In making lending decisions, RFIs should consider the effects of policy reforms on loan quality; substantial increases in credit flows to rural areas should be deferred until major price policy reforms are in place. Institution building for RFIs, which takes longer to implement, can proceed simultaneously with these broader sectoral reforms.[25]

Establishing Integrated and Efficient Financial Markets

The links in an economy between rural financial markets, which are often segmented, and broader financial markets are far from seamless. Nonetheless, the performance of rural financial markets cannot be divorced from that of broader financial markets. Governments can take several measures to strengthen the performance of financial intermediaries at the rural and national levels.

Problems in Broader Financial Markets Hurt Rural Financial Intermediaries

Banks and other intermediaries in urban and rural areas face incentive problems associated with using other people's money. Major moral hazard problems for financial intermediaries are associated with high leverage ratios, limited downside risk for shareholders, and the potential for insider loans and fraudulent practices. Externality problems are associated with depositors free-riding on the monitoring of financial intermediaries, runs on weak banks spilling over to sound ones, illiquid financial intermediaries participating in the payments system, and high-risk financial intermediaries drawing depositors away from prudent ones. These moral hazard and externality problems exist for a wide range of rural and nonrural financial intermediaries. Governments and their monetary authorities should address such incentive problems.

Government policies that increase risks or financial repression hurt RFIs. Governments can reduce the risk of financial crises, but they are often the source of those crises, owing to poor macroeconomic policies or harmful direct interventions in the financial sector.[26] The three most damaging interventions are excessive reserve requirements, a large volume of directed

credit programs, and subsidized interest rates or interest rate ceilings.

Governments have often established excessively high reserve requirements for fiscal reasons. In the early 1990s Argentina's reserve requirements were higher than 40 percent. Doing so drives up interest rates for borrowers and discourages deposit mobilization.

Governments have directed banks to lend large shares of their portfolios to unremunerative sectors of the economy. In Tunisia and Morocco mandated RFI loans have been used to subsidize inefficient state-owned agricultural enterprises. The mandate itself constitutes a subsidy to the targeted beneficiaries because administratively directing more funds to the beneficiaries than the market would have allocated to them enables them to pay less than the opportunity cost of capital for those funds.

Governments have used directed credit to shift the fiscal burden of propping up preferred enterprises and sectors to the financial system, but in doing so, they have taxed the financial sector more heavily than other sectors at tremendous cost to future growth (Giovannini and de Melo 1993 and Levine 1994).

Governments have administratively fixed interest rates and established interest ceilings for vast amounts of bank lending in general and for rural credit in particular. This form of intervention has perhaps been the most damaging, because interest rates are critical in the mobilization and allocation of resources. The market determination of interest rates is an essential ingredient of a competitive financial sector. Government restrictions on interest rates restrict the levels and types of participation by financial intermediaries in rural financial markets because interest rates on directed agricultural credit are usually fixed below market rates. Restricting interest rates discourages monetary savings and impedes

Box 4.2 Mitigating the risk of banking crises

Governments can address the moral hazard and externality problems that characterize the financial sector by increasing the transparency, accountability, and risk-bearing capacity of financial intermediaries. Possible measures include the following:

- Supervising financial intermediaries through an autonomous, efficient, and motivated banking superintendency.
- Requiring audited financial statements that adhere to generally accepted accounting principles, especially with regard to internationally accepted asset classification and provisioning norms.
- Establishing clear, simple, rule-based criteria for entry that reduce the potential for political interference and promote competition in the industry.
- Establishing asset diversification requirements that reflect credit and market risk, credit limits per borrower or per group of related borrowers (expressed as a proportion of the bank's capital), and restrictions on loans to insiders.
- Setting capital adequacy ratios that go well beyond the 8 percent Bank for International Settlements standards for more volatile economies.
- Defining permissible or prohibited activities.
- Allowing international diversification of risks by permitting foreign banks to operate in the country, not restricting foreign investors from owning shares in domestic banks, and allowing domestic banks to open branches abroad.
- Developing advanced central clearing systems that allow for early detection of payment problems. Doing so is important because daylight borrowing (interbank loans through the clearing system) is the single largest segment of sophisticated credit markets.
- Establishing clear bankruptcy laws and rapidly executable provisions for dealing with failing institutions. In general these provisions should require replacing management, eliminating shareholders' interests, and carving out bad debts. The institutions may be financially restructured, recapitalized, or dissolved.
- Enforcing prudential regulations through punitive fines and prosecution of banks and managers that fail to adhere to appropriate prudential standards.

Taken together, these measures can greatly increase the information and incentives available to participants in financial markets.

Source: Baer and Caprio 1995; Dale 1982; and Polizatto 1991.

access to formal credit by small-scale entrepreneurs.

Strengthening the Supervision and Regulation of Financial Intermediaries Promotes Market Development

To promote the development of deep and efficient financial markets, governments should strengthen the supervision and prudential regulation of financial intermediaries, and improve the legal and regulatory framework for contracts (see chapter 5). Governments should also support programs of financial liberalization and improved risk diversification. Such programs could deregulate interest rates, reduce reserve requirements to sound levels, and relax credit controls. Further measures that could be taken to improve the performance of the banking sector and reduce the probability of a banking crisis are listed in box 4.2.

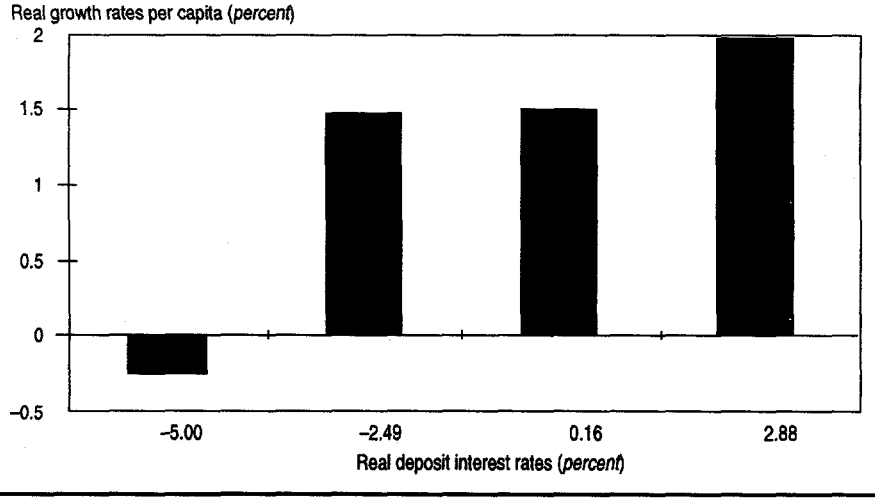
Programs for restructuring or recapitalizing fragile institutions should be undertaken only *after* adequate prudential and supervisory mechanisms have been put in place. These financial reforms should be applied at the same time to all the financial institutions to be included in the program, including RFIs supervised by the monetary authority. Until financial reforms are put in place and applied to RFIs, there is a significant risk of loan losses associated with formal credit programs in rural areas. In the interim the focus should be on developing institutions and piloting schemes to increase outreach and self-sustainability, rather than on expanded lending.

Box 4.3 Two good reasons for market-determined interest rates: equity and efficiency

Equity. Directed credit programs face a characteristic dilemma. The dilemma is whether to lend to more clients with no subsidy or to lend to fewer clients with a high per dollar subsidy. If the goal is to resolve the inadequate *access* to formal credit of the rural masses, then (on equity grounds) the program should pursue *increased outreach*—a choice that requires eliminating or minimizing the subsidy per dollar lent.

Efficiency. Several studies show that liberalized financial markets generate a more efficient allocation of resources and higher rates of economic growth (King and Levine 1993; Jaramillo, Schiantarelli, and Weiss 1994; and McKinnon and Shaw 1975). Other studies point to a positive relationship between savings and real interest rates in developing countries (Fry 1988 and McDonald 1983). The importance of financial intermediaries in offering and charging positive real interest rates is clearly indicated in box figure 4.3, which compares deposit interest rates with GDP growth for four groups of countries sampled over the period 1974–89.

Box figure 4.3 Real deposit interest rates and GDP growth per capita, 1974–89



Conclusion

Building efficient rural financial systems is essential for improving the livelihood of most of the rural population. Progress toward this goal has been held back for decades by policies biased against agriculture and rural development. There is little hope of developing strong rural financial markets unless the urban-biased policy context is changed. Similarly, prudent fiscal and monetary policies are essential to reduce macroeconomic volatility and increase the profitability of rural investments. Finally, the depth and viability of rural financial markets will depend on conditions in the broader financial markets. Governments must avoid financial repression and address the incentive and externality problems that can undermine the performance of financial intermediaries. The importance of creating the right environment is increasingly appreciated by policymakers, and considerable progress has been made. Chile and Mexico have instituted policy measures that have dramatically changed the terms of trade for agriculture and created a more level playing field within the sector (agricultural employment has been increasing as a share of total employment in Chile). Several countries have embarked on wide-ranging financial sector reforms and economies have achieved greater macroeconomic stability with the support of the International Monetary Fund and the multilateral development banks (Caprio, Atiyas, and Hansen 1994). But extensive reforms are still warranted in many economies if the overriding goals of expanding incomes and reducing poverty are to be achieved.

Measures to create a favorable policy environment for rural finance are necessary, but they may not be sufficient in themselves. Formal rural financial markets require a supportive legal and regulatory framework, and direct interventions may be needed to accelerate the building of robust rural financial markets.

CHAPTER 5

The Legal and Regulatory Framework for Rural Financial Markets

In many countries shortcomings in laws, regulations, and institutions prevent formal sector institutions from delivering credit to farmers and rural businesses.[27] These problems also make it difficult for banks to lend directly to farmers, for the formal sector to lend to the informal sector, and for banks and other financial institutions to lend to nonbank creditors (such as dealers and nongovernmental organization group lenders), who might be better placed to reach rural borrowers, especially the poor. Many of these legal and regulatory problems cause or aggravate the endemic problems of rural credit: information barriers, social barriers, adverse selection, spatial dispersion of clients, and covariance of returns.

There has been little analysis of these problems despite their major implications for rural finance. This chapter identifies key legal and regulatory impediments and ways of resolving them. The proposed solutions can have an enormous impact on rural financial markets at a modest cost.

Problems That Limit the Use of Collateral

Every private lender worries about the borrower's promise to repay. Over the years private markets have developed two broad means of giving comfort to private lenders: unsecured lending and secured lending. Unsecured lending rests on the lender's detailed knowledge about the borrower or on the lender's ability to impose penalties on the borrower. Secured lending rests on the collateral that a borrower puts forward for a loan. This collateral gives credence to the borrower's promise to pay and gives comfort to the lender should the borrower not pay. Because evaluating collateral is often cheaper than acquiring detailed knowledge about a lender, requiring borrowers to provide collateral permits lenders to offer larger loans at lower interest rates.

Problems in laws and regulations, however, can impede both systems of lending, resulting in private lenders denying loans or offering only small amounts of credit at very high interest rates. Placing restrictions on collateral can have serious effects on investment. In industrial countries such as the United States, about 45 percent of the private capital stock is residential real estate, 25 percent is nonresidential real estate, and 30 percent is movable capital—including livestock, farm equipment, fertilizer, standing crops, and inventories. Even the economically important class of movable capital is only a subset of what U.S. law views more broadly as personal property. Intangible personal property—accounts receivable and chattel paper, for example—is not counted in the capital stock. Nonetheless, this property is critical in credit sales and nonbank financing. When real estate and movable property cannot serve as collateral for loans, property owners cannot use their prop-

erty to raise funds for other purposes. Those who own no property will have difficulty buying on credit.

To offer loans secured by real or personal property, lenders need laws and institutions through which claims against property can be created, publicly established or "perfected," and enforced. The more uncertain and expensive this process, the less willing lenders are to lend. Lenders can cover some of these costs with higher interest rates. However, as risk and cost rise, lenders will reduce the amount lent relative to the value of the collateral. Under the least favorable circumstances, they will lend no more when collateral is offered than they would without it. The result? Small loans at high interest rates.

Creation of Security Interests in Collateral

Creating a security interest requires a framework that permits both parties to enter into a legally enforceable agreement that applies to the parties, the collateral, and related circumstances that have economic importance. For real estate many problems can arise in creating a mortgage—a security interest in real estate. The owner may not have clear title. Or the owner may lack a title recognized in the main body of law in the country. Or the owner may have established title to the land by adverse possession—by living in a place for the period of time that the law specifies is necessary to establish title. But that owner may not have actually established the title and filed it in a real estate registry. Since the law typically states that only the owner of the land may mortgage it and that registered title is the only acceptable proof of ownership, the lender will not be able to create an enforceable mortgage. For *personal property* creation of security interests is usually even more difficult and risky—as well as expensive and cumbersome.

The law can fail to envision instruments to cover transactions of key economic importance. In some countries, some commodities can serve as collateral and others cannot. Few countries have provisions for a *future interest*, consequently, few farmers can get loans against newly planted crops because the output does not yet exist. Few countries have provisions for *continuation in proceeds* that would permit the security interest to be maintained as the collateral is transformed. A lender with a security interest in wool in a warehouse will lose that security interest when the wool is sold. Sometimes high costs prohibit certain transactions. In Uruguay it costs 6 percent of the amount of the instrument to register a pledge; in Russia it costs 3 percent. Such registration fees alone, calculated at an annual rate, will exceed the interest rate on short-term loans for storing farm inventory.

Perfection of Security Interests in Collateral

Perfection, or *publicity*, is the process by which lenders establish the priority of their security interest in the collateral. Sometimes a borrower lets the lender keep the collateral until the loan is paid—as with a watch in a pawnshop, grain in an elevator, or securities deposited with a brokerage house. There is little danger that the borrower will pledge the same merchandise to another lender—the first lender's possession of the merchandise serves as effective notice to all other parties that the borrower has encumbered his or her goods. Other lenders will presume that the circumstances of storage imply that the first lender has a security interest in the goods.

The situation is not so clear when the collateral remains in the hands of the borrower. How can a lender know whether prior encumbrances exist? Prior encumbrances crucially affect the value of an asset as collateral. A $100,000 house that seems sufficient collateral for a $50,000 loan would be far less attractive to a lender if it had a first trust of $60,000. One solution to this problem is public registration of security interests. However, many practical problems limit the registration and perfection process in most developing countries (see boxes 5.1 and 5.2).

Box 5.1 Titling versus registration

The governments of Bolivia and Peru conveyed title through an agrarian reform law that delivered special deeds to land. These deeds were registered in agrarian reform registries. However, they were not registered in the real estate registries specified for that purpose in the civil code. Consequently, when a lender went to register a mortgage against a property, there would be no record of ownership and no property against which to register the mortgage. No mortgage could be issued. The deeds registered in the agrarian reform registries were sufficient to give the possessors some security of tenure because legal processes would probably fail to dislodge the occupiers. But the system would not permit lenders to use the land as collateral because there was no feasible way to enter the mortgage.

Source: Fleisig and de la Peña 1996.

For real estate lack of a registered title means that a lender will not have a legally certain place to file the mortgage on the property that the borrower offers as collateral, and so cannot be sure that the land is not already mortgaged to another lender. Lacking that certainty, the property will have no value as collateral. This problem can arise even when the ownership of the property is not disputed—as with clear demonstration of ownership by means of adverse possession or titles granted through government actions, such as agrarian reform programs.

Once a title is registered, perfecting a mortgage still requires a registry that functions and is open to the public. But some public registries are expensive to use. High filing costs, long delays in registration, and fees and constraints on obtaining information all add to the expense. Public operators sometimes restrict public access to registries, thus preventing private firms from remedying these problems. Since many of these costs are fixed, they can represent a high percentage of the value of a small plot. Perfecting a mortgage

Box 5.2 High-tech land titling

When strict requirements for collateral are maintained in developing countries despite the low availability of collateral among the rural poor, there is an inherent conflict between the lender's need for security and the government's policy of improving rural households' access to credit. Being unable to provide sufficient collateral, rural borrowers may qualify for little or no credit. The absence of sufficient collateral is, in turn, a result of their inability to obtain credit to enable them to increase their incomes and reduce their poverty—a vicious cycle. One way out of this collateral-based poverty trap is the new Global Positioning System (GPS) for high-tech land titling.

The GPS is a network of twenty-four U.S. Defense Department satellites that orbit the earth, enabling users to plot their exact position anywhere on the globe. New, detailed maps are being drawn up using GPS technology. Over the past six months CARE, a private aid organization, has used the GPS system for a pilot project aimed at dividing 11,900 acres into individual plots in Salvadoran communities. In its initial phase, the project shaved years off the time it takes to get land titles.

Carrying a radio transmitter that beams signals to the satellites, workers walk around a property, creating an extremely accurate map. The satellite information is fed into a computer, after which CARE advisers work with the community to decide how to divide the land into individual plots. Areas that are unsuitable for grazing or growing crops are then measured and divided. Because the GPS system is computerized, technicians are able to divide the land quickly, using laser beams to measure distances. The computer program can then print a detailed written description of each plot, a tedious job when done by hand.

"What we are doing will lead to a real transformation in the nation's land tenure system," said CARE's Javier Molina, director of the project, which is being financed by the U.S. Agency for International Development. "We are helping give people title to land in a way that has not been done before." "Now that everyone knows where his land is, everyone is already beginning to work," said Severino Chico, a Salvadoran community leader. The new GPS system for titling land has already led to investment in the land and will make credit for development efforts easier to come by.

Source: Farah 1996.

will raise the total borrowing costs faced by small operators.

For *personal property* procedures for *perfection* may not be well defined. When they are not, those taking security interests cannot be certain of their priority, cannot easily discover whether collateral has already been pledged, and cannot be certain of the legal standing of their security interests (see box 5.3). In many countries it is unclear where a pledge should be filed. Some countries limit security interests in movable property to items for which registries already exist for other purposes—claims can be registered against automobiles, ships, and planes for example, but not against rice mills, grain harvesters, or hay balers. In other countries laws establish priority by the date on the instrument as shown in the notarial registry—but there may be hundreds of scattered notarial registries, making it impossible to search them to determine whether the property has already been encumbered by pledge, judgment lien, or other security interest.

Enforcement of Security Interests in Collateral

The value of collateral in securing a loan depends heavily on the certainty and speed of enforcement and the ease of repossession and sale of the collateral. The importance of enforcement arises not because repossession and sale are common or desired by lenders but because contracting parties must believe that repossession and sale will be certain and rapid in order for the collateral to comfort the lender and demonstrate the good faith of the borrower. In most World Bank borrowing member countries many problems encumber repossession and sale.

In many countries repossession and sale to enforce a mortgage requires court actions that can take six months to two years. Homestead provisions often make it illegal to repossess and sell small parcels of land, making them useless as collateral.

Slow enforcement procedures can further diminish the value of movable property as collateral. Movable property often has a lower unit value than real estate. Unlike real estate, movable property usually depreciates in value over time. Enforcement that takes six months to two years can exceed the economic life of much inventory—fruits, vegetables, livestock, meat, poultry, standing crops—and most of the economic life of industrial and farm equipment. Under these circumstances, the collateral will provide little comfort to a potential lender.

All countries have laws that limit the amount that a creditor may claim from a debtor in default. Destitution of the borrower rarely serves society's interest. However, when carelessly conceived, *homestead and exempt property provisions* can prevent rural smallholders, usually the poor, from using their small holdings as collateral or purchasing small parcels of land or small quantities of equipment on credit. Similar problems arise for rural businesses

Box 5.3 Creation of a security interest: gaps in coverage

Often property cannot serve as collateral or be sold on credit because of gaps in the ability to create a security interest. For example, in Uruguay the pledge is a lawful contract for cattle but not for chicken or financial institutions. In Argentina and Bolivia something that does not yet exist cannot be the object of a loan. Consequently, farmers cannot get credit against the eggs from their poultry, the milk from their cattle, or the wine from their grapes. In Peru a rotating inventory requires redefinition of the loan, so fruit extract in warehouses cannot serve as collateral but fish meal, stored in containers of fixed sizes, can. For similar reasons, wheat in an Argentine silo cannot secure a loan but sugar in a warehouse can.

These problems are fatal to lending because the lender knows that in the event of default the borrower can claim that the underlying contract has no legal foundation. These legal problems have no valid basis in public policy. Some may be accidents of drafting, others may reflect the old notion of collateral property being retained physically by the creditors.

Source: Fleisig and de la Peña 1996.

Box 5.4 Enforcement: canaries, jail, and death

As long as there has been lending, there has been concern about enforcing debt contracts. Rome exiled nonpaying debtors—transported them across the Tiber River—and in some cases dismembered them and distributed the pieces to their creditors on a pro rata basis. The *Canarios* (Canaries) of Costa Rica dressed in yellow bird suits and followed nonpaying debtors to publicly humiliate them. In Bolivia, Chile, and Thailand creditors get postdated checks to secure loans. If the borrower cannot pay, the check is cashed and when it bounces, the lender has the borrower imprisoned for check fraud. In 1993 one-quarter of the jail inmates in La Paz were imprisoned for writing such checks as security loans.

In the United States and Canada the creditor is allowed to seize the collateral of the defaulting borrower without a court order on condition that in doing so the creditor does not "breach the peace."

Source: Fleisig and de la Peña 1996.

Box 5.5 Warehouse receipts: an instrument that facilitates trade and inventory financing

Warehouse receipts are widely used in industrial countries as collateral for loans. However, they are rarely used in developing countries and economies in transition, mainly because of the lack of appropriate legal and institutional environments, low levels of awareness, and government policies that reduce private sector incentives to store commodities—for example, fixed crop prices that discourage storage and later sales. The overall efficiency of markets can be greatly enhanced by enabling producers and commercial entities to convert agricultural production into a negotiable instrument that can be traded, sold, swapped, used as collateral for export or inventory financing, or used for delivery against a derivative instrument, such as a futures contract.

There are some ways in which the introduction of a warehouse receipt system can benefit developing countries and economies in transition:

- By providing secure collateral to lending institutions, warehouse receipts increase the availability of local and foreign funds for agricultural credit and reduce the cost of lending.
- For countries in the process of market liberalization, warehouse receipts can provide the basis for the development of a domestic spot market and possibly (at a later stage) for the creation of forward and futures markets.
- During liberalization warehouse receipts provide an alternative to direct government involvement in physical markets. The government can use warehouse receipts to manage strategic reserves and support prices without physically holding stocks.
- Warehouse receipts can be combined with price risk management, so that uncertainty is reduced for the collateral on agricultural loans and for the value of that collateral. The combination enables banks to discount the warehouse receipt less than they otherwise would, and may reduce the cost of lending, since loans would be more secure.

To establish a warehouse receipt system, there must be an appropriate legal and institutional environment: warehouse receipts must be functionally equivalent to stored commodities; the rights, liabilities, and duties of each party to a warehouse receipt (producer, bank, warehouse manager) must be clearly defined; warehouse receipts must specify essential terms; warehouse receipts must be freely transferable by delivery and endorsement; and the holder of a warehouse receipt must have priority to receive the stored goods or their fungible equivalent on liquidation or default of the warehouse. Other preconditions for creating a warehouse receipt system include verification and physical controls, warehouse certification, consistent grading, property and casualty insurance, and performance guarantees by the warehouse manager. When these conditions are met, warehouse receipt systems can contribute to increased and more efficient rural financial intermediation.

Source: Varangis, IECCP, World Bank 1996.

when exempt property regulations that ostensibly protect the poor have the opposite effect, when for example, small businesses are prevented from purchasing tools and equipment on credit because small properties are legally exempt from seizure.

Problems in the framework for secured transactions make it difficult for formal sector lend-

ers to make loans secured by small properties. The problems also make it difficult for formal sector lenders to provide financing through the natural conduits of rural credit, such as dealers, suppliers of farm inputs, and lenders specializing in unsecured loans, such as solidarity groups.

Problems That Limit Unsecured Lending

Unsecured lending can be an important means of providing credit to rural borrowers. Extensions of credit by dealers in input and personal and solidarity group loans (with more than one guarantor) are used in many areas. However, several features limit the expansion of these unsecured lending systems.

Framework for Secured Transactions

Problems in the framework for secured transactions can limit the access to credit of the lender or credit seller. For example, once a farm input store has extended credit out of the store's own capital, the store operator will have a portfolio of "accounts receivable" representing the credit extended. This portfolio can stand for a substantial amount of money even though the individual loans may be small. In an industrial country with a good framework for secured transactions, such a store operator could use that portfolio of accounts receivable as security for a loan at the bank. With that loan the dealer could then extend more credit to customers on an unsecured basis. Information is important in such transactions. Compared to the bank, the store owner knows more about the customers and can more safely select good risks. However, in most developing countries problems in the framework for secured transactions prevent banks from creating, perfecting, and enforcing security interests in accounts receivable. These problems limit the access to credit of store owners and choke off a potentially promising source of rural credit. The same story, with small variations, can be told for all rural credit sellers and nonbank lenders (see boxes 5.6 and 5.7).

Information

Information about borrowers is crucial in reducing risk in unsecured lending. Because rural borrowers are more dispersed than urban borrowers, only local lenders and credit sellers may know the repayment records of such borrowers. This special knowledge leads to domination of rural lending by a series of small monopolies that make small loans at high interest rates. Competition can break this link, but competitors will require information about borrowers.

Credit Reporting Systems

In many developing countries credit reporting systems are only now being developed. Banks have no systems for making credit decisions based on lending records. Nonbank lenders and credit sellers cannot have access to credit

Box 5.6 Nonbank lenders

Nonbank creditors, such as dealers in feed, fertilizer, insecticides, and machinery, can channel credit to the rural sector. Often they are willing to extend credit without collateral. However, because they lack the deposit base of banks, they must be able to borrow themselves in order to offer credit. In a well-functioning system of secured transactions, such credit sellers could use their inventories and accounts receivable to secure loans from the formal sector to extend more credit. But herbicide dealers in Bulgaria, equipment dealers in Uruguay and Argentina, and insecticide and fertilizer dealers in Bangladesh have all reported that they have been unable to do so. The absence of a good framework for secured transactions can break any possible link between rural supplier credits and urban formal sector lending.

In this way defects in the secured transactions system reduce the availability of credit to those who borrow in small amounts or who cannot provide land as collateral.

Source: Fleisig and de la Peña 1996.

Box 5.7 Fragmentary reform

Reforms of systems of secured transactions are relatively new, and there is no example of successful change in developing countries. But different efforts work in different countries, showing that, taken together, such reforms should have an impact in developing countries similar to the effect they have had in industrial countries.

Creation. Argentine grain dealers cannot get loans against grain inventories, but Argentine sugar dealers can get loans against sugar inventories; Peruvian fruit exporters cannot get credit on inventory, but Peruvian meal exporters can. Why? Because the laws of those countries do not easily permit the writing of contracts secured by rotating inventory. If the inventory does not rotate, the goods can serve as collateral. Lenders in those countries are not reacting to the underlying economic attractiveness of the collateral; the failure of the law to provide a useful contract for rotating inventory limits their lending. When these limitations are removed, lending can flourish.

Perfection. In Argentina, Uruguay, and Bangladesh, salaried workers who do not own land can get car loans—they make a down payment and the car itself serves as collateral. The system works because the automobile registry functions well and is the place where security interests in cars can be recorded. But in those same countries the same individual cannot get a loan for a tractor because the registries do not allow the filing of security interests in tractors. In Bulgaria, where the automobile registry does not file security interests, car loans are unknown except when guaranteed by the state or when the cars remain warehoused and in the possession of the lender. Again, removal of legal limitations can increase the scope for valuable exchanges.

Enforcement. Banco Agricola Boliviano, now closed after a spotty record in collecting its loans, managed collection rates in the mid-90 percentile on tiny loans to poor farmers on the altiplano. Why? Because under its charter, the bank could repossess and sell, without judicial intervention, the collateral for loans in default. The bank could readily resell repossessed equipment on credit in other altiplano villages. Knowing this, farmers serviced their loans. Credible enforcement mechanisms are essential for recovering loans and can help to improve the performance of otherwise weak institutions.

Source: Fleisig and de la Peña 1996.

information. Consequently, borrowers (especially the poor) who are not well known outside their areas have no way to publicize a strong payment performance and gain access to credit. The expansion of credit bureaus is limited by lack of public access to registries and lack of demand for information about unsecured borrowers because credit sellers cannot refinance their portfolios and take advantage of profitable credit sale opportunities.

Problems That Limit All Lending

A variety of legal and regulatory restrictions affect the cost and volume of both secured and unsecured lending. These include:

Usury Laws

Limits on interest rates are among the oldest forms of economic regulation. Usually these measures do not achieve a public policy purpose. Instead, informal lenders are driven underground, preventing poor rural borrowers from getting the benefits of competition and proper regulation of lending practices.

National Identity Cards

These are sometimes required by formal sector lenders. However, these cards can be difficult and expensive to get in many countries, particularly for people who have not served in the army or who do not have birth certificates. Inability to gain an identity card can critically limit action. Single women heads of households and those born in rural areas are especially affected by this problem. Governments must ease access to these cards, or bank regulations must be changed to permit banks to accept other reasonable forms of identification.

Age of Majority

It is common in countries with rapidly growing populations to find households in which all

members are younger than twenty-one. Were a member of such a household to sign a contract, including a loan agreement, it would not be enforceable in court. Such households often deal largely with informal sector lenders. Nonetheless, the age of majority problem inhibits the development of linkages between informal lenders and the formal sector through refinancing accounts receivable and chattel paper.

Written Contracts

Most laws require that contracts have informed consent—the contracting party must read and affirm agreement by signing. This implicit requirement that loan contracts be in writing makes a lawful contract impossible for the illiterate.

Supervision and Regulation of Financial Institutions

Supervision and regulation should be firmly aligned with the legal system. A bank regulator cannot remedy underlying defects in the legal system by issuing regulations. If the legal process requires six months to two years to repossess and sell collateral, then loans secured by perishables should be treated no differently from unsecured loans.

Supervision and regulation sometimes militate against rural credit in subtle ways. Nondeposit-taking financial institutions and nonfinancial credit-granting institutions are often regulated, or affected by regulations applied to banks, in ways that discourage rural lending. On occasion the leasing and lending activities of nonfinancial institutions such as equipment dealers are also so affected. Sometimes special rapid collection procedures are reserved for banks.

Such regulation obviously limits the development of nonbank formal sector lenders who could channel credit to many rural borrowers who might not be natural clients of banks. These effects can be substantial. In Bolivia about 95 percent of total credit is granted by taking institutions are not regulated by the monetary authorities and where the laws recognize a broader array of acceptable collateral, only about 50 percent of total credit is provided by banks.

There is a clear justification for regulating banks and other deposit-taking institutions, particularly if the government explicitly or implicitly insures their deposits, but the rationale for regulation and supervision is much weaker regarding lenders and deferred payment sellers who do not take deposits and who are not insured. Such regulation often serves only to increase the market power and dominance of the banks by restricting their competitors. Since these competitors often have peculiar advantages in lending to agriculture, such supervisory policies can burden agriculture heavily.

Within the banking system, personal (unsecured) lending may not be well developed. In the absence of norms for such lending, supervisors may not have an efficient system for distinguishing sound from unsound personal loans. The ability to do so can bear heavily on promising group lending programs but permit leeway for unsound lending to favored groups.

Slow and Uncertain Legal Systems

Slow and uncertain legal systems—to which creditors must turn to enforce debt contracts—raise the cost and risk of making loans. Small loans and loans secured by movable property are particularly affected. In severe cases, lenders may refuse domestic real estate collateral arrangements and accept only offshore guarantees.

Solution Options

The legal, regulatory, and institutional changes needed to expand access to credit in rural areas are well defined. Many developing countries have experienced more flows of credit to both urban and rural clients after remedial measures have been undertaken, even on a partial or frag

Reform usually requires greater flexibility in the private enforcement of contracts. The judi-

ciary often acts as the final arbiter but need not be involved in each step of the enforcement procedure. The pattern is found in Canada, the United Kingdom, and the United States. In other countries, particularly Germany and the Netherlands, reforms have focused on the powers and ability of the judiciary and other enforcement offices to act quickly. Developing countries face a broad range of practical options and can implement them when appropriate.

Changes in Laws and Regulations

The following list gives examples of changes required in laws and regulations:

- Title land and register it in a registry; lower the costs of registration and of foreclosure.
- Reform the law of secured transactions; permit repossession and sale without extensive judicial intervention.
- Adjust the age of majority to conform to prevalent family-rearing practices.
- Draft specific, clear, and limited homestead provisions.
- Permit witnesses to give legal standing to contracts signed by illiterates.
- Deregulate the lending activities of non-deposit-taking institutions.

Changes in Institutions

Institutional changes that would aid in expanding credit in rural areas include:

- Reform legal registries and expand the scope for private operation.
- Remove barriers to the operation of credit bureaus and use the ratings of credit bureaus in bank supervision and regulation.
- Where national identity systems are used, make these universal; where they are not used, set the standards for privately supplied identification.

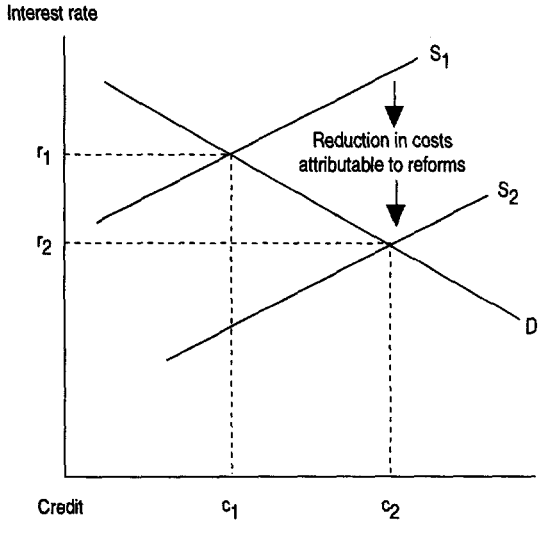
Benefits and Costs of Reforms

Reforming the legal, regulatory, and institutional systems that govern credit can lead to lower interest rates and more credit. These effects can be achieved by reducing the risk and cost involved in lending without resorting to subsidies.

The reforms recommended in this chapter permit lenders to lend profitably at lower rates of interest. Figure 5.1 shows a downward shift in the credit supply caused by reform, which produces lower interest rates and more credit in total. Society gains from the reduced cost of supplying the currently demanded credit (c_1) and from the gain in total output that arises from using the expanded credit ($c_1 - c_2$). The reductions in interest rates can be substantial (see table 5.1).

The combination of lower interest rates and more credit that results from well-designed programs to reform the laws of secured transactions produces gains estimated at several percentage points of gross domestic product. The costs of such legal reform programs would run under US$1 million. Even if the registries were operated publicly and not privately, the cost of the reform would typically run less than US$10 million. The World Bank is supporting such reforms with different combinations of economic and sector work and lending in

Figure 5.1 Impact on credit markets of well-designed legal and regulatory reform



Source: Contributed by Heywood Fleisig.

Table 5.1 Explaining high interest rates for loans in Argentina
(percent)

Factor	*United States*	*Argentina*	*Difference*
Effect of greater macroeconomic risk in Argentina[a]			
Government borrowing rate on 3-month dollar-denominated notes	5.5	11.4	5.9
Effect of higher bank intermediation spreads and greater difficulty collecting against real estate collateral			
Mortgage interest rate	7.5	18.0	10.5
Estimated impact of higher local bank spreads and collection costs			4.6 (10.5-5.9)
Effect of the difference in the framework for secured transactions[b]			
New car loan	9.7	21.0	11.3
Used car loan	14.1	26.0	11.9
Equipment loan	14.1	60.0	45.9
Personal unsecured loan	16.2	60.0	43.8
Estimated impact of the framework for secured transactions			
New cars			0.8 (11.3-10.5)
Equipment and personal loans			33.3 to 35.4 (43.8 or 45.9-10.5)

a. There is no risk that the U.S. government will be unable to pay its bonds in dollars because it has a legal monopoly on printing dollars. The Government of Argentina must get its dollars by raising taxes or cutting spending. Such actions are of course politically difficult. The difference between the U.S. interest rate on dollar bonds and the Argentinean interest rate on dollar bonds measures the markets' perception of this macroeconomic risk.
b. Differences in macroeconomic risk and intermediation cost apply equally to loans secured by real estate and loans secured by movable property. In the United States loans secured by movable property have interest rates close to the interest rates on mortgages; in Argentina banks do not make loans secured only by movable property, and nonbank lenders charge rates of about 60 percent.
Source: Fleisig and de la Peña 1996.

Argentina, Bolivia, Bangladesh, Bulgaria, El Salvador, Honduras, Peru (see box 5.8), and Uruguay. The Inter-American Development Bank has projects under way in Guyana and Haiti. The European Bank for Reconstruction and Development has projects under way in several countries with economies in transition from controlled to market-driven systems.

Conclusion

A fundamental obligation of the state is to provide a secure legal framework that enables its citizens to engage in exchanges that increase their welfare. This framework requires efficient and impartial institutions to settle claims among disputing parties. Because of the promissory nature of financial transactions, a sound legal and regulatory framework is particularly important to reduce risks and build confidence.

This chapter has drawn attention to the importance of collateral as an instrument for securing financial transactions, and to the many ways in which governments can facilitate the creation, perfection, and enforcement of security interests in collateral by improving laws, regulations, and institutions. The chapter pointed out the potential for increased private participation in these areas, and it highlighted other regulatory and institutional reforms that can increase the scope for both secured and unsecured lending. Such measures include removing constraints arising from usury laws and from regulations governing nonbank financial institutions.

Box 5.8 Land titling and registration: a private initiative in Peru

Where does this property end and that one begin? And who owns what? Land titling is not the world's most fascinating topic. Yet bringing secure property rights to the poor is a central issue in many developing countries.

Traditionally, the answers to such questions have come from bureaucrats. Or rather, have not come. More than four-fifths of the countryside in developing countries has no legally recognized owner. Now, a Peruvian, Hernando de Soto, and his Institute of Liberty and Democracy are trying to bring market forces to the task of titling.

Why does titling matter? Governments gain because they can collect property taxes. Utilities can more easily identify, and then charge, those who use their services at a given address. For ordinary citizens, recognized ownership brings pride, security, and credit: in the United States, over half the loans to new businesses depend on formal titles as collateral. The result is more investment and better upkeep for houses, workshops, and farms. Better value too: a recent study in the Philippines found that providing deeds for property raised its value by a third.

Aid donors have given (or lent) developing country governments several hundred million dollars in the past three decades for this cause. This funding has produced satellite-derived maps and elaborate databases but not many useful registries. The World Bank admits that nearly all its rural titling schemes have produced poor results.

In Indonesia onerous titling regulations add 10-30 percent to the cost of buying land. In Peru, before recent reforms, getting a deed involved 207 bureaucratic steps, divided among 48 government offices; on average, it took 43 months and cost 10 weeks' worth of the official minimum wage. There, however, with support from President Alberto Fujimori, Mr. de Soto's institute began to simplify and decentralize the process by creating its own computerized register of land and commercial property.

This went beyond titling: African experience has shown that titling alone will not expand credit if links to the financial sector are missing. So the institute's Peruvian database is designed to be used by lenders and utilities. Easier credit appraisal and the assurance of more certainty in foreclosure or cutting off services, if need be, mean less risk. The institute's scheme is said to cost a fraction of officialdom's, and still be faster. The Peruvian government has helped by legalizing 270,000 squatter businesses.

The institute claims that property given deeds under its scheme doubled in value in the plan's first three years. Mr. de Soto sees potential partners in financial firms: the more titles, the more mortgages, and in time, a secondary market in mortgage-backed securities.

Not everyone is convinced. Time and the attitude of governments will decide. But at least Peru is bringing fresh thinking to the old problem of helping the poor to join the formal economy.

Source: "A Matter of Title," *The Economist*, December 9, 1995.

Although the costs associated with the implementation of legal and regulatory reforms are moderate, the long-term benefits are enormous. Much more emphasis is warranted on the reform aspect of building rural financial markets and improving the performance of rural financial institutions.

CHAPTER 6

Direct Interventions

The new approach to rural financial intermediation suggests a more limited, market friendly role for government interventions. It specifies strict criteria regarding the conditions under which direct public interventions are warranted.

- If the overriding goal is *rural income expansion*, direct public interventions are justified only if they address identifiable market failures, and then only if the expected benefits of the interventions outweigh the associated costs of the interventions.
- If the overriding goal is *poverty reduction*, the benefits of economic growth may fail to reach many of the rural poor and interventions based on prevailing social norms may still be justified, even in the absence of market failure (or of an economically justifiable intervention to address such failure).

Differentiating between indirect and direct interventions is often difficult. In this report the term *indirect* refers to the policy environment (macroeconomic, sectoral, and legal and regulatory), and *direct* refers to interventions that normally involve the direct application of public funds through targeted credit, the financing of technical assistance to rural financial institutions, and so forth. Although consensus has developed among policymakers regarding optimal indirect interventions (see chapters 4 and 5), the appropriate role for governments in direct interventions is still much debated.

Targeted Interventions

Targeting specific market segments is not uncommon in the private sector. But in the public provision of goods, the situation differs in two important respects. Budgetary resources used to target specific activities are (ultimately) obtained by imposing taxes on other economic activities. The allocation of public funds, including subsidies, is usually not guided by market forces but by social objectives. Because public funds can be put to a variety of uses, the opportunity cost of each intervention should be strictly analyzed.

Subsidies to rural financial institutions should be measured, and the social costs of given interventions should be compared with the cost of alternative interventions (see chapter 3, and Squire 1995). The impact and performance of targeted or subsidized programs should be evaluated regularly against their stated objectives. Chapter 7 presents the potential problems associated with rural financial intermediation and proposes a methodology for assessing its effectiveness.

Rural financial interventions should always be guided by the fundamental objective of complementing or facilitating the workings of the market. All interventions should aim to reduce government involvement over time, while increasing the private provision of financial services and competition. The unit desas (village units) of the Bank of Indonesia (BRI-UD) were created with government assis-

tance through the provision of seed capital. Because BRI attained economies of scale and introduced efficient modes of operation, it has become highly profitable and financially self-sustainable. Its success has encouraged other financial intermediaries to explore profitable lines of activity in rural areas, following the BRI-UD methodology.

Guiding Principles for Public Interventions

No single form of intervention is optimal in all cases. The selection of the most appropriate intervention will be determined by the *initial objective of the intervention* and should take into consideration several related variables. These include the characteristics of the target clientele, the physical and socioeconomic environment, the country's or community's culture, and the nature and efficiency of the prevailing informal financial market (see box 6.1).

The intervention could draw on several kinds of institutions, forms of assistance (such as seed capital or training), products or services (such as savings or insurance), and modes of operation (such as group lending or mobile banking). Table 6.1 summarizes some of the main variables and policy options and provides a framework for the discussion in this chapter.

Objectives of the Intervention

Direct interventions should be implemented either to address specific market failures or to reduce poverty (see chapter 3). The effectiveness of the intervention should always be measured against the objective.

Market failure. Informal providers cater to several aspects of the demand for financial services in rural communities. However, these providers all rely on community-based information to screen poor risks, and the costs of obtaining this information rise rapidly with geographical distance. Partly as a result, rural financial markets are almost always segmented. They cannot easily spread risks geographically, provide adequate payments, transfer services across large areas, or provide sufficient savings services at positive real interest rates (because lenders must maintain high equity-to-assets ratios to manage covariance risk).

Examples of interventions to rectify market failure resulting from *imperfect information* are government or donor assistance in the form of seed capital for establishing rural financial institutions in remote areas or for introducing mobile banking; support for piloting innovative schemes; and incentives for existing financial institutions to expand their range of services or to extend services to a certain clientele or specific geographic area. These interventions would enable institutions to test methods that could systematically reduce the cost of obtaining information about a specific clientele, making it feasible to extend financial services to them. In Indonesia the government provided seed capital for the formation of BRI's village units on the clear understanding that any unit failing to become independent of subsidies would be closed.

Social barriers to successful financial intermediation could be overcome through similar interventions. Examples include financial incentives to institutions that service disenfranchised segments of the market (women or the poor, for example) or cost-sharing to cover the initial expense of researching and piloting effective methods for servicing the target clientele. Although social intermediation could help to further overcome these barriers, its cost can seldom be fully covered by an institution through its interest income. Social intermediation can take several forms, including advocacy, training, and group-based approaches. Group-based lending or saving can also help to reduce the transaction costs of financial institutions (Bennett and Goldberg 1993).

Poverty reduction. In designing interventions to reduce rural poverty, the causes of poverty and obstacles to income expansion should be carefully analyzed, and the intervention should

Box 6.1 The importance of empirical evidence in justifying and designing intervention

A recent World Bank study demonstrated that rural financial markets are very shallow in three important regions of Mexico, where rural entrepreneurs have only limited access to financial services. The markets are also highly segmented because the types of borrowers and lenders are so closely matched that funds cannot flow across regions or groups of individuals. These markets are either noncompetitive or highly inefficient. High interest rates imply that there are abnormal returns or that the ex ante risk premiums charged by some lenders are socially inefficient because of the lenders' inability to diversify geographically.

Because of this poor performance the rural economy in Mexico will continue to have difficulty adjusting to the major policy reforms of recent years and to the aftermath of the exchange rate crisis of early 1995. Rural entrepreneurs will have to adjust factor proportions, modify output mixes, change their scale of operations, and invest in new technologies. Their success will depend on the performance of all factor markets, particularly financial markets. Segmentation, however, will force rural investors to rely mainly on limited local resources. Therefore, any local negative income shocks or low initial endowments of resources will have long-term negative effects on wealth accumulation and hence on poverty. Extreme interest rates—up to an average of 36 percent *per month* in real terms for credit in kind—and peculiar collateral requirements have negative distributional consequences. The evidence also suggests that traditionally disadvantaged groups in the rural population may be trapped in low risk–low return investment strategies that in the long run will probably widen the income distribution gap. Lack of access to rural financial markets is contributing to this state of affairs.

The newly available evidence seems to have helped the government arrive at a better understanding of the relevant issues and to formulate strategies for dealing with them. For example, the government's new objective is to increase the availability in rural areas of viable, competitively priced, and untargeted deposit and credit services from formal financial intermediaries. This effort, if successful, will increase the outreach and sustainability of formal financial intermediaries in rural areas. It will also increase overall access to rural financial markets and change the composition of that market niche by serving entrepreneurs whom the formal sector did not previously serve.

The government is attempting to create an environment in which property rights, contracts, and financial services can prosper. Such an environment requires an improved legal framework for enforcing contracts and making use of collateral, as well as networks for sharing information between lenders (for example, credit checks). In particular, it is necessary to (a) have a more efficient legal framework for lending secured by real estate, equipment, inventory receivables, and consumer goods; (b) make the system of public registries efficient; and (c) introduce mechanisms for expeditious recovery of collateral.

The government will also fund—with World Bank assistance—experiments in developing sustainable technological packages for delivering financial services to small rural entrepreneurs. The objective is to establish general guidelines for providing financial services to medium-size and small entrepreneurs in rural areas based on examples of successful informal lenders in the regions surveyed and in other countries. The guidelines will recommend sensible business practices that can be applied to the provision of financial services in rural areas. That is to say, the services offered and the technologies used must be appropriate, and the people involved must act on a proper set of incentives within a conducive policy framework.

Source: Contributed by Rodrigo Chaves and Susana Sanchez.

be directed toward overcoming these problems. For example, financial institutions often refrain from lending to the poor because small loan and deposit amounts increase relative transaction costs. These costs could be lowered through subsidies aimed at sharing a portion of the transaction costs or through dissemination of information on institutional practices known to reduce transaction costs. One successful practice is group-based lending, which helps to overcome the problem of insufficient collateral. Credit guarantee funds have also helped to encourage institutions to lend to high-risk clients with no credit record and insufficient collateral. Sound financial reporting and transparency in disclosing the costs of such interventions are essential for choosing the most efficient intervention, whether through financial intermediation or through nonfinancial interventions aimed at poverty reduction.

Table 6.1 Variables and policy options for direct interventions

	Variables			*Forms of public financial intermediation*			
Objectives	*Target clientele (demographics, cultural, and socioeconomic considerations)*	*Physical and socioeconomic environment*	*Nature of existing (informal) products, schemes, and institutions*	*Delivery vehicle and institutions*	*Instruments for targeted interventions*	*Products and services*	*Modes of operation (institutional or product level)*
Address market failure	Income level	Population density	Moneylenders	Nongovernmental organizations, private rural financial institutions	Seed capital	Credit (working capital and personal)	Group lending: – Collective – Peer pressure
Reduce poverty	Occupations in agriculture or microenterprises	Investment in infrastructure	Rotating savings and credit associations	Commercial banks	Matching grants	Savings	Mobile or village banking
	Rural, nonagricultural enterprises	Agricultural growth trends	Nongovernmental organizations	Specialized agricultural credit institutions	Subsidized transaction costs	Credit guarantees	Incentives to staff and clients
		Agricultural conditions, such as double-cropping or threat of droughts or floods	Commercial banks	Rural financial institutions	Incentives for innovations	Crop insurance	
		Access to formal financial services	Postal services	Insurance companies	Piloting	Other insurance	
		Access to informal financial services	Cooperatives		Information dissemination		
					Social intermediation		

The poor often have limited skills and markets, and the profitability of their investments could be improved through skills-based training, including training in effective agricultural methods. It remains debatable whether such services should be provided by institutions specializing in financial services. The government or donors could, however, work in association with financial institutions or nongovernmental organizations to provide these services.

Target Clientele

There may be several ways to reach a given target clientele. Some factors to consider in designing rural financial intermediation projects are the income-generating activities of the target clientele, their income levels, and their culture.

Income-generating activities. Clients involved in agricultural activities may require longer-term loans than those involved in microenterprise activities. The potential impact of seasonality and natural disaster on incomes should also be taken into account, for example, by introducing crop or livestock insurance against specific risks or allowing for rescheduling of loan repayments (at full financial cost) under unwillful default.

Loans are often extended to provide working capital. Poor clients or those with wide fluctuations in income may at times require loans to meet personal expenses. Short-term revolving credit or easily accessible savings could meet these needs, particularly for clients above the poverty line.

Income levels. Credit alone is unlikely to draw the very poor out of poverty because they have limited access to markets, networks, and skills. Access to nonfinancial services, such as skills-based training, could help to improve the poor's return on their investments, just as access to savings facilities with a positive return would start to smooth their consumption. The Grameen Bank (GB) in Bangladesh requires savings deposits as a precondition to extending credit.

Culture. Cultural factors are important to the success or failure of given methodologies. For example, joint liability groups may be more successful in some cultures than in others (see box 8.9). Practices prevalent in the informal market, such as the use of rotating savings and credit associations (ROSCAs) can provide a good indication of the types of products and delivery mechanisms that may work in a given community.

Physical and Socioeconomic Environment

The most appropriate form of direct intervention can be determined by the physical and socioeconomic environment of the target clientele. Factors to be considered include level of education (of the population and potential staff), population density, the quality of the rural infrastructure, growth trends in agriculture, and climatic conditions.

Well-educated, low-cost staff. The availability of well-educated, low-cost staff with a good knowledge of the community would improve the efficiency of an RFI and perhaps lower transaction costs. Most successful rural financial institutions, such as the BRI, the GB, and the Bank for Agriculture and Agricultural Cooperatives (BAAC) in Thailand, invest heavily in ongoing training. The GB selects and trains staff who have a unique knowledge of local conditions. Government assistance to support the initial training of employees or early innovators in rural finance could facilitate the development of institutional capacity.

Population density. Credit interventions are likely to be more successful in areas with a relatively high population density because average administrative costs are likely to be lower in such areas (see chapter 9 for a discussion of successful interventions in Bangladesh, Indonesia, and Thailand).

Box 6.2 Rural finance in Central and Eastern Europe

Rural financial interventions in countries in Central and Eastern Europe (CEE) have been characterized by potentially high social return on the one hand and high risk on the other. The *high social return* refers to the strong supply response of private enterprises that might have been realized following implementation of reforms in macroeconomic, trade, agricultural, and financial policies—but which were constrained by insufficient agricultural credit and lack of reform in rural finance. The *high risk* stems from poor policies which lead to distorted input-output prices and the intensive use of concessional agricultural credit (to compensate for the inadequate profitability of agricultural activities), which have resulted in misallocation of resources.

Challenges

Under central planning state and collective farms depended on credit from state banks, which acted as disbursement windows rather than as profit maximizing financial institutions. Frequent loan forgiveness took place, and the agricultural banks were not expected to screen clients for their credit worthiness but rather to channel funds to facilitate the realization of central plans. Because the state had filled all credit "needs" in the past there were virtually no informal sources of credit to turn to when the formal banking system collapsed under the weight of bad loans. Rural finance in CEE faces the following challenges:

- *Low profitability of agriculture.* Rural finance cannot expand rural incomes if borrowers do not have profitable investment opportunities. Sectoral reforms to remove distorted policies that tax the agriculture sector should be given priority. Such reforms include eliminating food price controls and aligning input-output prices to international prices.
- *Lack of information.* The rapid and substantial changes in the CEE economies have made old information about creditworthiness irrelevant. New information is difficult to compile. Emerging financial institutions are generally too inexperienced to assess the risks associated with rural finance, and there are no credit rating systems through which to share and obtain credit information. Potential measures to improve information include training farmers to keep records and develop business plans, providing technical assistance to banks to help them price risks and evaluate agricultural projects, and promoting credit rating agencies.
- *Overcoming the high risk.* The rapidly changing macroeconomic and policy environments in

Agricultural trends and infrastructure. Credit would also be more effective in areas with profitable agriculture (such as irrigated, double-cropped lands), well-developed infrastructure, and access to active markets, because these factors would facilitate a higher (and often more stable) return on investments.

Climatic conditions. In poor, semi-arid areas with highly volatile climatic conditions and limited infrastructure, a credit program is unlikely to be the preferred option because it may impose significant financial risks on its clients, who may be unable to generate a regular cash flow to service debts. But financial interventions that support savings mobilization and offer clients liquid and remunerative savings instruments with which to smooth consumption may be warranted. The Mysore Resettlement and Development Agency (MYRADA), which operates group-based savings and credit schemes in semi-arid parts of Karnataka, India, is a good example of a savings-led financial intervention (see box 8.6). Clients' risk in areas with major climatic changes could also be reduced through well-designed crop or drought insurance schemes.

The prevailing economic system and the nature of existing financial intermediaries are extremely important. The form and sequence of interventions would differ markedly in a sparsely populated and underserved rural African community than in a former command economy in which a central government had previously assumed much of the risk related to agricultural activities and in which a well-established network of state-owned supply-driven financial institutions was in place.

Informal Finance Market

Rural populations often rely mainly on savings and credit services from informal sources: trad-

CEE countries foster high levels of uncertainty that adversely affect financial intermediation by making potential creditors and producers reluctant to engage in financial intermediation. To reduce risk, macroeconomic stabilization must be achieved and mechanisms must be developed to allow reduced risk through hedging instruments, such as adequately priced crop insurance and guarantees.

- *Poor framework for secured lending.* Secured lending is facilitated when clients are allowed to own property and hold titles to their assets. To improve secured lending, cadastre and land registration efforts should begin as soon as possible, collateral laws for real and personal property should be updated, and registries and procedures for out-of-court settlements should be established. In the absence of adequate collateral, social capital in the form of joint and several liability may be created by supporting the voluntary formation of small, homogeneous groups of borrowers.

Strategies

The World Bank financial intermediary loans to CEE countries are of four types:

- *Competitive banking model.* This approach calls for a network of financially sound commercial banks that lend to the agricultural sector at market rates without state budget subsidies. To promote rural financial intermediation through a competitive banking system, measures are required to strengthen the banking system as a whole and to address the multiple policy, and legal and regulatory constraints to rural financial intermediation in the former command economies.
- *Credit union model.* This approach relies on local, member-owned institutions that are locally diversified or nationally federated and thus able to overcome seasonality and high covariance problems by pooling and sharing risk.
- *Stop-gap models.* Interim solutions to prevent unwarranted decline in agricultural production include the use of government-sponsored nonbanking institutions to channel funds on a temporary basis to the agricultural sector at market rates and according to commercial imperatives while the financial system is being rebuilt.
- *Sovereign risk guarantee model.* Government-sponsored sovereign risk facilities can offset the sovereign risk associated with policy setbacks that negatively affect credit contracts for the supply of agricultural inputs from international suppliers.

Source: Tuck and Yaron 1996.

ers, landlords, moneylenders, money keepers, savings and loan associations, and rotating savings and credit associations (ROSCAs). Significant use of informal mutual insurance has also been observed in rural communities (Platteau and Abraham 1987).

These informal schemes provide many necessary financial services, but they are often underdeveloped. For example, savings usually earn no interest—in some places depositors pay to have their savings safeguarded. Similarly, markets are often segmented and isolated, which may allow usurious moneylenders to extract monopoly rents. The informal market has limited ability to diversify covariant risk or to deal with seasonality and natural catastrophe.

Governments can facilitate the functioning of these markets (see box 6.4). Researching the informal market can provide important data about the needs of clients and accepted norms of operation and may help to identify innovative modes of operation applied by the informal market to overcome problems inherent to rural financial markets (see chapter 8). Encouraging private or state-owned financial institutions to provide group-based savings facilities at positive interest rates for ROSCAs or for members of funeral savings and insurance funds is another way of complementing the informal market.

Kinds of Institutions

Financial sector policies have generally been tailored to urban banks, brokerages, and other financial institutions that serve primarily larger corporate clients and urban depositors.[28] In rural areas governments have focused on specialized agricultural credit institutions and government-run cooperatives. Neither set of institutions has been attuned to the

Box 6.3 Village credit funds in Albania

Background. The dismantling of Albania's agricultural cooperatives in 1992 resulted in the creation of 380,000 farms with an average size of 1.4 hectares. Albania regressed to a subsistence economy. The banking sector was in disarray and unable to provide the new, risk-averse, small-scale farmers with credit. A credit system was started with the participation of the farmers; it was developed and tested using a learn-by-doing approach. The farmers refused to use solidarity group methodologies, which reminded them of the former top-down cooperatives, but they wanted to restore village identity, which had been destroyed during the communist period.

Start-up. Village credit funds (VCF), managed by elected village credit committees (VCC), were set up under a Rural Poverty Alleviation Pilot Project financed by the International Development Association to provide financial intermediation services at the village level. The Albanian Development Fund (ADF), an autonomous government foundation, is responsible for implementing the project, which has a rural works component. The ADF has recruited and trained credit officers, who participate in VCC decisions and extend the VCF network.

According to the basic rules of the VCFs, if a borrower fails to repay a loan, the line of credit to the borrower's entire village may be suspended. Only a part of a village's population can receive loans at a given time; those who expect to obtain credit in the future exert strong social pressure on borrowers to repay on time.

Performance. Ninety-three VCFs had been created by December 1995, and more than 4,300 loans had been disbursed, with an average loan size of US$350 and a repayment rate of nearly 100 percent. The loans have been used for livestock (65 percent), agriculture (25 percent), trade and services (6 percent), and crafts (4 percent). The interest rate, which was initially pegged to the U.S. dollar because of an inflation rate of 200 percent in 1992, has been increased from 6 percent to 10 percent in local currency. Inflation was estimated at 8 percent in 1995.

Follow-up. The objectives of the follow-up Rural Development Project which began in 1995, are to create 720 VCFs in the next five years, integrate savings with credit services once a cooperative law is passed that provides a legal structure for VCFs, transform the ADF's credit department into an apex institution subject to the banking law, and move the new rural financial institution toward financial self-sustainability.

Lessons. Four main lessons can be drawn from the Albanian experience, which is especially relevant for post-socialist countries. First, the strength and durability of local tradition must be considered. In Albania local traditions survived about 50 years of a centrally planned command economy. Second, the active participation of villagers and regular dialogue with the village credit committees are essential for success. Third, by decentralizing decisionmaking and promoting entrepreneurship, credit becomes a powerful tool for promoting a market economy and fostering democracy. Fourth, using a multipurpose project unit with a soft budget constraint makes it more difficult to achieve the goal of financial sustainability. At the beginning of the pilot project it was not known whether the VCFs had the potential to become sound financial institutions. Now that their potential is known, the autonomy of the credit program—and the imposition of a hard budget constraint—is an urgent necessity.

Source: Nowak 1996.

Box 6.4 Financial systems that work for the majority

In April 1995 Women's World Banking (WWB) organized the Global Policy Forum on Financial Systems That Work for the Majority (WWB 1995). Fifty leaders of finance ministries, central banks, financial institutions, and international development agencies agreed on key principles and practices for promoting financial institutions that serve the poor. These practices include:

- Encouraging a range of institutions with different legal structures to provide sound financial services to the poor
- Keeping entry thresholds low and developing simple supervisory and reporting requirements for financial intermediaries that serve the poor
- Allowing microfinance institutions to operate as recognized financial institutions, possibly under separate supervisory and regulatory arrangements
- Encouraging lending institutions that meet prudential standards to mobilize savings and other domestic resources
- Permitting financial intermediaries that serve the poor to rely on competition rather than government fiat to contain their on-lending interest rates to clients.

Source: WWB 1995.

financial needs of the vast majority of rural inhabitants.

NGOs and private formal and informal institutions. Public support for rural financial intermediation does not necessarily imply public provision of credit. NGOs or locally sponsored credit unions are frequently more adept at supporting grassroots community development than central or even local governments. NGOs often establish ties with the community that reduce information barriers and discourage irregularities. Governments can support the provision of credit through these institutions by providing grants to cover transaction costs related to these agencies' start-up activities or by assisting in training and disseminating information (see box 6.5).

Governments can provide incentives to commercial banks to expand their services to rural communities. The banks often have stronger financial skills and can reach significantly more clients than can most NGOs. The involvement of commercial urban-based banks would help to mainstream rural finance. However, the potential place of commercial banks in rural finance has been largely neglected, often because of the preference accorded to specialized agricultural credit institutions. Finding the most appropriate ways of encouraging the effective provision of rural financial services by commercial banks requires further research.

State-owned rural financial intermediaries. The state may decide to revitalize specialized agricultural credit institutions, convert them to RFIs, or privatize them. Governments may also have to establish new RFIs. However, no preferences should be given to state-owned RFIs that would not be granted to other (new) applicants interested in servicing the same target clientele—competition with state-owned rural financial institutions should not only be welcomed but encouraged.

The special treatment often accorded to state-owned rural financial institutions, which were run as disbursement windows rather than as autonomous financial institutions, usually led to extremely poor financial performance. The political and fiscal costs of closing a state-owned RFI can be significant (large staffs must be laid off, unfunded pension liabilities accrue). In addition, such rural financial institutions often have a sunk cost represented by a large branch network in otherwise underserved areas that could be put to more efficient

Box 6.5 The World Bank and nongovernmental organizations

As the World Bank focuses on investing in human development, it is increasingly recognizing the importance of local and international nongovernmental organizations (NGOs) in achieving poverty reduction and environmentally sustainable growth and in efficiently and equitably delivering services. NGO involvement has significantly improved beneficiary participation, and thus helped to ensure that goals and objectives of projects truly reflect beneficiary needs. NGOs reach poor communities and remote areas where there are few basic resources and little infrastructure. They operate at low cost by building on existing resources and transfer technologies developed elsewhere.

But there are factors that make it difficult for some NGOs to collaborate on Bank-financed operations. Many NGO-sponsored activities are too limited and localized to have important regional or national impact, and many could benefit from managerial and technical capacity building. There is particular concern that NGOs asked to scale up their operations may lose their innovative quality and grassroots participatory base. The challenge for organizations such as the World Bank and its partners in civil society is to develop a strategy for choosing from among the wide range of NGOs working in a particular sector and country, those best suited for collaboration.

The World Bank is committed to achieving a close and productive working relationship with NGOs. Opportunities for collaboration exist on the operational level (identifying, designing, implementing, and evaluating projects), the analytical level (participating in the Bank's research and economic and sector work), and the policy level (discussing and formulating Bank policies on development issues).

Source: World Bank 1996a.

use. It may be worthwhile to re-engineer rather than close down the operations of unsuccessful RFIs by restructuring incentives and sources of finance to enhance compliance with commercial imperatives and by introducing a strict program for reaching financial targets and phasing out targeted credit.

When establishing a new RFI or rehabilitating a poorly performing one, it is essential to use market-oriented interventions that aim to complement and not replace the informal rural financial market. State-owned rural financial institutions should be run according to the same sound business principles that guide private and commercial financial institutions (see chapter 8). The management of state-owned rural financial institutions must have both autonomy in operational decisions and accountability for performance. For privately owned institutions, subsidies should be limited to providing seed capital, helping to lower initial transaction costs, and assisting with training to facilitate building institutional capacity and achieving economies of scale and scope. Once RFIs become profitable, they can be privatized in part or in total.

The initial rehabilitation and conversion of a specialized agricultural credit institution into a diversified RFI may require substantial investment in institution building (see box 6.6), including the retraining of staff and upgrading of management information systems. Other

Box 6.6 Rehabilitation of credit unions in Guatemala

Before 1988 Guatemalan credit unions had a strong social orientation; their main purpose was to provide cheap rural credit. The credit unions were financed by subsidized external credit and by compulsory, zero-interest share deposits from members. Because loans were issued at below-market interest rates, members were in effect penalized for saving and rewarded for borrowing. The credit unions had serious operational problems (management information systems were undeveloped, the credit unions carried a large volume of nonearning assets, the loan delinquency rate was about 20 percent, and loan loss reserves were underestimated by more than 50 percent). Liquidity reserves were so low (about 3 percent) that the credit unions could not always honor cash withdrawals from members.

The World Council for Credit Unions (WOCCU), funded by the U.S. Agency for International Development, implemented an institutional development program for the credit unions between 1987 and 1994. The WOCCU Cooperative Strengthening Project worked with the National Credit Union Federation of Guatemala and twenty of its thirty-nine affiliated members, of which nineteen were in rural areas.

By 1994 the situation had completely reversed: deposits had grown from 24 percent of assets (1988) to 55 percent (1994), the loan delinquency rate had decreased to 8 percent of the loan portfolio, loan loss and liquidity reserves were increased to adequate levels, and nonearning assets had been halved. The result was phenomenal growth in assets, profitability, and service with many more clients using (interest-earning) savings and credit facilities.

Several factors contributed to this turnaround:

- A change in modes of operation was implemented through the use of a business plan that incorporated institutional development, financial stabilization, savings mobilization, and credit administration. Firm financial targets were set and an effective management information system was put in place. Interest rates on deposits and loans were increased.
- A change of mind was effected to achieve a change in operations and management. To ensure long-term sustainability, the changes had to be embedded in organizational practices and culture. To make sure that they would be, the WOCCU emphasized institutional development. An agreement of participation was signed by all parties to demonstrate their commitment, and credit unions were required to contribute staff and financial resources during the stabilization process.
- Compliance from the credit unions was obtained through *positive incentives*. Under the project, financial assistance for the stabilization process was provided to the credit unions in the form of non-interest-bearing one-year loans. The loan principal was placed in high-yielding Guatemalan investments, and the interest earned went to the credit unions to offset nonperforming assets.

Source: Branch and Richardson 1995.

reforms that are usually required include increasing reliance on voluntary savings, withdrawing operating subsidies, initiating aggressive loan collection campaigns, and developing staff incentives.

Instruments for Targeted Rural Financial Interventions

Governments and donors can help to disseminate best practices by supporting training and funding study trips to successful rural financial institutions in other parts of the world. They can fund initial training costs or support piloting schemes that promote innovation and establish ways of reducing transaction costs through a learning-by-doing approach. For example, the World Bank is now involved in two promising pilot rural financial projects in Madagascar and Croatia (see boxes 6.7 and 6.8).

Targeting and explicit subsidies should be used to address barriers to financial intermediation and to accelerate institutional development. Care should, however, be taken to minimize the distortions inherent in these methods. Some guidelines on the design and application of targeted credit follow.

Ensure that targeted funding remains the exception. When directed credit targets are binding on financial intermediaries (when they allocate more to particular activities or clientele than they would in the absence of the lending requirements), an economic subsidy inevitably accrues to the target group because it pays less than the economic opportunity cost of funds.

Phase out government involvement over time. Interventions should aim to reduce government involvement over time, while increasing the private provision of financial services and competition. When financial assistance is provided to private or state-owned rural financial institutions, clear goals for outreach and self-sustainability should be set, as should a sunset clause

Box 6.7 Piloting savings and loan associations in Madagascar

In 1993 the World Bank approved an International Development Association Credit of SDR2.7 million for a pilot operation to help rural groups in Madagascar develop savings and loans associations that could eventually be grouped into unions and linked with the formal banking sector. The project has piloted new schemes under the guidance of two experienced international organizations—the World Council of Credit Unions and Développement International Desjardins—and is financing the expansion of existing schemes supported by foreign nongovernmental organizations—the International Development and Research Company and the Foundation for Land Development.

About forty savings and loans associations have been established in less than two years, exceeding appraisal estimates. Each has from thirty to fifty members with average savings of US$20–$30 per person. Savings and loans associations committees manage loans and establish interest rates that are invariably positive in real terms. Recovery rates have been high, and project implementation is highly satisfactory.

Although the concept of savings as a prerequisite for credit activities is new to the country, it is increasingly accepted, even in the poorest rural areas. The pilot project is drawing considerable interest from crop and livestock producers, who have requested help to set up savings and loan associations in their villages. New schemes will be established in the dairy production areas of the country under the IDA-financed Livestock Sector Program: more are likely to follow.

The overall process is being coordinated by the Association for the Development of the savings and loans associations movement (ADMMEC), a small private apex organization that is also managing the IDA credit. ADMMEC is now assessing experience, organizing workshops to produce recommendations for improving the regulatory framework for SLAs, and steering a participatory process that should lead to the formulation of a national rural financial strategy and a five-year action plan. The outcome of this work will be discussed with the government and donors during the midterm review of the project, paving the way for the development of a full-scale follow-up operation.

Source: Contributed by Michael Simeon in 1996.

Box 6.8 Proposed pilot rural financial project in Croatia

Objectives. The proposed project aims to identify the reasons for the lack of rural credit in Croatia, to strengthen viable rural financial intermediaries, and to provide long-term credit resources suitable for rural investments. If approved, the project will (a) support participating commercial banks committed to serving rural borrowers, (b) strengthen the network of savings and credit associations as rural financial institutions, (c) assist rural entrepreneurs in seeking access to bank credit, and (d) develop solutions for collateral- and savings-related constraints facing rural financial intermediation.

Components. The project would consist of the following four components:

1. *Commercial banks.* Long-term credit funds (US$12 million) will be given to three Croatian commercial banks. These banks will engage in rural small-scale lending at market rates to the private sector and, through a learning-by-doing approach, find ways of overcoming initial information constraints and reducing high unit costs in the market segment. In addition, a training program will be developed for credit officers of participating commercial banks dealing with rural small-scale loans. The program will aim to develop substitutes for the screening and enforcement mechanisms used by informal lenders in Croatia and to learn from the experiences of banks in other countries. Project funds to participating commercial banks would be allocated through an auction at which the bank offering to on-lend at the lowest rates (linked to a long-term interest rate index in Croatia) will receive the most funds.

2. *Savings and credit associations.* Long-term credit funds (US$2 million) will be given to five to seven selected savings and credit associations for on-lending to small and rural borrowers at market rates. Technical assistance and training will be offered to savings and credit associations and to the new savings and credit associations supervision unit of the National Bank of Croatia. Funds will be provided at the central bank's interbank rate.

3. *Borrower support.* Rural business advisory services for farmers and other small-scale entrepreneurs will be established to assist them with evaluating investment projects, developing business plans, and presenting loan applications to banks and savings and credit associations. A farmer association service will advise farmers and other rural entrepreneurs of how to join associations and apply for group loans from commercial banks.

4. *Studies and evaluation.* Studies on rural collateral will be carried out. These studies will deal with rural real estate, movable property, and mutual credit guarantees. A study for a possible savings and credit association deposit guarantee facility and a formal evaluation study of the pilot project will also be completed.

Project implementation. A project coordination unit in the Ministry of Agriculture and Forestry will be responsible for all components (except the project coordination unit components, which will be administered by the three banks). A unit will be established in the central bank to supervise savings and credit associations. Participating commercial banks and savings and credit associations must comply with eligibility criteria, which will include managerial and financial soundness and the quality of portfolio. Only creditworthy, private clients will be eligible for subloans, which will be evaluated according to the subprojects' commercial viability, available collateral, and environmental impact.

Expected outcome. The project will provide evidence of the ability of commercial banks and member-based savings and credit associations to attract rural savings and deliver recoverable rural credit. After the project's completion, commercial banks and savings and credit associations will be expected to undertake rural financial intermediation on commercial principles at their own risk.

Source: Contributed by Vinod Goel in 1996.

for phasing out support completely, when doing so is clearly warranted.

Assess performance. The performance of targeted credit programs should be evaluated regularly against their stated objectives and against other potential interventions. To facilitate measurement, subsidies should be *transparent* and be reflected in the financial statements of institutions.

Focus on access. If the aim is to expand the provision of financial services to underserved clients, then the problem of access must be addressed. Because budget constraints are nearly always an issue, underpricing interest rates in-

variably compromises the access objective and should be avoided.

Be alert to undesirable incentive effects of targeting. The potential for incentive distortions for target and nontarget clients increases with the size of the unit subsidy provided through the targeted program. Both financial institutions and their clients have an incentive to misrepresent clients' status if doing so gains them access to subsidies (Besley and Kanbur 1990). Addressing this problem can involve significant administrative costs and invasive bureaucratic procedures. Therefore, avoiding subsidized interest rates is essential. Mechanisms such as small loans should be designed to encourage self-selection of targeted clients into programs.

Create a level playing field. A level playing field can be achieved at the sectoral level by ensuring competitive access to lines of credit among qualifying institutions that provide targeted activities (Guasch and Glaessner 1992), by applying hard budget constraints to state-owned rural financial institutions, and by providing no special privileges, such as coverage of loan losses.

Focus on providing services to the target clientele, not to the owners of the RFI. If the objective is to provide savings and credit services to a target clientele, any reputable RFI capable of doing so could be supported with direct interventions for institution building. Particular institutions should not be favored. An impartial approach is needed to enhance competition.

Evaluate the appropriate degree of targeting on a case-by-case basis. Determining how narrowly public funds should be targeted is difficult. Traditional approaches have often been too narrowly targeted to specific subsectors within agriculture, exposing specialized agricultural credit institutions to unnecessarily large covariant risks. Similarly, donors who have focused assistance on one institution have denied opportunities for institutional development to other financial intermediaries. The appropriate degree of targeting requires judicious balancing of cost and incentive factors on a case-by-case basis.[29]

Products and Services

The provision of financial services to rural communities, especially poor communities, has traditionally focused almost exclusively on extending credit. Savings, insurance, and other financial products and services were largely ignored. This emphasis on credit was due partly to the perception that the poor cannot save. This perception has subsequently been proved wrong by many institutions, including the GB, the BRI, the BAAC and the MYRADA project in India (see chapters 8 and 9).

Often, the need for safe, liquid, and remunerative savings facilities takes precedence over the need for credit, because saving improves clients' ability to smooth consumption with their own resources, and allows them to avoid having to carry the burden of debt repayments during income downswings. Similarly, the presence of insurance schemes in informal markets shows that there is demand for a broad array of financial services among the rural poor.

Chapter 8 offers some guidelines for providing traditional financial products, such as savings facilities, on an institutional level. Two special and much-debated products that deserve further discussion are credit guarantee schemes and crop insurance; these products are discussed later in this chapter.

Modes of Operation

The mode of operation most suited to the target clientele must be considered in selecting the products and services provided, the instruments used, and the delivery vehicles supported. For example, it may be cost-effective for NGOs or state-owned rural financial institutions to provide credit or savings services in remote areas through mobile banking agents

rather than through full-scale branch offices. The National Agricultural Bank of Morocco doubled its banking network by opening seasonal banking windows in existing local offices of the Ministry of Agriculture. Several rural financial intermediaries have employed agents who regularly visit villages by motorcycle or on foot to provide financial services.

Another issue is whether group-based joint liability schemes are preferable to loans to individuals. If clients have better information about each other's investments than the lender has about them, and the clients can engage in cooperative behavior, interlinked contracts based on mutual guarantees can result in better loan terms for the clients with no reduction in expected income for lenders. This is so because the co-guarantees can lead to higher effort levels and lower default rates on loans. The merits of group-based lending and other modes of operation are discussed in chapter 8.

Credit Guarantee Schemes

The most important form of guarantees for transactions in rural financial markets are credit guarantees. They cover commercial risks associated with loans to clients who have insufficient enforceable collateral. Other major forms of guarantee cover noncommercial risks such as war, civil disturbance, or breach of contract by host governments (boxes 6.9 and 6.10).

Guarantees are widely used by the private sector. For example, it is common for banks to require cosigners on loans to clients, and loans to cooperatives or other group-based loans often involve mutual guarantees (see chapter 8). Governments have also sponsored public guarantee schemes to encourage commercial banks and other financial intermediaries to lend to farmers who have viable projects but inadequate collateral or credit histories (see box 6.11). Guarantees allow for greater leverage and thus greater potential outreach than rediscounts of subloans. It is often expected that lenders, once induced to lend, ill discover that the target clientele is really not unacceptably risky and that future loans can be made without guarantees. It is assumed that without the guarantees the supply of credit will be suboptimal from a social perspective.

Box 6.9 Guaranteeing noncommercial risks: a viable approach for rural finance in Russia?

Guarantee schemes that cover noncommercial risks are usually designed to reduce political risk and increase the flow of foreign private investment into an economy. Such schemes can provide incentives for foreign companies to engage in increased trade with rural farm and nonfarm enterprises.

That is precisely the aim of a proposed World Bank input guarantee facility for the Russian Federation. The facility is designed to place production inputs into the hands of Russian farmers, producers, processors, and manufacturers when no cash, credit, or collateral is available to them to purchase these inputs. The facility will be used to induce international and domestic suppliers to provide inputs to clients on deferred payment terms by providing the suppliers with a government guarantee against certain forms of interference in deferred payment transactions and against military action, war, and civil disturbance.

There is an urgent need to restore production, improve quality, and develop new markets for agricultural products within the former Soviet Union. The input guarantee facility was proposed because of an acute shortage of short-term working capital loans and medium-term equipment loans to achieve these objectives. Although government credit programs have been cut back sharply, private banks and input suppliers have yet to fill the gap with credit or deferred payment transactions.

The facility will provide incentives for clients to use increased inputs and repay their input supply credits in a timely way to retain access to scarce inputs. The facility will also offer incentives for multinational companies to establish trading relationships with rural enterprises and incentives for the government to avoid triggering payment of guarantees by avoiding actions proscribed under the guarantee contracts. The guarantee facility will be marketed aggressively among multinational input suppliers, and a public information campaign will precede the launching of the facility in Russia.

Source: Contributed by Lynn Engstrand in 1996.

Box 6.10 Moldova pre-export guarantee

The World Bank has so far provided loans to fund guarantees and other forms of coverage for only a few projects. The 1995 Moldova Pre-export Guarantee Facility Project has both a government guarantee facility and a third-party guarantor. Moldova established a guarantee facility to cover foreign supplier credit provided to its exporters against specified political risks. In addition, an offshore bank (the agent bank), acting as a third-party guarantor on behalf of Moldova, issued standby letters of credit to foreign creditors, backstopping the government facility's guarantees. The agent bank could draw down the World Bank loan to fund payments to be made under its letters of credit to the foreign creditors.

Source: World Bank 1996b.

Mexico and India have devoted considerable resources to publicly supported credit guarantee schemes. Mexico's guarantee and technical assistance fund covers some commercial bank loans to agriculture and subsidizes transaction costs for commercial bank loans to low-income producers. India's Deposit Insurance and Credit Guarantee Corporation offers credit guarantees for loans by commercial and cooperative banks to targeted borrowers, including farmers and small-scale industrial firms.

Outcomes of Guarantee Schemes

The results of credit guarantees have not been well documented, but the empirical evidence on the performance of guarantees that does exist has been mixed. There is plenty of skepticism among theorists and practitioners about guarantee performance. Most crop insurance programs that cover specific insurable risks are subsidized, and a comprehensive credit guarantee with its severe adverse selection and moral hazard problems would probably also need to be subsidized. Skeptics conclude that guarantees are simply a form of subsidized credit dressed in new clothes. But many governments, donors, and bankers favor guarantees as a way to induce lending to targeted clientele. Advocates in the NGO ACCION International claim that guarantee schemes are a major reason for the expansion in microenterprise lending in Latin America.

Guarantee schemes in Mexican and India have suffered significant losses; the schemes' benefits in terms of additionality cannot readily be discerned.[30] The reasons for the poor performance of most guarantee schemes include failure to take into account incentives for participating lenders and clients, inability to cope effectively with problems of moral hazard and adverse selection, failure to price guarantees at

Box 6.11 A primer on credit guarantees

A typical credit guarantee scheme links three agents or participants—a guarantor, a lender, and a borrower—who strive to maximize their objective functions through the guarantee contract (Meyer and Nagarajan 1996). An ideal credit guarantee scheme shares risks among all the agents in an incentive-compatible way so as to increase lending to a targeted (rationed) clientele at low cost and in a sustainable fashion. A contract is incentive-compatible when no other contract gives the participants a higher expected utility. It satisfies the objectives of all participants and is self-enforcing (Philips, 1988).

Credit guarantee schemes generally have two major objectives: (a) to improve access to financial services for a targeted sector by reducing risks and transaction costs and (b) to encourage lenders, usually banks, to undertake profitable lending to an underserved clientele (Stearns 1993). The challenge of meeting these objectives can be analyzed by examining five major issues for each of the three participants in credit guarantee schemes: additionality, collateral requirements, viability, costs and fees, and learning. If credit guarantee schemes are prudently managed, lenders will eventually realize that the targeted clientele is less risky than was believed. Properly developed screening and monitoring would reduce the cost of supporting the scheme. Optimally, transaction unit costs would become low enough for the guarantee scheme to be gradually withdrawn.

Source: Meyer and Nagarajan 1996; Philips 1988; and Stearns 1993.

levels that encourage participation while covering indemnity payments and administrative costs, inefficient bureaucracy that reduces confidence in the guarantees, and provision of guarantees to public lenders that do not adhere to commercial imperatives so that loan losses have to be covered by the public coffers.

Lessons for Reform

In deciding whether to use government guarantee schemes, other uses of public funds must be considered. When guarantees are warranted, the following principles should be followed:

Client selection. Establish how far to extend the risk frontier and thus the target loss rate—the ratio of claims paid for defaults over loans guaranteed (Levitsky and Prasad 1989). The focus should be on clients with sound projects who fail to meet lenders' collateral requirements rather than on risky clients or projects. Assessment of risk should largely determine the guarantee fee and the leverage ratio of the guarantee fund.

Process issues. Appoint competent and well-trained staff to investigate requests for guarantees and to build credibility with financial intermediaries. Such efforts should be balanced against the need to contain administrative costs to keep guarantee fees low (3 percent or less).

Incentive issues. Settle claims quickly to increase lenders' incentives to participate, while reserving the right to reopen and severely penalize fraudulent claims. Responsibility for collection efforts should be clearly demarcated, and processes for allocating recoveries between the guarantee scheme and the financial intermediary should be clearly established. Banks should bear a portion of the risk on principal and all the risk on interest due. This risk will provide an incentive to pursue recoveries vigorously.

Crop Insurance

Insurance schemes for production in rural areas have focused almost entirely on agriculture, and within agriculture on crops much more so than on livestock.[31] The results of these schemes have often been disappointing. This section discusses the lessons from these schemes and identifies principles for crop insurance that can be applied more broadly to rural insurance services.

Insurable and Uninsurable Risk

Rural producers face a variety of risks associated with input supplies, production, marketing, health, and asset management. These risks can be categorized as insurable or uninsurable. The most insurable risks have to do with events having three characteristics: their likelihood of events is readily quantifiable, the damage they cause is easy to attribute and value; and the insuree can affect neither the probability of their occurrence nor the damage they cause (there is no moral hazard). Typhoon damage is usually an insurable risk; other forms of crop damage may be uninsurable. Some production and asset-management risks and most health risks are insurable, but most market and resource risks and a wide array of production risks are not.

Limitations of Private Risk-Coping and Risk-Reducing Strategies

Farmers reduce risk in advance by diversifying crops, intercropping, planting on dispersed plots of land, entering into crop-sharing arrangements, and seeking nonfarm sources of income. Once losses occur, farmers cope by selling assets, consuming a larger share of output, borrowing, or seeking temporary off-farm employment. In many rural societies mutual aid and kin-support systems provide an important safety net for member households (Posner 1981; Udry 1990). However, these mechanisms may significantly reduce average incomes because of forgone returns from specialization without effectively coping with covariate shocks that affect most members of the community.

Formal rural financial institutions (lenders and insurers) risk incurring losses as a result

of the risks faced by given clients and because of the mix of clients that they serve (see box 6.12). To reduce these risks, rural financial institutions usually diversify across different types of crops, farms, regions, and sectors of the economy. They adjust interest rates and premiums to reflect risk. These practices can be effective in managing risks, but because they increase administrative costs, most banks focus on large commercial farms rather than on smaller farms or more risky clients. Where crop insurance has been offered voluntarily, private insurers such as the Chilean Consorcio Nacional de Seguros, have focused on larger farmers.[32]

Public Agricultural Insurance

The rationale for public agricultural insurance schemes is that they stabilize incomes for farmers by pooling risks at a regional or national level. The schemes also aim to improve recoveries for rural financial institutions and to reduce lenders' administrative costs to encourage greater provision of credit to clients who would otherwise be classed as too risky to qualify for loans.[33]

To be financially viable in the long term (Z), insurers' income from premiums (P) must cover indemnities (I) plus administrative costs (A), plus reserves for the catastrophic losses (C) that occasionally strike agricultural producers (Hazell 1992; Roberts and Dick 1991). The insurer must satisfy:

$$Z = \frac{A + I + C}{P} < 1.$$

Public crop insurers rarely meet this condition, and Z ratios are usually well above 100 percent even without reserves for catastrophic losses. Indeed, loss ratios alone (the ratio of indemnity payments to income from premiums) have often exceeded 100 percent. They were often as high as 519 percent in Bangladesh and 687 percent in India on a cumulative

Box 6.12 Liquidity options for diversifying risk in rural financial markets

Governments and formal financial intermediaries have applied many methods to complete markets in rural areas and to diversify the agricultural covariant risk of rural financial institutions. Most of these attempts have had poor or indeterminate cost-benefit results. Among the most notorious failures have been crop insurance and credit guarantee schemes.

What alternative financial options are available to rural financial institutions to ensure their long-term viability and to minimize the impact of covariant risk on their liquidity? An RFI would be better able to cope with a liquidity shortage in a bad agricultural year and the impact on long-term liquidity if it met the following conditions:

- Maintained a high equity ratio
- Applied on-lending interest rates high enough to reflect the related credit risk premium associated with the probability of bad agricultural years (liquidity shocks)
- Collected principal and interest payments in an efficient manner.

An agricultural crisis may nonetheless prevent an RFI from obtaining funds when liquidity is needed most. To ensure that an RFI has access to funds during a crisis, nonagricultural banks could be encouraged to make an "option" available to rural financial institutions. The RFI would be able to opt for seasonal liquidity in the financial market. Such an option would have a cost similar to an insurance fee and would be based on the probability of the associated risk. The benefits of such an option—which have yet to be tried—would be threefold. First, the option would ensure access to funds for individual rural financial institutions during a bad year or slow season; second, it would increase the flow of loanable funds; and third, it would improve both the economies of scale and scope of the financial sector by diversifying covariant risk throughout the economy and by reducing the risk premium.

To qualify for such an option, an RFI would have to meet all three of the conditions listed above—an extremely rare accomplishment in the rural financial arena. If the RFI appeared insolvent and in search of a bailout, the cost of the option (even if offered to the RFI) might be prohibitive. Unfortunately, not many rural financial institutions currently meet the three conditions; these RFIs would have to improve their performance before being considered for such an option.

basis during the late 1980s (FAO 1992). Administrative expenses are rarely below 30 percent of premium incomes in public insurance schemes. In the Philippines administrative expenses amounted to 180 percent of premium incomes during the 1980s (Hazell 1992).

Reasons for Disappointing Performance

The main reasons for the disappointing performance of most public insurance schemes are that (a) they have attempted to provide multiperil coverage for essentially uninsurable risks; (b) they have caused moral hazard problems among insurers, who have relied on government bailouts and engaged in poor premium-setting and loan-adjustment practices; (c) they have led to moral hazard problems among clients, who failed to follow sound husbandry practices because of reduced downside risks; and (d) they have been undermined by political interventions.

Lessons for Reform

Given the other uses to which funding for agricultural insurance could be put—uses that could increase agricultural productivity and reduce risks (through irrigation, watershed management, and so on—there may not always be a rationale for publicly funded insurance schemes, especially for larger commercial farmers who could be served by private agencies. For small-scale farmers who produce cash crops, private, industry-based insurance schemes may meet the most important insurance requirements. An example is the provision of insurance by banana producer associations against wind damage to their members' crops. Governments can facilitate the private provision of insurance services by removing entry barriers to the industry for domestic and foreign firms, by ensuring transparency and accountability in the firms' operations, and by facilitating reinsurance domestically or abroad.

When public insurance schemes are warranted, the following operating principles and incentive issues should be taken into consideration:

Operating principles. Write coverage only on insurable risks (on named perils over which clients have little control and on cash crops). Use available weather records and information about clients to calculate actuarially based premiums, and diversify to the extent possible across regions and insured activities.

Incentive issues. Address incentive problems by adjusting indemnities for visibly negligent husbandry practices; by tailoring premiums, indemnities, and deductibles to the risk levels of individual clients (or to fairly narrowly defined client groups); and by ensuring financial and political autonomy for the insurer (by applying a hard budget constraint and avoiding exploitation of insurance funds for political patronage).

When sound business practices are pursued by public insurance agencies the outcomes can be highly beneficial (see box 6.13).

A creative approach to crop insurance that seems to overcome the major shortfalls of many crop insurance schemes is detailed in box 6.14.

Conclusion

New perspectives on rural financial intermediation suggest a limited, market-friendly role for government. Direct public intervention in rural financial markets is warranted only if it is the most cost-effective way of addressing identifiable market failures or reducing poverty. The expected benefits of the interventions must outweigh the associated costs of intervening.

No single form of intervention is universally optimal. The choice of an appropriate intervention through a targeted rural finance program or an alternative nonfinancial market program will depend on the initial objectives of the intervention (addressing market failure or

Box 6.13 Effective public crop insurance: the example of sugar in Mauritius

Sugar is the dominant agricultural product and main earner of foreign exchange in Mauritius. The Mauritius Sugar Insurance Fund (MSIF), which was set up in 1945, covers all growers (about 34,000, from backyard ventures to commercial estates) and all the sugar mills (19) in the country. Sugar has so dominated the economy that there have been few alternative sources of funds from which to subsidize the industry. The MSIF has always been run on commercial principles.

The MSIF has amassed considerable, accurate information over the years on which to base premiums and indemnities. It has a highly representative board and a small headquarters. Two-thirds of its staff are field agents who send information back to cartographers and to the MSIF computer. Since 1964 premiums, first loss percentage, and indemnity percentages have been tied to clients' individual claim histories to increase fairness and reduce moral hazard. For millers indemnities are based on outcomes for the growers that supply the mills and adjusted for the extractive efficiency of the sugar mill. Indemnities for growers are related to insurable sugar per hectare, calculated according to recorded individual yields and known area harvested. Each plot is inspected at least four times a year, and adjustments are made for negligence by growers (for example, a 10 percent reduction in insured sugar for inadequate pest control). Only cyclones, fire, and excess rainfall are covered—the MSIF has resisted covering damage from pests and diseases, which are viewed as management problems.

As a public agency the MSIF has been unable to accumulate the reserves that a private commercial venture might have accumulated. However, its goal is the accumulation of sufficient reserves to handle back-to-back declared events (or 40 percent of average annual crop value), and it has earned more than sufficient investment income from reserves to cover administrative costs (which are very low at 6.5 percent of premium income). As a public agency it has enjoyed the right to limit its financial liability in the event of massive claims to reserves outstanding plus reinsurance indemnities, and it has negotiated for levies on sugar tonnages when major shortfalls were expected. Thus, even though the historic loss ratio has been slightly negative (at 120 percent), the MSIF has had access to emergency funding from the sugar industry itself without seeking recourse to public subsidies.

The key to the MSIF's success has been a commercial orientation to insurance, actuarially fair pricing based on carefully gathered information, and attention to potential incentive problems in designing all elements of the scheme.

Source: Excerpted from Roberts and Dick 1991.

reducing poverty). The selection of an intervention will also depend on the characteristics of the target clientele, the physical and socioeconomic environment, the cultural features of the target group, and the existing situation in rural financial markets.

Credit interventions are likely to be more effective in areas with relatively high population densities, open access to markets, productive agricultural sectors, and entrepreneurial target groups who are slightly above the poverty line. In less favorable conditions alternative projects, such as public works schemes or savings-driven, group-based financial services, are likely to be more effective.

Interventions can be conducted through a wide variety of institutions (such as NGOs and state-owned rural financial institutions), instruments (such as matching grants and credit lines), products and services (such as savings, credit, and insurance services), and modes of operation (such as group-based schemes and village banking).

Public support for insurance schemes may be warranted under certain conditions. The insurance could be for loans to clients (guarantees) or for the primary risk (crop insurance, for example). Publicly supported guarantee and insurance schemes have often proved ineffective in the past because of design deficiencies and weak implementation. The merits of direct support for insurance and guarantees need to be evaluated through rigorous cost-benefit analysis in the same way that the merits of credit- and savings-oriented interventions must be carefully assessed before implementation.

Box 6.14 A drought insurance proposal

Drought threatens the welfare of many poor people in the developing world. It ought to be insurable. But to design effective drought insurance, several objectives must be met.

First, the insurance must be readily accessible to all kinds of households: small and large farmers, landless laborers, shopkeepers, agricultural merchants, processors, and artisans. That means that insurance contracts cannot be tied solely to crop or livestock production.

Second, the insurance must be affordable, particularly by poor people, suggesting that administration costs must be kept very low and that only rare drought events (say in one or two years out of ten) can reasonably be insured.

Third, because drought damage within a region tends to be highly covariate, drought insurance will be financially viable only if a mechanism exists to spread the risk beyond the insured region. In a large country it might be possible to spread risk by insuring many regions, particularly if these regions have low or even negatively correlated rainfall patterns. But it is necessary to establish arrangements for reinsurance or contingent loans with the government or with private banking and insurance.

The drought insurance proposed here would be weather-station specific, with rainfall monitored from satellites. All persons insuring against drought at a specific station would pay the same premium and receive the same indemnity per dollar of insurance. Indemnities should be paid whenever the station's cumulative rainfall for some specified period of the year (an agricultural season, for example) fell below an agreed-upon level (70 percent of the average, for example). Premiums would be calculated according to the probability of a drought occurring, the size of the indemnity to be paid, and administration costs. For example, for a station faced with the probability of one drought in ten years and an insurance administration cost of 10 percent, a $1 insurance ticket would pay out approximately $9 in the event of a drought (the expected premium collected over ten years minus the 10 percent administration cost). The calculation is approximate, because no allowance has been made for expected interest earnings on accumulated premiums held by the insurer, for reinsurance costs, or for the need to build a financial reserve.

Drought insurance tickets could be marketed like lottery tickets, and low-income people could sell the tickets on commission. Unlike standard insurance, however, drought insurance would provide all ticket holders for a given weather station with an indemnity in a drought year but not in nondrought years. If the scheme were managed by a commercial bank, the indemnities could be issued through local branch offices after being announced in the newspapers, and on radio and television.

Because all participants would pay the same premium and receive the same indemnity, drought insurance would avoid moral hazard and adverse selection problems. And because the insurance does not require the writing of individual contracts, field inspections, or loss assessments, administration costs could be kept low (perhaps to 2 to 3 percent of the ticket value). These features could make drought insurance an attractive proposition for reinsurance in the international market and thus overcome the covariate risk problem of regional droughts.

To increase its benefits to rural households, drought insurance should be sold freely to all kinds of people, who should be able to purchase insurance from any insured weather station. Allowing them to do so would enable them to exploit less than perfectly correlated drought risks and to tailor insurance portfolios to better match their own individual risk. Private firms might even offer such portfolio insurance. The emergence of secondary markets should be tolerated to allow cash-short individuals to obtain their indemnities earlier in a drought year, perhaps at a market discount.

Source: Hazell 1996.

PART THREE

An Overview of Rural Financial Institutions

Part three provides an overview of rural financial intermediation on the institutional level. Chapter 7 considers the problems inherent in measuring the success of rural credit projects and proposes that the performance of rural financial institutions be used as a proxy for assessing the success of rural finance intermediation. A framework is introduced to measure the performance of rural financial institutions in terms of outreach and financial self-sustainability.

Chapter 8 proposes guiding principles for helping rural financial institutions to improve outreach and self-sustainability. The experiences of rural development donors and governments in rural financial intermediation projects throughout the world are shared in boxes throughout the chapter.

Chapter 9 discusses in detail the performance and operating methods of three rural financial institutions that are widely viewed as highly successful: the Bank for Agriculture and Agricultural Cooperatives in Thailand, the Bank Rakyat Indonesia–Unit Desa System in Indonesia, and the Grameen Bank in Bangladesh. The institutions' target clientele and the environments within which they operate differ markedly. Nonetheless, certain common features can be identified in the management principles and operating methods of all three institutions. These shared characteristics can contribute to the development of useful guidelines for designing future rural financial intermediation projects.

CHAPTER 7

Performance Criteria for Rural Financial Intermediation

The decisions of private financial intermediaries regarding their services and target markets are generally guided by profit motives. However, for government-supported rural financial institutions (RFIs), development impact is usually a more important consideration than profit. Rural financial programs or institutions are considered successful if they expand rural incomes and reduce rural poverty.

In evaluating the performance of rural financial initiatives, it is essential to determine first whether they have met their *goals* of expanding income and reducing poverty, and then to evaluate their *opportunity cost*. A concerted effort by governments or other agencies to promote rural finance usually includes directed credit, which, to the extent that it changes the allocation of resources, involves a subsidy and entails an economic opportunity cost (Ray 1995). Given these characteristics, it is reasonable to require an estimate of the total cost to society to facilitate the optimal allocation of scarce public resources both within and between rural financial markets and other sectors of the economy.

Measuring the impact of rural credit projects, programs, or institutions on rural incomes and poverty levels is fraught with methodological problems. However, a logical framework has been developed to assess the performance of rural financial institutions (World Bank 1992). Financial institutions that provide a wide range of financial services to a broad range of clients in an efficient manner are likely to contribute to income expansion and poverty reduction. Efficient RFIs should therefore achieve the desired development impact. Measuring the performance of RFIs can serve as a proxy for assessing development impact. *Measuring RFI performance has the added benefit of having fewer methodological problems than measuring the impact of rural credit schemes.*

The performance of rural financial institutions can be measured by the extent of their *outreach* and *self-sustainability*. Measuring performance by these criteria has two important benefits. First, it enables policymakers to better evaluate the cost to society of supporting rural financial institutions; second, it establishes key performance benchmarks for rural financial intermediation. These benchmarks can assist in the formulation of policies and modes of operation for future initiatives (World Bank 1994e). The shortfalls in the capacity of rural financial institutions are often cited as major constraints for successful rural financial intermediation (Women's World Banking 1995).

The first part of this chapter reviews the methodological problems associated with measuring the impact of rural credit projects, and the second part develops a framework to assess rural financial institutions.

Methodological Problems in Assessing the Impact of Rural Credit Projects

This section reviews assessments of the impact of agricultural credit projects, in line with the traditional methodology of evaluating and attributing benefits to agricultural projects.[34] The complex problems associated with this methodology can be categorized as microeconomic and macroeconomic problems.

Microeconomic Problems

Microeconomic problems consist of (a) the assumption of a representative farm model, (b) the limited comparability between project participants and nonparticipants, and (c) the fungibility of money (loans provided under the credit scheme may substitute for other sources of finance or may be applied to "unintended" investments).

The representative farm model. In establishing a project's anticipated financial and economic rates of return, an imaginary representative farm is used as a model. Usually, the economic rate of return (ERR) on farm model investments, which is used to quantify the project benefits, is estimated for investments in the model form and assumed to apply to the universe of subborrowers. This assumption may be erroneous, given the large variations in farmers' characteristics.

Limited comparability of project participants and nonparticipants. Comparing a group that received project funds with a control group that did not may be misleading. The farmers that participate in most agricultural credit schemes are self-selected. Usually they are more entrepreneurial, less risk-averse, and more receptive to new technologies than their nonparticipating counterparts, and they have stronger links with financing agencies. In light of this reality, efforts to create a "without project" situation established ex post through random sampling of project participants and a control group of nonparticipants are biased in favor of the project.

Fungibility of money. Attributing benefits to credit projects is complicated by the question of fungibility. Subloan resources can be pooled with other resources at a client's disposal, and these combined resources can be used for multiple purposes. It is hard to discern whether loans result in additional resources for the purposes specified under projects, and it is equally hard to establish the purposes for which loans are applied.

The terms *substitution* and *diversion* are often used to clarify the problems that fungibility poses for evaluating the impact of credit projects (Von Pischke and Adams 1980). Since farmers who obtain project loans may have been able to mobilize other resources even without the project, loans may have substituted for these alternative sources of financing. Audits of many agricultural credit projects have shown that alternative sources of funds were available for financing project-related investments (World Bank/OED 1981). Diversion of funds is a form of substitution in which credit funds are used for purposes not authorized by the loan covenants. Close supervision of numerous rural borrowers can be costly, and diversion can occur even in projects that are well managed.

The problem of substitution can be conceptualized along a continuum. At one end, no substitution is possible (as in the case of a farmer in a remote area with no access to other sources of funds). At the other end, a farmer's investment could have been implemented without the credit project or with less than the amount lent. Except in rare instances when no substitution is possible, calculations of economic and financial rates of return must be adjusted to reflect the possibility of limited additionality under the project. It is difficult to make these adjustments accurately (because substitution is not readily quantifiable), and the problem of attributing benefits to credit projects becomes increasingly complex as one moves along the continuum.

A 1983 report by the World Bank's Operations and Evaluation Department (OED) notes that "obtaining adequate farm survey data to

measure actual production impact of investments financed under the project is difficult; problems related to fungibility may make such attempts even superfluous as they will not necessarily measure project impact. What might be needed is in-depth farm survey/evaluation research to measure the impact of credit projects, but this should be limited to a few projects only; in other cases, economic analysis should keep the attractiveness of the development packages under review mainly during implementation, not ex post" (World Bank 1983, paragraphs 5.150, 5.155).

Another OED study found that because of fungibility problems, "high economic returns as quoted in the completion and audit reports overestimated the real economic return" on ten agricultural projects in India (World Bank/OED 1981), and in a review of twenty credit operations in five countries, rates of substitution were found to range between 25 and 75 percent (World Bank/OED 1976). In fact, substitution may be present to varying degrees in most agricultural credit projects.

Quantifying and attributing the benefits of credit projects call for economic evaluation and econometric studies significantly more complex than the one-dimensional methods frequently used in assessing project impact (World Bank/OED 1983). Researchers associated with Ohio State University question whether even the use of rigorous econometric methods can provide conclusive results, given the fungibility of money and the difficulty of establishing an appropriate control group (Von Pischke and Adams 1980; David and Meyer 1984). However, more recent econometric studies have attempted to deal with some of these methodological concerns (Binswanger and Khandker 1995).

Since such econometric studies are costly and since findings cannot readily be generalized beyond the contexts in which the studies are conducted, it is not feasible for practitioners to engage in regular, rigorous econometric impact assessments. To engage in prudent lending, rural financial institutions should gather information on the assets, liabilities, cash flows, and debt servicing capacity of borrowers—which would allow for ex post comparisons, which are preferable to ex ante ones. RFIs should generally abstain from costly impact assessments that could more appropriately be conducted by research institutes with the requisite skills and resources.

Macroeconomic Problems

Attributing benefits to credit projects is even more tenuous when considering issues of fungibility at the macroeconomic level. If, for example, a donor were to provide a loan denominated in foreign exchange for an agricultural credit project to a country that maintains free convertability of the currency but that is already flooded with foreign exchange reserves, it is plausible that the volume of agricultural credit loans in the country would increase by only a fraction of the amount of the donor funding. The overall volume of agricultural credit lending in the country is likely to be determined by monetary, financial, institutional, and rural-sector considerations, rather than by an external loan from a donor.

An opposite situation might arise in an economy in transition. An external agricultural credit loan may relax constraints on farmers' and input suppliers' access (licenses) to foreign exchange for imports of agricultural inputs and equipment. In such economies, the shortage of foreign exchange may constitute a constraint on farm-level investments. As large traditional borrowers (like India and Mexico) move toward free convertibility of their currencies, the direct link between the volume of external agricultural donor credit and domestic lending becomes much less discernible. In fact, donor lending intended to increase domestic agricultural credit may result only in balance of payments support. Under these circumstances, the appropriate action is to focus on changing policies that hamper agricultural and rural growth and to invest in institution building in rural financial intermediaries.

To sum up, in assessing the benefits of donor-financed agricultural credit projects, the

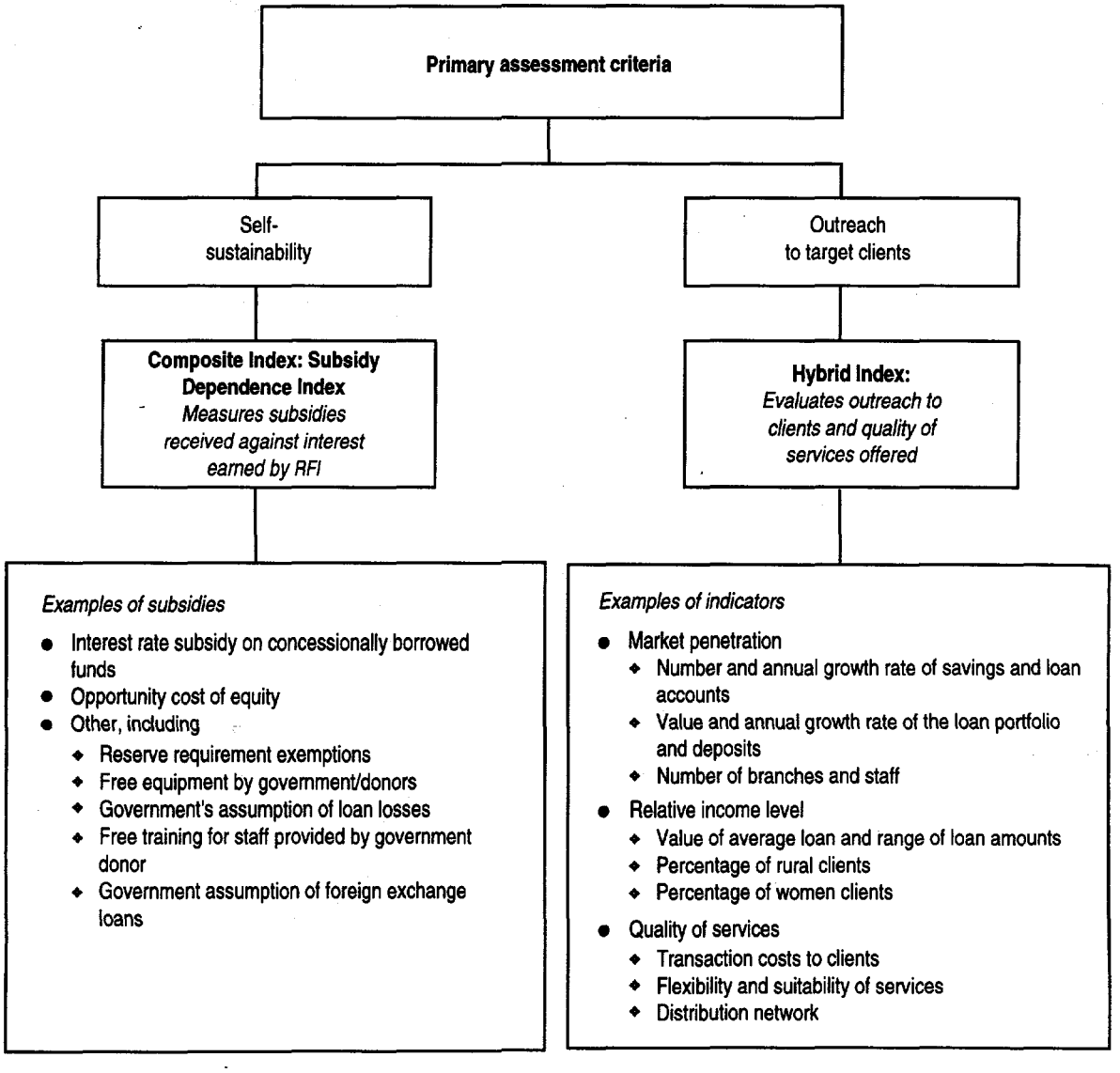
convertibility of currencies and availability of foreign exchange should be considered.

Assessing the Performance of Rural Financial Institutions

For many years no agreed-upon criteria existed to evaluate the performance of rural financial institutions. RFI performance was usually assessed using standard financial ratio analyses. These standard measuring tools do not take into account the various subsidies involved in RFI operations or the special objectives often assigned to rural financial institutions.

The performance assessment framework introduced by Yaron in 1992 has since been widely accepted by academia and practitioners (Christen and others 1995; Chaves and González-Vega 1994; Ramola and Mahajan 1996). The framework has two primary criteria: the level of *outreach* achieved among target clientele and the *self-sustainability* of the RFI (figure 7.1). These criteria do not provide a full assessment of the economic impact of the operations

Figure 7.1 Criteria for assessing the performance of rural financial institutions



of an RFI, but they serve as quantifiable *proxies* of the extent to which an RFI has reached its objectives and make transparent the social costs associated with supporting the institution.

Outreach

Outreach is a hybrid measure that assesses the extent to which an RFI has succeeded in reaching its target clientele and the degree to which the RFI has met that clientele's demand for financial services. The indicators of outreach are both qualitative and quantitative and can be used to measure both depth (type of client reached and level of poverty) and breadth of outreach (number of clients served with different kinds of instruments).

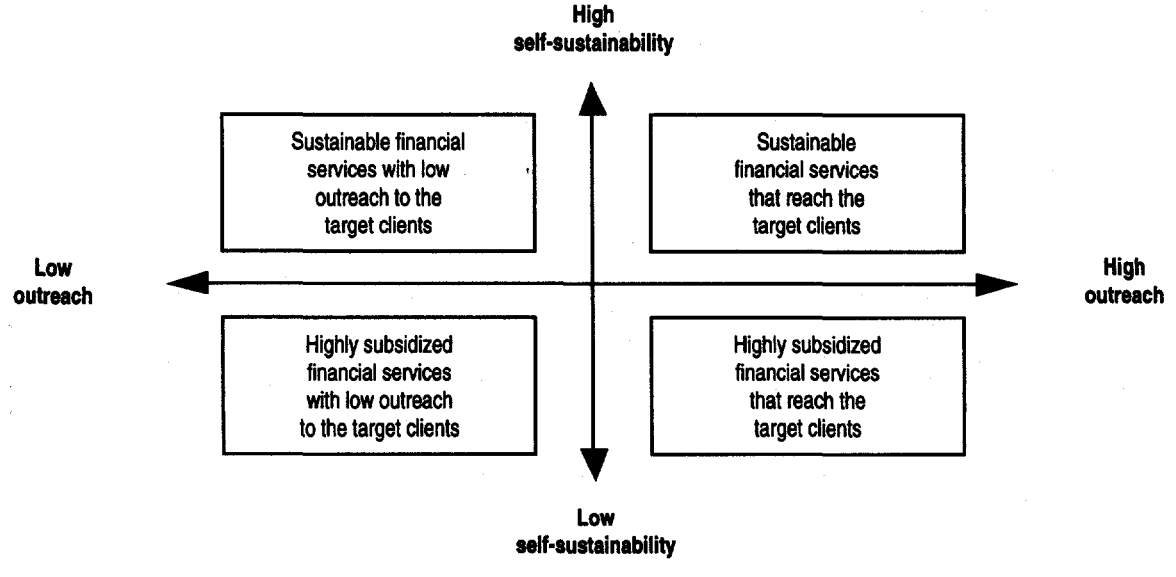
Figure 7.1 gives examples of the indicators that can be used to measure outreach. These and other indicators are presented for the Bank for Agriculture and Agricultural Cooperatives in Thailand, the Bank Rakyat Indonesia–Unit Desa System, and the Grameen Bank in Bangladesh in the annex to chapter 9. The indicators can be weighed and quantified according to their relevance to a particular society. For example, if gender does not limit access to credit, the weight attached to the number of women clients may be low or even zero. The assessment of an RFI can only be as good as the information available on (and to) the RFI. Measuring the performance of an RFI requires that the RFI adhere to generally accepted accounting principles and be subject to regular external auditing.

The primary assessment criteria can be represented on two axes, as in figure 7.2. Some theorists argue that there may be a trade-off between outreach and self-sustainability, but many institutional policies that improve outreach also improve self-sustainability (see chapter 8 for details about building institutional capacity). Improvement in the performance of an RFI requires improvement in at least one criterion, while performance in the other is at least monitored.

Self-Sustainability

Previous interventions in rural financial markets have placed insufficient emphasis on the self-sustainability of state-owned rural finan-

Figure 7.2 Optimizing performance



Source: Mahajan 1994.

cial institutions. Attempts to track their performance have been improved by the use of standard accounting measures to assess the special circumstances of rural financial institutions.

The financial performance of profit-maximizing organizations can be measured using conventional financial profitability ratios, such as return on equity and return on assets. However, these measures were not designed to measure the financial performance of state-owned development finance institutions, which are not profit-maximizers and which almost always benefit from subsidies that carry an opportunity cost to society. Nor do conventional financial ratios take into consideration the effect of subsidies on the profitability of rural financial institutions. The financial profitability ratios of an RFI can increase because of an infusion of subsidized funds or other forms of subsidy, even as the true performance of the RFI is deteriorating (see box 7.1). The reverse is also true: an RFI's financial profitability can appear to decline, not because it has become operationally less efficient, but because subsidies granted to the institution have been reduced.

The major forms of subsidy to state-owned RFIs are usually the opportunity cost of the RFIs' equities (considered costless by the institutions) and concessional borrowing. In most cases the equity of an RFI determines neither its ability to borrow nor the cost of its borrowing. The concessional borrowing interest rate that benefits the typical state-owned RFI is usually determined by considerations of political economy through a process involving a central bank and related ministries and agencies—not by market forces. As a result, distinguishing between a state-owned RFI's equity and its external financial liabilities often does not make sense in the way that it does for profit-maximizing financial intermediaries. Although an RFI's concessional borrowing rate has a major influence on its return on equity and return on assets, its management has little, if any, influence over this exogenous determinant of the institution's financial profitability.

Subsidy Dependence Index

To determine the real cost to society of maintaining an RFI, measuring its performance should take into account the subsidies received by the RFI. The subsidy dependence index (SDI) provides such a measure.

Definition and rationale. The SDI is a composite measure of an RFI's financial performance (see box 7.2). Because it takes into account the subsidies received by an RFI and shifts the focus away from traditional profitability ratios, the SDI provides a more appropriate measure for the performance assessment of an RFI than standard financial indicators.

The SDI is expressed as a ratio that indicates the percentage increase required in the on-lending rate to completely eliminate all subsidies received in a given year.[35] It allows for the calculation of:

- The volume of subsidies required to keep an RFI afloat (the total amount of subsidies received by an RFI in a given period)
- The ratio of subsidies received to interest earned by an RFI on its loan portfolio in the marketplace.

Interpretation. The SDI has a lower bound of –100 percent but no upper bound (Benjamin 1994). An SDI of zero means that an RFI has achieved full self-sustainability. An SDI of 100 percent indicates that a doubling of the prevailing average on-lending interest rate would be required to eliminate subsidies. A negative SDI indicates that an RFI has achieved full self-sustainability and that its annual profits exceeded the total annual value of any subsidies received by the RFI. Such an RFI could lower its average on-lending interest rate, eliminate all subsidies, and remain self-sustainable. The SDI should, in some cases, be seen as a lower bound for the required increase in the on-lending rate, because full financing of RFI activities is likely to be difficult at the prevailing market reference deposit interest rate if the RFI's financial performance is dismal.

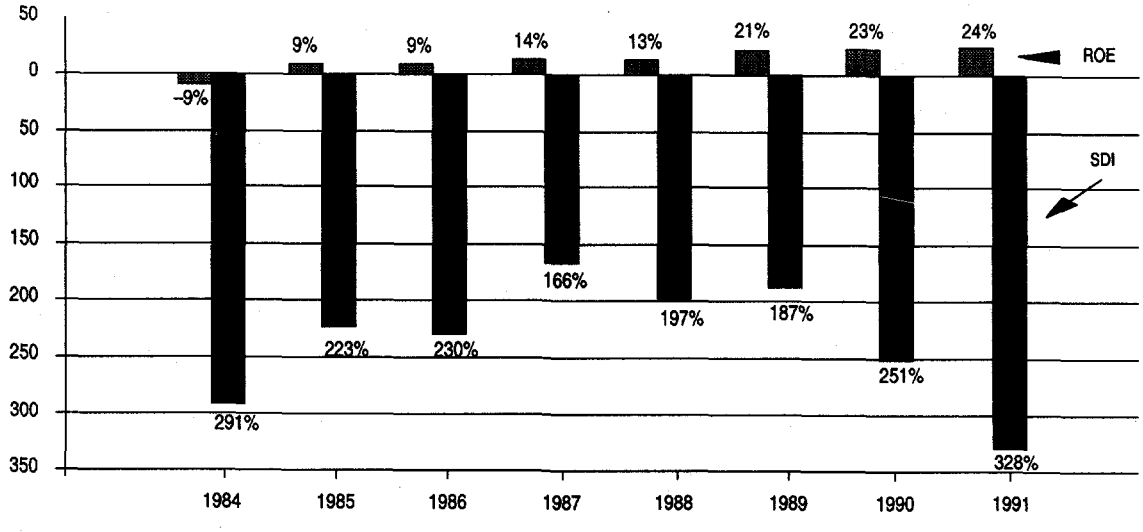
Box 7.1 Merits of computing the subsidy dependence index for a rural financial institution in Jamaica

The Agricultural Credit Bank of Jamaica was established in 1981 as an apex institution supporting agricultural credit operations through commercial banks and rural cooperatives. The government intended that the bank should become self-sustaining within three to four years of its inception. A review of the bank's financial statements using standard financial indicators suggests that this goal was attained. The return on equity had become positive by 1985 and by 1987 cumulative retained earnings had entered the black. Indeed, between 1987 and 1991 the bank's return on equity rose by 75 percent—from 13.8 to 24.4 percent—and the return on assets hovered between 3.6 and 5.3 percent.

However, more detailed analysis suggests that the bank has been dependent on subsidies for its operations and that its reliance on these subsidies has increased over time. Application of the subsidy dependence index (SDI) to the bank reveals that a total of US$84 million was provided to the bank in implicit and direct transfers between 1983 and 1991 and that transfers far exceeded profits every year during that period. The bank made solid progress toward self-sustainability between 1984 and 1987 (see figure below). However, its SDI doubled between 1987 and 1991, rising from 166 to 328 percent, and thus outpacing the growth in return on equities. Other things being equal, the net return on equity excluding transfers would have been increasingly negative.

It is clear that (a) notwithstanding the attractive standard financial ratios, the goal of achieving self-sustainability within three to four years of the bank's inception was not attained, and (b) the SDI can offer a clearer picture of a development financial institution's true financial position than is revealed by standard financial analysis.

Box figure 7.1 Comparing the SDI with the return on equity for the Agricultural Bank of Jamaica, 1984–91



Source: World Bank 1993.

Application. By applying the imputed cost of subsidized resources extended to an RFI, the SDI enables the assessment of the real *financial cost* of intervention in financial markets and focuses on the real *viability and longevity* of the institution. The SDI enables governments, donors, and RFI managers to better allocate and apply resources in three ways:[36]

1. By making explicit the subsidies received by an RFI, the SDI provides an estimate of the *total cost* involved in supporting an RFI. This estimate does not indicate whether the RFI has accomplished its socioeconomic objectives, nor is it sufficient for a full economic cost-benefit assessment. However, it provides a starting point for comparing the costs

Box 7.2 Calculating the subsidy dependence index

To calculate the subsidy dependence index (SDI) for a rural financial institution (RFI), all the subsidies received by the RFI must be aggregated. Total subsidies are then compared with the RFI's average on-lending interest rate multiplied by its average annual loan portfolio (the interest earned as presented in the RFI's income statements). The ratio of an RFI's annual subsidies to its annual interest income indicates the percentage by which that RFI's interest income would have to increase to eliminate the need for any subsidies.

The SDI can be expressed as follows:

$$\text{SDI} = \frac{\text{Total annual subsidies received } (S)}{\text{Average annual interest income } (LP^{*}i)}$$

$$= \frac{A\,(m-c) + [(E * m) - P] + K}{n \qquad (LP * i)}$$

where:

- A = Annual average outstanding concessionally borrowed funds
- m = Interest rate the RFI would probably pay for borrowed funds if access to concessionally borrowed funds were to be eliminated. This is generally the market reference deposit interest rate, adjusted for reserve requirements, and the administrative cost associated with mobilizing and servicing additional deposits
- c = Weighted average annual concessional rate of interest actually paid by the RFI on its average annual outstanding concessionally borrowed funds
- E = Average annual equity
- P = Reported annual profit before tax (adjusted for appropriate loan loss provisions, inflation, and so on)
- K = The sum of all other annual subsidies received by the RFI (such as partial or complete coverage of the RFI's operational costs by the state)
- LP = Average annual outstanding loan portfolio of the RFI
- i = Weighted average on-lending interest rate of the RFI's loan portfolio

$$= \frac{\text{Annual interest earned}}{\text{Average annual loan portfolio.}}$$

Source: Yaron 1992b.

of alternative public interventions (see box 7.3 and Squire 1995).

2. The SDI enables comparison of the financial performance and degree of subsidy dependence of rural financial institutions that provide comparable services to a similar clientele.

3. The SDI serves as a long-term planning and monitoring tool for governments, donors, and managers to track a specific RFI's progress toward self-sustainability over time. An analysis of the sources and application of an RFI's subsidies could further assist in determining the merits of subsidizing an RFI (Yaron 1992a).

Factors Contributing to a Reduction in Subsidy Dependence

Four factors critical to eliminating subsidy dependence are adequate on-lending rates, high rates of loan collection, savings mobilization, and control of administrative costs.[37] This section provides an overview of these four factors. Chapter 8 provides details about improving RFIs' operational efficiency more generally.

Adequate on-lending rates and spreads. To completely eliminate subsidy dependence, an RFI's on-lending rate should be positive in real terms and set at a level sufficient to cover all operating costs and financial expenses. This is a main contributing factor to financial self-sustainability.

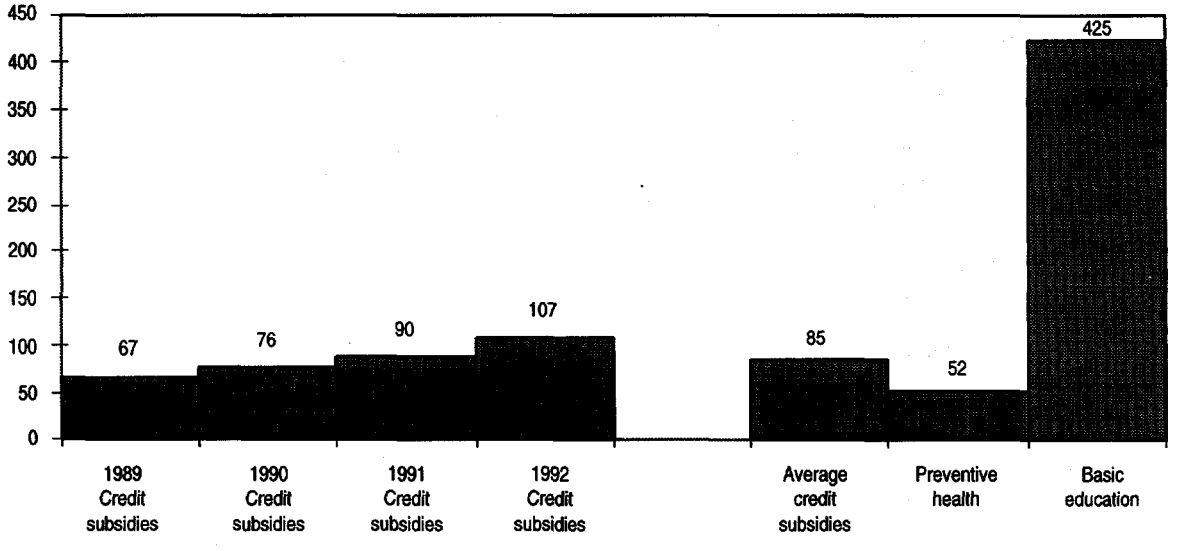
High rates of loan collection. Loan losses have often been the largest single cost borne by rural financial institutions and the principal manifestation of financial distress (see box 7.4). Appropriate monitoring of loan performance should be an integral part of sound financial manage-

Box 7.3 Cost comparisons in public spending

Box figure 7.3 shows the allocation of US$340 million in public subsidies to a state-owned RFI in an African country over a four-year period. The amount of the subsidy was determined by using the subsidy dependence index (SDI) methodology. The annual average amount of subsidy for the period was US$85 million. This amount was equivalent to 20 percent of public expenditure on basic education during the same period and 165 percent of public expenditure on preventive health in a country with a high infant mortality rate.

The information provided by the SDI calculation enriches the public debate on the allocation of scarce resources at a time when state funds are shrinking and the role of the state is being reexamined. This cost comparison enables the following question to be put: "Does this support for the RFI represent an optimal allocation of scarce public resources?"

Box figure 7.3 Comparing subsidies for rural finance with funding for basic education and preventive health care
(millions of U.S. dollars)



Source: Adapted from Squire 1995.

ment. The main indicators of loan performance are:

- The ratio of arrears to amounts due, measured for loans payable tracked by their original maturity dates (see table 7.1).
- Loan collection as measured against total collectibles (the sum of old arrears and the amount due in the reporting period).

For these ratios to be meaningful, an RFI must clearly define arrears and adhere to generally accepted accounting principles with regard to writing off bad debt (see box 8.13 on the impact of failure to write off bad loans). Caution is needed when interpreting loan collection ratios. In a highly inflationary environment the volume of the current outstanding loan portfolio may expand rapidly as the average loan size increases in line with inflation. The percentage of arrears to outstanding loans may appear less alarming than it really is. This deceptive effect will be deepened when long-term loans (with maturities beyond one year) are issued with multiyear installments and grace periods or when arrears are measured against the overall loan portfolio of which only a small part has fallen due. Under such circumstances a more useful ratio would be the contaminated loan portfolio as a percentage of the total loan portfolio. (The contaminated portfolio refers to all loans outstanding with at least one installment overdue.)

Box 7.4 Performance of credit line operations: collection experience of on-lending institutions

"An important indicator in the design and monitoring of credit line operations is the loan collection experience of on-lending institutions. There is no strict one-to-one relationship between the profitability and the repayment as businesses might or might not repay loans independent of the profit or losses they make on the loan. As an empirical matter, however, it appears that loan profitability and repayment are linked. Borrowers who expect to have to repay their loans seem more careful in their choice of projects than those who do not expect to repay. Not having to repay loans may lead to capital misallocation, since the borrower will make money even from socially unprofitable projects. This broad empirical association between loan collection and efficient capital allocation supports the concern of the Bank in improving bank supervision and regulation in its borrowing member countries."

Source: World Bank 1995b, 5.

To calculate loan collection ratios and make adequate provisions for bad debts, an RFI should track loan performance continuously, as shown in the past-due aging analysis of the Bank for Agriculture and Agricultural Cooperatives in Thailand (table 7.1). The analysis uses information routinely presented in the bank's audited financial statements. It demonstrates how arrears, measured in relation to their original maturity dates, become loan losses after several years of late payments of overdue amounts. This analysis can be used to calculate separate recovery curves for each period to facilitate a realistic estimate of future annual provision for loan losses (see figure 7.3). Since this analysis takes account of historical trends in collecting both current dues and overdues, it allows for:

- Sound assessment of the adequacy of the provision for loan losses
- Appropriate pricing of the cost of loan losses when setting lending interest rates
- Proper income recognition
- Improved cash flow management.

Despite these advantages, such an age analysis of loan collection is rarely conducted by rural financial institutions.

Savings mobilization. Active savings mobilization helps to ensure a continuous source of funds for an RFI. An increase over time in the ratio of the total value of voluntary savings to the loan portfolio will indicate the extent to which an RFI has been successful in replacing concessional funds from the state (or from donors) with savings from clients.

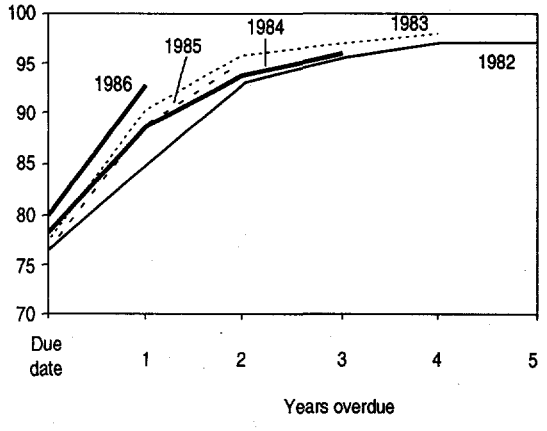
Containment of administrative costs. To ensure subsidy independence, administrative costs must be reflected and covered in the final on-lending rate of rural financial institutions. High transaction costs can reduce outreach and render an RFI uncompetitive, or they can increase dependence on subsidies if the on-lending rate is not adjusted appropriately. When analyzing administrative costs, the nature of the services provided by an RFI must be considered; these services may in-

Table 7.1 Past-due age analysis of short-term working capital of Bank for Agriculture and Agricultural Cooperatives, 1981–86
(percent)

Fiscal year	*Amount due during the year*	*Overdue at year-end*	*Overdue end of year + 1*	*Overdue end of year + 2*	*Overdue end of year + 3*	*Overdue end of year + 4*	*Overdue end of year + 5*
1982	100	24	15	7	5	3	3
1983	100	22	9	4	3	2	
1984	100	22	11	6	4		
1985	100	24	11	5			
1986	100	20	7				

Source: Authors' findings.

Figure 7.3 Loan recovery profile for short-term loans of the Bank for Agriculture and Agricultural Cooperatives, 1981–86
(percentage of original loan amount)



Source: Authors' findings.

clude (mobile) banking services, savings mobilization, social intermediation services, technical assistance, and other nonfinancial services.

Administrative costs should be monitored against total operating costs, annual average assets, and the annual average loan portfolio (see annex 9.1 for figures on the Bank for Agriculture and Agricultural Cooperatives, the Bank Rakyat Indonesia–Unit Desa System, and the Grameen Bank). Analysis of the individual components of administrative costs could help to identify the major cost factors and changes in the cost structure of an RFI.

Financial Rate of Return and Rate of Return on Investors' Equity

On-lending rates are often set too low, resulting in a high subsidy per dollar outstanding loan portfolio. In the end low rates benefit fewer borrowers than adequate access to formal credit would.

By definition, directed credit is always budget-constrained. Concessional terms are used to induce potential investors to borrow and invest. The donor or the state acts as financier of last resort when the borrower-investor is unable to obtain a loan elsewhere with the same or better terms. The concessional loan to the ultimate borrower is viewed as a necessary condition for undertaking the investment.

The financial rate of return (FRR) alone does not allow the project analyst to judge the attractiveness of the proposed investment to potential entrepreneurs (for definitions, see box 7.5). The entrepreneur's decision to invest is motivated by the level of the (risk-adjusted) internal rate of return on the investor's equity (IREQ). The IREQ should therefore be calculated whenever the FRR is computed. The potential entrepreneur is motivated to invest in "priority investments" *by a high IREQ, not by a high FRR,* although the two are closely interrelated. The IREQ is derived from calculating the FRR with two modifications.

Often a large gap exists between the FRR and the IREQ. The gap will widen if there is a large difference between the FRR and the on-lending interest rate, the loan is granted for a long period (including the grace period), and the investment is financed by a large share of borrowed funds and a small share of owner equity. Therefore, the IREQ may provide some guidance in setting the adequate on-lending interest rate to charge on the loan. Computing the IREQ may be particularly helpful when concessional directed credit schemes have to

Box 7.5 Definitions

IRR	The internal rate of return is a discounted measure of a project's worth. It is the discount rate that just makes the net present value of the incremental net benefit stream, or incremental cash flow, equal zero.
ERR	The economic rate of return is the IRR calculated using economic values.
FRR	The financial rate of return is the IRR calculated using financial values.
IREQ	The internal rate of return on equity is derived by calculating the FRR with two modifications: (a) only the investor's equity is considered (borrowed funds are subtracted from total investment funds) and (b) the interest payment and principal repayments are subtracted from the annual cash flow.

Box 7.6 Illustration of the financial rate of return and the investor's return on equity

The example described here refers to a loan from a large, state-owned agricultural bank in Asia to finance a tractor. The figures demonstrate the merits of calculating the IREQ of the investor *whenever the FRR is computed.*

A farmer borrows $7,500 to buy a tractor that costs $10,000 (an investment of about thirty times the gross domestic product per capita). The balance constitutes equity. The financial rate of return (FRR) is estimated by the bank to be at least 28 percent. The loan has a ten-year maturity with an interest rate of 15 percent a year. The country has had slightly more than 10 percent annual inflation in four out of the last five years. Reviewing the investment cash flow reveals that when the estimated FRR in constant prices was 28 percent and inflation was 10 percent a year, the IREQ was about 97 percent.

There are two lessons to be learned from this illustration: (a) the FRR calculated by the agricultural bank did not reflect the benefits that accrued to the borrower as a result of the decrease in the value of the loan repayment and interest payments caused by inflation of 10 percent a year, and (b) the profitability of the investment as judged by the IREQ was far higher than the on-lending interest rate, which was about 5 percent inflation adjusted (15 percent nominal). What could be the justification for lending at such a low interest rate when the investment yields an expected IREQ equal to about twenty times the borrowing rate?

This illustration points to the need to compute the IREQ whenever the FRR is computed, as well as determining on-lending interest rates that are sound and do not waste scarce resources and encourage corruption because of the huge grant element embedded in the concessional lending terms. Lending on the terms described in this illustration should be seriously questioned, particularly in a country that aims officially at increasing employment while actually enormously subsidizing capital.

resist widespread pressure to lend at relatively low interest rates.

Calculating the difference between the estimated FRR and the IREQ of the investor may help more clients benefit from scarce public funds and obtain access to formal credit than is possible through heavy subsidies that benefit a smaller number of borrowers.

Conclusion

Government-supported interventions in rural financial markets usually aim to achieve development impact by expanding incomes and reducing poverty. Since these interventions frequently involve the use of scarce public funds, it is important to ensure that these goals are achieved and that the opportunity cost involved has been assessed.

Because of the methodological problems associated with impact assessments, the performance of rural financial institutions and rural credit programs should be assessed with the use of proxies for development impact. The primary criteria proposed are *outreach* and *self-sustainability*. The SDI, which is used to assess the self-sustainability of a program (or institution), also measures the social cost of supporting a program. Using the SDI thus enables policymakers to weigh support for the program against alternative uses of public resources.

CHAPTER 8

Building Institutional Capacity

Few rural financial institutions (RFIs) have been successful in both outreach and self-sustainability. Most state-owned RFIs are the product of traditional interventionist approaches that emphasized disbursements rather than the quality of lending, low interest rates rather than broad access to credit, and agricultural production rather than diversified, market-oriented rural economies. The resulting poor financial performance of RFIs has made them dependent on subsidies that have drained government budgets and deprived other sectors of funds. The soft budget constraints applied to state-owned rural financial institutions have also undermined the financial discipline of the institutions and their clientele and have reduced incentives to develop sound institutional practices and institutional capacity.

The new approach to rural finance—limited, market-friendly government interventions that address clearly defined market failures—calls for policies aimed at removing the *causes of market failures* rather than their effects. However, addressing macroeconomic, sectoral, legal, and regulatory constraints to rural financial intermediation does not automatically result in the emergence of efficient and effective RFIs. Reforms will facilitate the process, but a concerted effort is required to build strong institutions (see box 8.1).[39]

Building institutional capacity is a continuous process aimed at improving the performance of RFIs in terms of outreach and self-sustainability (see chapter 7). To attain a high level of outreach and self-sustainability, RFIs require *appropriate governance,* which entails clearly defined and limited roles and powers for government, donors, the central bank, and other agencies. *Capable management* with a high degree of *autonomy* is also required, as are *innovative and efficient operating procedures* guided by a well-developed *management information system.*

This chapter provides guidelines on institutional policies and practices necessary for building institutional capacity in rural financial institutions. The chapter begins with a definition of institutional capacity, which is

Box 8.1 The need for institutional reform

"Not even an extremely far-reaching and successful financial sector reform would eliminate the need for specific efforts to initiate and support target-group-oriented financial institutions: There does not seem to be a 'market mechanism' which would induce established financial institutions to start providing financial services to the lower-income target groups as soon as a financial sector reform has taken place. . . In the medium- to long-term (banks) will have other strategic options, such as financing external trade, and experience indicates that they prefer these other options and are reluctant to serve the poorer segments of the population if they are not given specific incentives and technical assistance to motivate and enable them to address the 'mass market' of the poor."

Source: Krahnen and Schmidt 1995, 8.

followed by a description of the main problems experienced by RFIs. It then discusses in detail the key elements of a comprehensive strategy for building institutional capacity.

Definition of Institutional Capacity

Institutional capacity refers to the degree to which an organization's objectives and procedures are embedded in its day-to-day activities. Edgecomb and Cawley (1994) define capacity as an organization's ability to move from thinking to action and to structure itself. Capacity includes the following elements:

- A strong *management team* capable of communicating the mission of the organization and translating the organization's objectives into actions
- *An organizational structure* that supports the organization's objectives, is responsive to client needs, and engenders appropriate participation
- *Systems and procedures* that are customer-friendly, facilitate the smooth and efficient flow of information, and ensure transparency in the institution's operations and policies
- *Motivated and skilled staff* with the ability to effectively execute and continuously refine and improve the operational methodology to better meet the organization's objectives
- The ability to secure *appropriate resources: human, financial, and technical.*

Problems Experienced by RFIs

Few state and donor-sponsored RFIs have been able to provide financial services to their target clientele in a sustainable manner. Access to a continuous flow of inexpensive funds, lack of commercial imperatives, and insufficient attention to information and incentive issues in designing institutional mechanisms and operating procedures have resulted in inadequate credit evaluation, poor enforcement, poor loan collection, and costly administrative procedures. The perception that donor-funded loans were grants that did not have to be repaid has led to a lack of financial discipline by both clientele and institutions (see box 8.2). Such factors explain the failure of many rural financial institutions.

Because of ineffective policies, only a small portion of the target market has been reached.

Box 8.2 Potential impact of interest rate subsidies

Aside from the effects that subsidies can have on the overall economy, they can have the following (unintended) effects on rural financial intermediation at the institutional level:

- Subsidized on-lending interest rates could result in a *lack of financial discipline* by the rural financial institution (RFI) or its clientele because cheap loans are often regarded as grants that do not have to be repaid.
- Low-cost loans to clients discourage savings mobilization because the loans preclude remunerative interest rates on deposits, and the low-cost rediscounts associated with cheap loans usually entail less administrative effort than is required to mobilize and manage deposits.
- Government budget constraints mean that if loans are extended to clients at subsidized interest rates, there will be fewer borrowers (fewer people are served as the subsidy per dollar lent increases).
- Below market on-lending interest rates attract rent-seekers. They also result in rationing, which typically favors the wealthy and politically connected.
- Below market on-lending interest rates can encourage institutional corruption and fraud because staff may try to capture the difference in the interest rate by eliciting side payments from clients.
- Subsidies prevent an RFI from attaining financial self-sustainability, which requires that the interest rate margin should cover all the RFI's administrative and financial costs over the long term. A higher than market interest rate is usually required to cover the higher transaction costs and greater risk associated with serving an RFI's target clientele.
- Withdrawal or cancellation of subsidies by the government or donors could cause financial distress for an RFI and its clientele.

Box 8.3 Subsidized interest rates: good intentions, disappointing results

There have been many attempts to reach target clienteles by heavily subsidizing on-lending interest rates. But the rural poor and small-scale farmers value access to timely, reliable formal credit and savings facilities much more than they value subsidized rates of interest. A recent World Bank staff appraisal report describes a proposed project to provide credit in one country in transition:

Potential microenterprises do not have access to formal bank credit, which has a current rate of interest of 24 to 32 percent (plus, reportedly, a 10 percent baksheesh, or "irregular" payment to a bank official for authorizing a loan). Informal credit at an interest rate of 5 to 10 percent monthly is available mainly for trade activities greater than US$10,000.

The proposed project intends to introduce an on-lending rate of 24 percent (about 3 percent in real terms). The box table illustrates the effective lending rates that the borrower will face once the baksheesh is taken into account. Under these prevailing circumstances, and assuming that the scarcity of capital in the country is well reflected in the effective rates paid by the borrower (inclusive of baksheesh), any intervention in the form of a lower interest rate will enrich only the rent seeker—the bank official who can control the availability of loans and approve applications with almost no trickle-down effect on the effective interest rate (official interest plus baksheesh) paid by the ultimate borrowers.

The accommodation of officials capturing the baksheesh impoverishes the financial intermediary, adversely affects financial discipline, and undermines the repayment culture. A borrower forced to pay baksheesh will not be motivated to repay the loan, having never received the full value of the loan. Failure to repay will generate further deterioration in the financial position of the financial intermediary. So an increase in the on-lending interest rate seems desirable on all counts.

	One year	*Six months*
Annual lending rate	24%	24%
Baksheesh (paid in advance)	10%	10%
Effective annual lending interest rate	38%	55%

Clearly there is no point in attempting to reduce the on-lending interest rate through interest rate subsidies when any reduction in the rate below the rate prevailing in the market is likely to result in increased rent-seeking in the form of baksheesh.

Source: Authors' calculation based on World Bank data.

The wealthy and politically connected have been the main beneficiaries of most programs. Subsidized interest rates have encouraged rent-seeking behavior, and the benefits of cheap funds have seldom reached poorer clients (see box 8.3). Weak governance explains the failure of most rural financial institutions to detect and prevent rent-seeking behavior.

RFI management teams have been held back by limited autonomy in determining operational policies. Because of their limited accountability, they have also often lacked the motivation to pursue viable policies. RFIs have frequently been used as vehicles for patronage, with politicians taking advantage of them to gain electoral support rather than helping them to serve the financial needs of disadvantaged rural communities. Box 8.4 provides a typical example of political interference.

Key Elements of Capacity Building

There is no single formula for developing a successful RFI: factors such as an RFI's target clientele and the prevailing socioeconomic conditions will determine the most suitable operational approach. This section discusses the main components of institutional capacity and provides some principles for institutional development in formal and semiformal RFIs.

Ensure Appropriate Governance

The powers and responsibilities of the entities involved in managing and supervising an RFI should be clearly defined. These entities usually include an external auditing or supervisory agency, the owners (who may be private citizens, nongovernmental organizations, local,

Box 8.4 Rural credit institutions as a political tool: debt forgiveness in India

Rural financial institutions (RFIs) that are associated with governments often become the target of politicians. The influential clientele of these institutions makes them a particularly attractive political target. In India the government-appointed Agricultural Credit Review Committee reported in 1989:

"During the election years, and even at other times, there is considerable propaganda from political platforms for postponement of loan recovery or pressure on the credit institutions to grant extensions to avoid or delay the enforcement process of recovery. In the course of our field visits, it was often reported that political factors were responsible for widespread defaults on the ostensible plea of crop failures in various regions." (Part III, para. 36)

"The 'willful' defaulters are, in general, socially and politically important people whose example others are likely to follow and, in the present democratic set-up, the credit agency-bureaucracy is reluctant to touch the influential rural elite who wield much formal and informal influence and considerable power. Farmers' agitation in many parts of the country is taking a virulent form, and banners are put up in many villages declaring that no bank officer should enter the village for recovery purposes. This dampens the enthusiasm of even the conscientious members of the bank staff working in rural areas in recovery efforts. The general climate, therefore, is becoming increasingly hostile to recoveries." (Part III, para. 39)

Source: World Bank 1994b.

or national governments, or donors), and the RFI's management team.

Supervision and prudential regulation. The degree and appropriate form of regulation required will depend on the size, ownership structure, and nature of an institution. At one end of the spectrum are large formal banking institutions, whose owners and clients are separate entities and whose many depositors are relatively uninformed. These institutions should be subject to prudential laws and to fairly intensive prudential supervision by the monetary authorities to protect the interests of creditors and ensure financial sector stability. However, the supervisory body should not be involved in managing the day-to-day operations of the institution.

At the other end of the continuum are small credit unions or village banks. Because the clients and depositors of these institutions are often also the owners, self-regulation and monitoring may be acceptable. Even so, the potential for rent seeking or conflict between the interests of borrowers and depositors may still exist (Chaves and González-Vega 1994). Since this potential is related to the size of the institutions and to the amount of information available to depositors, some external supervision is warranted if the institution mobilizes deposits and grows in scale. The supervision need not be by the monetary authorities. External auditing or supervision by the central offices of a federated credit union may suffice. Prudential regulations may be limited to separating the roles and powers of the management from those of a board or supervisory committee, although many countries require adherence to prudential laws if the RFI takes deposits (see box 8.5).

When determining the appropriate level of supervision, the potential costs involved in formal supervision must be assessed. Regulatory requirements (such as minimum-capital requirements) may thwart the operations of a small semiformal RFI, forcing it to restrict the kinds of products offered or to quit the market altogether.

Management. A strong management team, capable of formulating and communicating the vision and objectives of the institution, is critical to the success of an RFI. Management must be *accountable* for the performance of the institution. It should therefore have a high degree of *autonomy* in setting the operational policies of the institution. Autonomy is of special importance to RFIs because funds are often provided by government or other donors who may want to influence operational policies to benefit a

Box 8.5 When does informal become formal? South Africa

"By the time the South African banking regulators became aware of Sun Multi Serve's operations, it had already collected approximately R50 million (US$13 million) from 53,000 black investors—well in excess of the R9.9 million (US$2.7 million) statutory limit above which a bank must comply with banking laws. South African authorities stepped in and froze the assets of Sun Multi Serve, pending an investigation. The central bank's chief of banking supervision insists that Sun Multi Serve is a pyramid scheme and that the banking regulators have the responsibility to protect depositors. However, Sun Multi Serve claims to be a *stokvel* (an informal savings scheme or credit union) in line with African tradition, and insists that the scheme is the victim of 'cultural intolerance.' Some of its depositors marched on the central bank to protest the central bank's actions."

Source: "South African Finance: Not a Formality," *The Economist*, January 13, 1996.

specific group or attain political or other (disbursement) objectives (see box 8.6).

Management should focus on reaching the institution's target clientele. Outreach can be encouraged by linking management incentives to RFI performance in serving the defined target clientele or by limited client participation in the management structure, which the Grameen Bank in Bangladesh has done successfully.

Define the Institution's Strategies and Objectives

An RFI should explicitly define its target clientele and objectives. Unless this is done up front, the conflicting objectives of different stakeholders may prevent the institution from formalizing the most suitable policies and procedures for fulfilling its mission. For example, if social intermediation or the provision of social services are institutional objectives, the institution should say so explicitly, because the objectives will at the very least partially determine the types of services offered, the modes of operation, and the costing structure of the RFI.

Clearly defined goals and objectives are necessary to enable the RFI to measure its progress. Once the objectives of the RFI have been defined, a detailed plan and schedule should be developed that includes intermediate objectives and qualitative and quantitative performance indicators. If the goal is to improve savings mobilization, related actions and objectives should be specified, together with indicators such as the target number of clients, volume of annual average deposits, and ratio of savings to loans to be achieved by a specific date. When appropriate, explicit agreement should be reached on interim objectives with external agencies. If an RFI does not meet its objectives, management will know that it needs to improve the RFI's operational performance.

In defining the RFI's goals and objectives, clear roles must be established for the various stakeholders. Box 8.7 provides an example of the importance of clearly defined roles and objectives.

Learn from the Informal Sector

Knowledge about a country's informal financial markets can provide guidance on the kinds of practices that are acceptable and workable within a community. it also helps in identifying opportunities available in the market to better meet the financial needs of that community. An RFI that offers products or uses methods familiar to the target market is likely to gain wider product acceptance and achieve greater market penetration (see box 6.3).

However, the objective of a formal RFI should not be to supplant the informal financial market but to *compete* with it in certain areas and *complement* it in others by providing a broader range of products to a wider clientele. For example, the existence of rotating savings and credit associations (ROSCAs) or voluntary group-based savings schemes in a community indicates that group-based financial schemes are feasible in that community. ROSCA members often, however, have no

Box 8.6 Rural savings and loan associations in Benin

Benin's rural savings and loan associations were created in 1975 as local member-managed banks. They were soon placed under the jurisdiction of a public agricultural bank that functioned as an apex institution for the associations. This move undermined their mutualist principles and shifted decisionmaking from elected association members to government-appointed managers. The apex institution used the network to transfer savings from the rural sector to the urban (mostly public) sector. Because of lax credit policy under public management, the financial situation of the network deteriorated in the 1980s until it reached the brink of collapse.

A strategy for reform. Several donors, including the World Bank, recognized the importance of savings and loan associations in rural financial intermediation and helped to devise a rehabilitation plan that included:

- Reestablishing a positive macroeconomic and sector policy environment
- Earning the confidence of rural dwellers by reverting to mutualistic principles and empowering members—government agreed to restrict itself from intervening in network affairs
- Making external financial resources complements to savings rather than the main source of loan funds
- Instituting more rigorous credit policies focusing on security and sustainability
- Establishing a "full recovery" principle to maintain repayment discipline
- Using group lending, familiarity between borrowers and elected association officials, and social pressure to ensure debt repayment
- Applying positive real interest rates and adequate spreads to increase sustainability
- Building capacity and training staff and elected officials, especially in institutional mechanisms and procedures, accounting, auditing, management, and financial control.

Results. The network was completely revitalized between 1990 and 1995. Membership increased almost fivefold to 127,000, and share capital rose by 160 percent to CFAF 390 million. Deposits increased 240 percent to CFAF 9.4 billion, and credits rose from CFAF 200 million to CFAF 6 billion. The recovery rate was consistently above 98 percent, and more than 90 percent of local banks reported operating profits with support from external donors. Measures have been taken to ensure the medium-term sustainability of the regional associations and the national federation.

New challenges. Does anything overshadow this picture? With success and popularity the same dangers that caused failures in the 1980s are back. Government interest in the network, which had waned during the crisis period, is increasing steadily, and government and donors alike are lining up to propose new lines of credit and new activities in which the network has no experience or comparative advantage, such as medium-term loans. "Market failures" are once again used as the rationale for these interventions. The massive (2,900 percent) expansion in credit has been detrimental to security. The loans to savings ratio has risen from 50 percent to over 60 percent, average loan amounts and reliance on external lines of credit have increased, and group lending is decreasing in relation to individual lending. Is history repeating itself?

Lessons. It is clear that appropriate rehabilitation measures work, but success is not necessarily permanent. Any mistakes quickly forgotten are likely to be repeated. It is therefore imperative in times of success to advise circumspection and restraint.

Source: Contributed by Luciano Mosele.

access to interest-earning facilities where funds can be deposited, and recipients of savings therefore often hoard funds or spend them immediately upon receipt. The provision of interest-bearing group savings accounts for ROSCA and individual accounts for ROSCA members could therefore encourage savings and improve members' return on savings. Box 8.8 shows how innovations implemented by commercial banks in South Africa helped to complement informal saving schemes.

Determine Which Services Clients Need

Successful outreach means meeting the target clientele's demand for financial services in a way that is as beneficial as possible for the clientele. Krahnen and Schmidt (1995) note that "target-group orientation is more a matter of an institution's general policy or 'corporate culture' than of the clever application of techniques or 'tricks of the trade.'" In commercial terms that means that devel-

Box 8.7 Mysore Resettlement and Development Agency

The Mysore Resettlement and Development Agency (MYRADA) was established in 1968 to assist with Tibetan refugee resettlement. In 1984 MYRADA initiated a group-based community development and financial services project with credit management groups. Today, the program has a staff of sixty-seven servicing 388 villages and more than 10,000 credit management group members.

Kamasamudran District. The MYRADA savings-led model in Kamasamudran emphasizes the institutional development of the credit management groups. The results have been encouraging. The overall repayment rate in early 1993 was 85 percent, with women's groups outperforming men's. Accounts were updated and accurate, meetings were well organized, and individual members were well informed about their rights and responsibilities.

Dharmapuri District. In this area of Tamil Nadu MYRADA has collaborated with many government institutions and nongovernmental organizations (including Plan International, the International Fund for Agricultural Development, the Indian Bank, and the Tamil Nadu Women's Development Program) to provide financial and other services to groups of poor villagers. Activities include assisting in the formation and development of community savings and credit groups; providing subsidized credit from the government's Integrated Rural Development Program; providing youth skills training; providing technical assistance in agriculture, forestry, and animal husbandry; and assisting with resettlement, watershed management, and land reclamation.

The results in the Dharmapuri District have been disappointing. The credit management groups have displayed a general lack of financial discipline: the repayment rate is estimated at only 54 percent, savings have stabilized at less than 50 percent of the loan portfolio, financial service delivery costs have increased to at least 31 percent with the involvement of new institutions, and members are confused about their repayment schedules and obligations.

This poor performance can be ascribed to several causes. First, overlap of responsibilities and different development objectives have led to confusion among group leaders and members. Second, there is enormous variation in the financial services provided and in the way that groups are organized. Each group wrestles independently with issues such as membership requirements, interest rates, and loan size and use. Third, the Indian Bank offers, through its Integrated Rural Development Program, subsidized loans to members selected by a credit management group, with the average loan size twelve times larger than loans from the group's own funds. The link to Integrated Rural Development Program funds dramatically changes the incentive structure for members, notably with regard to repayment of loans. The links are also a disincentive to increased mobilization of savings from members. Finally, the use of paid village animators who tend to control the groups undermines the credit group's principle of self-reliance—an essential characteristic of other more successful MYRADA projects.

Conclusion. The effectiveness of MYRADA's highly participatory approach in Kamasamudran results from the clear roles, responsibilities, incentives, and performance standards set for MYRADA staff and the leaders and members of the credit management groups. It also results from the effective sequencing of organizational and financial activities. In Dharmapuri the MYRADA approach has become unwieldy because of the uncoordinated involvement of various institutions. Financial performance and group cohesion has suffered from conflicting objectives and incentives and from the availability of external subsidized loan funds linked to a government program. In sum, the complexity and multiple objectives of the Dharmapuri approach have adversely affected financial performance and the strength of the groups.

Source: Contributed by Lynn Bennett and Mike Goldberg.

opment institutions need to be customer-oriented.

Development planners should not assume that they know what clients want more than the clients themselves do. The financial requirements of the target clientele should be researched as part of a continuous process of refining products, policies, and modes of operation to better meet clients' evolving needs. Client needs can be determined by learning from the informal market; consulting community leaders; interviewing current, former, and potential clients; and analyzing defaults and product performance.

Box 8.8 The formal meeting the informal in South Africa

A *stokvel* is an informal savings scheme or credit union to which group members usually contribute monthly. Stokvels have been part of the financial landscape in South Africa for decades. The National Stokvels Association of South Africa represents about 11,000 stokvels. There are different kinds of stokvels. Some are run as "funeral insurance schemes," with proceeds used to pay the expenses of members' funerals (costly affairs among black South Africans). Other stokvels pay out proceeds in full on a rotating monthly basis to members to purchase otherwise unaffordable commodities. Still others simply keep proceeds (with no interest earned) in a safe place. Membership is often confined to a small group of people, but some stokvels have grown to a few hundred members.

Some of the large commercial banks in South Africa have recently developed savings instruments to accommodate these schemes. Stokvels are able to open a single bank account for the group, with certain designated members having signature rights to the account. Loans can also be issued against the accumulated savings. These savings and loan instruments enable stokvel members to safeguard their money, earn a return on their savings, and gain access to additional funds. The banks obtain access to funds for on-lending in a regulated environment.

Source: Adapted from "South African Finance: Not a Formality," *The Economist*, January 13, 1996.

The traditional view that credit was the only financial need of rural populations has been disproved. Rural populations, including the poor, have financial demands similar to those of urban populations (access to credit, savings, insurance, and payment facilities).

However, the needs of rural clients may differ with respect to the structure or nature of products required and in delivery mechanisms. For example, RFIs often focus on medium-term, production-oriented loans with fixed-term repayment requirements. Liquid savings instruments, overdraft facilities, or other forms of quickly accessible funds may be more appropriate for a creditworthy client during personal financial difficulties.

Establish Appropriate Modes of Delivery

Efficiently and effectively delivering financial services is particularly challenging in rural areas. RFIs must overcome many obstacles, including the geographic dispersion of clients, underdeveloped infrastructure and lack of transport, the time constraints faced by the rural poor, high illiteracy rates and other social barriers, limited information, and inadequate formal enforcement mechanisms.

Geographic constraints. Some rural financial institutions have successfully used village banking, mobile banking, or a combination of the two. Village banking relies on community-based savings and credit associations that may be linked with formal financial institutions (see box 8.9). Mobile banks may consist of small, low-cost branch offices at the village level, which may be open only on selected days. The offices are operated by a small staff that spends much of its time visiting clients. Meetings with clients can take place at the market, at organized outdoor meetings, or at clients' homes.

Time and mobility constraints. These constraints should be considered carefully, especially the lack of mobility among the poor, particularly women. RFIs should determine the most suitable time of the day or week to meet with potential clients, and they should arrange access and schedule meetings accordingly.

Literacy and numeracy constraints. To deal with illiteracy and lack of numeracy among clients, witnesses should be allowed to give legal standing to contracts signed by illiterate or innumerate clients. For smaller transactions, written contracts could be replaced by oral contracts, joint liability, and regular meetings with clients. All clients should be told the effective rate of interest, not just the nominal rate, and the amount and timing of installments should

Box 8.9 Village bank methodology

Village banks are "community-managed credit and savings associations that are established to improve members' access to financial services, build a community self-help group, and help members accumulate savings" (Holt 1991). The size of individual loans, backed by the solidarity guarantee of the village bank, is increased when the borrower repays in a timely way and saves money. The loan amount is increased according to the amount of savings generated by the member during the four- to six-month loan cycle. The participant is usually a rural low-income woman who has no access to affordable financial services and is dependent on informal moneylenders and market intermediaries.

Different international nongovernmental organizations (NGOs) pursue different institutional approaches to village banking. Katalysis works with local NGOs to create village banks; Freedom from Hunger works with established credit unions. Catholic Relief Services has apex institutions in Peru, Thailand, and Honduras to work with local NGOs and credit unions. World Relief, Save the Children, and Project HOPE have local offices, and the Foundation for International Community Assistance has local affiliates with branch banks.

Training in village banking projects is usually carried out by extension specialists who provide elected leaders with bank management training in leadership styles and responsibilities, membership eligibility rules, administrative procedures, and basic savings and loan recordkeeping. Some NGOs provide additional training and support services, such as technical training to improve productivity and nutrition and child health care.

CARE/Guatemala. CARE/Guatemala initiated a pilot village bank project in April 1988 and launched a full-scale program in early 1991. The program is designed to respond to rural women's lack of access to affordable working capital and technical support for income-generating productive and commercial activities. The program provides a short-term loan to each participating village bank, requires mandatory savings, and provides organizational training and limited production-oriented technical assistance. The approach has gained widespread acceptance because of peer pressure, shared economic risk, and the use of delivery mechanisms that address the constraints and productive opportunities of women in rural Guatemala. In late 1994 the program had more than 10,000 women members and CARE reported a 99 percent on-time loan recovery rate.

Source: Contributed by Lynn Bennett and Mike Goldberg.

always be clearly explained. Training in financial management, budgeting, interest rates, collateral, and foreclosure may help to avoid misunderstanding, improve repayment performance, and ensure that a positive long-term relationship is formed between the client and the institution.

Other social constraints. Some barriers to trade are based on social factors, such as gender and ethnicity (see box 3.5). Various forms of social intermediation may be warranted to make formal financial services available to economically or socially marginalized members of society. One of the most important kinds of intermediation overcoming social barriers is the provision of group-based savings and credit services. First, capacity must be built among target clients to establish and manage groups. Building this capacity may require largely unremunerated technical assistance from RFIs. The second stage links these groups to formal RFIs for two-way financial transactions. The role of groups in rural financial intermediation is described in box 8.10.

Information and enforcement barriers. The problem of asymmetric information is significantly more pronounced across rather than within rural communities. Villagers often have information that is not available outside the community. RFIs should aim to obtain information by consistently deploying appropriate contractual designs and clear operating procedures, including reputation mechanisms, interlinked credit and savings transactions, group-based mechanisms for screening and selecting clients, the use of local staff, and intensive direct monitoring (see Stiglitz and Weiss 1983, Bell 1988, Varian 1990). The approaches used to acquire information are also often extremely effective in enforcing contracts.

Box 8.10 Groups in rural financial intermediation

When should groups be used?

- When communities have strong group cohesiveness
- When initial start-up costs and transaction costs are high
- When individuals (potential group members) can obtain information about each other at a lower cost than the bank can
- When individuals do not have collateral.

Guidelines for more effective use of groups

- Focus on small, homogeneous groups that will assume some responsibility for supervising their funds
- Impose penalties (such as prohibiting access to further loans while an individual is in default) and provide incentives (such as promising higher future loan amounts to those who repay on time)
- Institute sequential lending (to allow groups to screen out bad risks).

Advantages of using groups

- Economies of scale—a larger clientele served by a fixed investment in operating assets
- Economies of scope—increased capacity to deliver multiple services through the same group mechanism
- Less information asymmetry through group's knowledge of potential borrower-savers
- Reduced moral hazard risks through group monitoring and peer pressure
- Joint liability makes up for absence of individual collateral
- Improved loan collection—better screening and selection through peer pressure and joint liability, especially if group penalties and incentives are incorporated in the loan terms
- Improved savings mobilization, especially if incentives are incorporated in the group scheme
- Lower administrative costs (selection, screening, and loan collection).

Risks associated with using groups

- Risk of poor records and lack of contract enforcement
- Risk of corruption and control by a powerful nucleus or leader within the group
- Risk of covariance because of similar production activities
- Risk of generalized repayment problems (contagion)
- Risk of limited participation by women because of gender mix
- Risk of spending excessive time and money to form viable groups
- Risk that departure of a group leader may jeopardize group viability
- Risk of potential of free-riders. (This risk can be reduced if the group can impose penalties on individuals.)

Source: Adapted from Pederson 1995; Bennett, Goldberg, and Hunte 1996; Besley and Coate 1995; Huppi and Feder 1990; Rashid and Townsend 1994.

Contain Transaction Costs

The transaction costs to both clients and RFIs should be minimized to improve the outreach and financial performance of RFIs.

The delivery system is a key determinant of transaction costs. A *solidarity group* can reduce the screening, selecting, and enforcement costs of an institution if the group carries most of the cost of these functions. Innovative techniques like *mobile banking* may further reduce transaction costs for rural financial institutions and their clients.

Appropriate technology can substitute for physical representation and reduce processing time and cost. The Swazi Business Growth Trust in Swaziland has no physical branch network; it uses SmartCard technology, which allows clients to conduct transactions at regular commercial banks (see box 8.11).

A simple, decentralized loan-processing system can speed loan approval and reduce processing cost by minimizing red tape and thus increase client satisfaction.

Efficient, appropriately trained, and motivated staff will further improve operational efficiency and contain costs. (Staff policies are discussed in greater detail toward the end of the chapter.)

An effective management information system is vital for reducing transaction costs be-

Box 8.11 Technology in servicing the poor: introducing the SmartCard in Swaziland

Swaziland is a small country with a fairly well-developed banking industry. However, commercial banks in Swaziland have not shown much interest in providing financial services to small businesses and the poorer segments of the market. This lack of interest is caused by the usual constraints, such as lack of collateral and the high transaction costs associated with servicing these clients.

The Swazi Business Growth Trust (SBGT), a private nonprofit Swazi-directed nongovernmental organization, was established in 1992 with support from Development Alternatives to facilitate the development and growth of small Swazi businesses by helping them to obtain access to key inputs. To minimize the transaction costs associated with extending and recovering loans, the SBGT introduced the SBGT SmartCard. Each customer receives a SmartCard, which has a memory chip on its surface that contains all information pertinent to the client's loan. Commercial bank branches are supplied the equipment to read the cards and SBGT clients can draw funds and make repayments at various commercial bank branches in Swaziland. The SBGT holds a line of credit with the participating banks, and collects transaction information from the banks and settles net transfers to and from its line of credit daily. Commercial banks provide this service free of charge because the SBGT is a nonprofit organization that does not compete for the banks' clients. SmartCard credit purchases can be made at authorized dealers and suppliers, who are provided with card-reading equipment by the SBGT.

A SmartCard transaction takes a fraction of the time of a regular teller transaction. The SmartCard provides SBGT clients with access to funds through a convenient countrywide distribution network at minimal cost to the SBGT. To further reduce costs, the SBGT plans to put the SmartCard network on-line in commercial bank branches as soon as the Swazi telephone system allows this.

Source: Adapted from McLean and Gamser 1995.

cause it speeds and improves the quality of decisionmaking, enables staff to detect and immediately deal with potentially costly problems, and affords management greater oversight over decentralized activities.

Cover Costs with Appropriate, Positive On-lending Interest Rates

Interest rates charged by the informal sector are usually much higher than those charged by commercial banks, showing that the rural poor are willing and able to pay high interest rates. What they need is improved access to funds, not subsidized loans that hardly reach them.

Both savings outreach and the quality and volume of lending can benefit from a positive real on-lending interest rate that covers the true risk and full administrative and financial costs associated with lending to the target group. A positive interest rate will enable an RFI to pay positive competitive interest rates on deposits. Paying competitive interest rates can simultaneously stimulate both savings mobilization and the volume of lending, since additional deposits can be extended as credit. Appropriate, positive real on-lending rates will also discourage rentseekers, who might crowd out the target clientele if interest rates were subsidized.

Customize Loan Terms and Conditions for the Target Clientele

Loan terms and conditions should be simple, flexible, and comprehensible to clients. The special circumstances of the clientele should be considered in structuring the terms of a loan.

Loan amount. Loan amounts should be determined according to clients' projected cash flow and repayment capacity. Debt capacity calculations should take into account the likelihood of adverse shocks to clients' incomes—a major issue for many supply-led specialized agricultural credit institutions (Von Pischke 1991).

Loan type. Often loans are offered only for investment or working capital purposes, but clients may have a more immediate demand for consumption loans to address personal finan-

cial crises or to finance lumpy consumption expenditures. More flexibility in loan conditions and types of lending instruments is needed because of the fungibility of money and the frequent lack of clear distinction between target clients' personal and business finances, especially for smaller enterprises and farmers with low surplus production.

Installment amount and timing. The repayment ability of clients may be affected by seasonality or be highly vulnerable to natural events. Fluctuations in repayment ability could be provided for without sacrificing financial discipline by allowing a greater choice of repayment terms at the associated cost of funds. Indeed, allowing for frequent repayment of small amounts should improve repayment performance and the ability of RFIs to monitor repayments and detect problems early. Krahnen and Schmidt (1995) found that shorter terms to maturity were associated with improved collection performance on loans to nonfarm enterprises.

Collateral. When customers are not capable of providing formal collateral, RFIs should be innovative. The use of joint liability groups and compulsory savings are two examples of ways to overcome clients' inability to meet the collateral requirements of mainstream banking. Another is to create implicit or explicit multiperiod contracts that make the size of new loans contingent on previous repayment performance.

Monitor and Maintain the Quality of Assets

Poor loan collection is a major cause of financial distress in RFIs. Special attention must be paid, first, to monitoring, and second, to maintaining the quality of assets.

Tracking and reporting loan performance. The absence of a process to define and systematically account for arrears and loan losses often results in the misrepresentation of assets, profits, and net worth. RFIs often understate loan losses and so overstate profitability. The appearance of profitability can entice politicians to make greater use of the institutions for patronage and lead governments to tax rural financial institutions more heavily. Operationally, the appearance of profitablity can hamper careful screening and selection of clients and prevent RFIs from pricing loans appropriately. To systematically monitor loan performance, RFIs should:

- Develop an effective management information system (see box 8.12) to track payments, dues, and overdues daily.

Box 8.12 Effective management information systems

The importance of a sound management information system in a rural financial institution (RFI) cannot be exaggerated. It enables informed decisionmaking by management, sends warning signals to RFI staff and external evaluators, and contributes to the transparency of operations. A good management information system will at a minimum provide information about:

- The financial performance of the overall institution
- The performance of products, especially in loan collection and arrears
- Individual branch and staff performance, rewards for performance may be required as inputs for the staff incentive system
- Repayment performance of individual clients or groups. This information will enable staff at the branch level to provide incentives to clients or investigate problems and either reschedule loans or implement punitive measures. Client 'profiles' could also be developed to improve future loan selection and screening.

RFIs should strive to continuously improve the technology and methodology they employ, but management information systems do not have to be high-tech to be efficient. The focus should be on simplicity and on the integration of the system into the daily activities of the RFI. As McNaughton (1992, 120) notes: "[Information technology] should support the management process, not precede it."

Source: Authors' findings.

Box 8.13 Impact of failure to write off bad debt

Rural financial institutions often fail to write off bad loans because of legal restrictions or the desire to show exaggerated profits. When bad debts are not written off, reported loan recovery performance may be highly distorted.

The calculation below provides an example of the type of distortion that can arise when a bad debt is not written off but is carried over as part of the outstanding loan portfolio. Loan collection performance should be measured as follows: loan collection over the amount falling due during the reported year *net* of bad debt. Instead, it is often measured as loan collection over *demand* (the amount falling due *plus* the cumulative total of previous years' bad debt). Several countries, including India, have followed this practice.

Assume that the RFI lends 100 units of currency every year of which 10 units are never collected and never written off. The denominator (demand) consequently increases by 10 units annually, resulting in a misleading deterioration of the recovery ratio while actual performance has remained constant—at a 90 percent annual collection ratio.

Year	1	2	3	...	10
$\frac{Collection}{Demand} \times 100\%$	$\frac{90}{100} = 90\%$	$\frac{90}{10+100} = 82\%$	$\frac{90}{(10x2)+100} = 75\%$	...	$\frac{90}{(10x9)+100} = 47\%$

Source: Yaron 1994b.

- Adopt a transparent and informative methodology by which to monitor loan performance. A *past-due-aging analysis* like the one used by the Bank for Agriculture and Agricultural Cooperatives in Thailand is highly recommended (see figure 7.3, table 7.1).
- Pursue *transparent accounting procedures* that follow generally accepted accounting principles for income recognition related to nonperforming loans, provisions for bad debts, and write-offs of unrecoverable loans. Past-due-aging analysis should form the basis for realistic estimates of anticipated loan defaults, although current and expected future trends should be considered. Box 8.13 provides an example of the distortion that can arise in reporting on loan collections when bad debts are never written off.

Maintaining the quality of assets. Several factors can cause high arrears on loans: poor screening and selection of clients, insufficient monitoring of loans, and inadequate incentives for clients to repay. Box 8.14 provides guidelines for reducing arrears and improving loan collections in RFIs.

Manage and Diversify Risks

The longevity of an RFI is largely a function of its ability to manage risk successfully. A detailed discussion on risk management in financial institutions is beyond the scope of this paper. However, the three categories of risk that characterize RFIs do warrant mention.

Subsidy risk. Dependence on subsidies threatens the longevity of RFIs and subjects them and their clients to risk in the form of possible variations, and especially reductions, in future subsidized funds (Krahnen and Schmidt 1995). This risk can be mitigated by measures that reduce dependence on subsidies.

Covariant risk. RFIs are subject to high covariant risks in lending to their target clientele, since the rural economy is highly influenced by agriculture, which is seasonal and subject to covariant shocks. The solution is to diversify to the extent possible and to forge links with financial intermediaries in other areas (including urban areas).

Default risk. Challenging covariant risks and information and enforcement barriers in rural

Box 8.14 Quality of assets: a healthy loan portfolio

Guidelines for reducing loan defaults include the following:

- Lending must be initiated to meet the bankable *demand* for credit (as opposed to being supply-led).
- Clients must be carefully *selected and screened,* asking for character references and forming groups can offset the lack of information about potential borrowers.
- Alternative forms of *collateral,* such as joint liability, should be accepted.
- *Foreclosure* should be exercised (where legally possible) in instances of default. Although foreclosing may not always be cost-effective, particularly for small loans, it can deter willful default by other clients.
- *Loan size* should be carefully evaluated and gradually increased according to the client's repayment performance, earnings, and debt-carrying capacity.
- *Loan terms* should meet the needs of the client, be flexible, and be convenient in relation to the repayment schedule, installment amounts, and location of payments.
- The *loan contract* must be clear, simple, and explicit.
- The *effective interest rate* should be quoted to the client.
- A *positive real on-lending interest* rate must be charged so that the loan is not perceived as a grant.
- *Arrangements with the government* (especially for interest payments) should be transparent (Krahnen and Schmidt 1995).
- The RFI should *mobilize savings* where permitted—this may give the client a sense of ownership of the loanable funds and of the institution (Bennett, Goldberg, and Hunte 1996).
- Clients should be *rewarded* (through interest rate rebates or access to larger future loans) for timely repayment and *penalized* (through foreclosure and denial of future access to loans) for defaulting.
- Staff should be given *incentives* (through profit sharing and promotion for performance) for high loan collection performance.
- *Loan performance* should be monitored daily through a well-developed management information system—arrears should be investigated immediately by the loan officers responsible for managing the account.
- *Rent-seeking* by staff (fraud and bribery) should be detected and prevented by requiring managers and internal auditors to monitor staff, by providing staff incentives and competitive remuneration, and by eliminating opportunities for arbitrage afforded by below-market on-lending interest rates.
- Covariance risk associated with loan portfolios should be reduced through *diversification* of loans in relation to clients and client groups, lines of activity (by lending for agriculture and nonfarm activities), loan maturities, and location of clients. Prudent maximum ratios should be established relative to net worth.

areas expose RFIs to higher default risks. These risks can be reduced by carefully screening and selecting clients, using joint liability mechanisms, providing incentives for timely repayment (an interest rate rebate, for example), and carefully monitoring loan performance. Making adequate provisions for doubtful loans and including appropriate risk premiums in on-lending rates will help RFIs to cope with this risk and reduce the likelihood of financial distress. Credit guarantor schemes have been introduced by some governments to reduce RFIs' risks and encourage them to lend to customers with insufficient collateral. Credit guarantees are discussed in chapter 6.

Mobilize Savings Resources in the Market

Savings have been referred to as "the forgotten half of rural finance" (Vogel 1984). Indeed, until recently, little effort had been made by rural financial institutions to mobilize savings. According to Robinson (1994), this lack of effort can be attributed to misconceptions about rural clients (the notion that the poor cannot and do not save), ineffective policies (cheap lines of credit to rural financial institutions), and operational inadequacies (limited, low-cost access to liquid and secure savings instruments).

In recent years different kinds of rural financial institutions around the world have

proliferated, and informal savings schemes (notably ROSCAs), have had tremendous success with savings mobilization. These developments prove unambiguously that *rural communities can and want to save.* The Bank Rakyat Indonesia and the Bank for Agriculture and Agricultural Cooperatives in Thailand are examples of established rural financial institutions with fast-growing savings mobilization (see chapter 9). The Cooperative Development Foundation in India (box 8.15) and the pilot savings and loans program in Madagascar (box 6.7) are young programs with savings as the major source of funds.

The benefits of savings mobilization. The provision of savings facilities by rural financial institutions can contribute to improved financial intermediation by:

Box 8.15 Cooperative Development Foundation: strengthening women's thrift groups in India

The Cooperative Development Foundation (CDF) has been an active force in forming and strengthening women's thrift and credit societies in Andhra Pradesh, India, for more than ten years. In 1991 the CDF launched a project to organize women's groups and to develop a cost-effective, sustainable, and replicable model for women's thrift cooperatives. CDF believes that when women have access to credit, they can take part in local economic growth by establishing their own enterprises. There is no conscious effort to target low-income women—any woman with a business opportunity and no affordable source of financing is considered to be a good candidate for membership. However, the strategy is to promote women's thrifts only in areas of active paddy cooperatives.

The CDF has used a "saturation" approach in the Warangal and Karimnagar Districts to achieve its objective. There are four reasons for choosing these districts: (a) successful experience with men's paddy cooperatives, (b) growing markets in the area, (c) the existence of farm-to-market roads and other basic infrastructure, and (d) the receptiveness of women in the villages. Even though the CDF has a staff of only five and has received modest support from donors, it has been a catalyst, emphasizing cooperative group organization as the first step in developing a sustainable financial services system.

Individual cooperatives depend largely on internally generated savings to provide a pool of loanable funds, since the CDF does not offer a credit facility. Direct CDF assistance to the thrift groups has declined from a peak of Rs 21,500 in 1991 to Rs 12,900 in 1992. The emphasis on self-reliance has led to efficient cooperatives. Mulkanoor cluster's Kasiviswanadha Savings Society illustrates the efficiency of the individual thrift and credit cooperatives. Of funds allocated, 92 percent were extended as credit, 4 percent were used to cover interest on savings, and the remainder was used to cover expenses.

By September 1995 the system was serving 13,297 women members in 238 groups. Loan portfolio growth in the CDF system has been rapid, with a 425 percent increase in 1992 and a 235 percent increase in 1993. The share of portfolio backed by savings was 98 percent in 1993. The balance of loanable funds was Rs 16.4 million (US$530,000) by December 1993. By 1995 the portfolio had reached Rs 7.4 million (US$239,000), savings of Rs 100,000 were being mobilized each month (about $US3,400). Financial performance indicators showed a highly successful cooperative program, with a repayment rate of above 95 percent and a real lending interest rate of 12 percent. The deposit interest rate was slightly positive, unlike other similar programs in India. Administrative costs are low for a new program, amounting to an estimated Rs 0.24 per rupee of loans outstanding.

Four factors have contributed to the success of the CDF system. First, other programs have promoted access to subsidized credit from external sources, but the CDF has emphasized savings mobilization as the exclusive source of funds for loans to members. Second, the security of deposits has been demonstrated through the use of transparent record keeping, efficient financial management systems, and periodic reporting. Third, groups control credit decisions, contributing to ownership and commitment, with the CDF providing assistance in devising installment repayment plans. Finally, the CDF promotes the development of improved, computerized financial management systems and a representative apex body. It also has a clear "exit strategy," enabling it to maintain a role as consultant to leaders while avoiding management decisions that might lead to dependency.

Source: Bennett and Goldberg 1993.

- Helping clients to smooth consumption patterns while earning higher real returns than they might by hoarding or saving real goods
- Enabling clients to build reputations and collateral with rural financial institutions
- Enhancing clients' perception of "owning" an RFI and thus potentially increasing their commitment to repaying loans[40]
- Encouraging rural financial institutions to intensify efforts to collect loans because of pressure from depositors (which becomes especially strong when depositors lose confidence in the RFI)
- Providing a source of funds for rural financial institutions that can contribute to improved loan outreach, increased autonomy from governments and donors, and reduced dependence on subsidies.

Improved savings mobilization. Different methods can be used to improve savings mobilization, but the most suitable approach for an RFI will depend on the cultural and socioeconomic circumstances of its target clientele. The Grameen Bank in Bangladesh, the Promotion of Rural Initiatives and Development Enterprises in Kenya, and numerous cooperatives require mandatory savings by client-members who want to gain access to loans. Access to these savings is often restricted. However, the Bank Rakyat Indonesia and the Bank for Agriculture and Agricultural Cooperatives in Thailand have mobilized voluntary deposits that are separate from credit transactions.

Some broadly recognized requirements for effective voluntary savings mobilization are:

- Positive real deposit interest rates (which require positive real on-lending interest rates)
- Flexibility and diversity of savings instruments
- Easy access to deposits for clients
- Easy access to the financial institution (through its branch network or through mobile banking staff)
- RFI staff incentives linked to savings mobilization
- A high level of client confidence in the institution.

Institutional capacity and regulatory requirements for accepting deposits. Savings mobilization is not always feasible or desirable for rural financial institutions. Schmidt and Zeitinger (1996) found that savings mobilization may not always be an optimal source of funds for institutions: the administrative complexities and cost associated with mobilizing savings, especially of small amounts of it, may be prohibitive for some rural financial institutions. Institutions may find it difficult to comply with prudential regulations that apply to deposit-taking financial intermediaries. When mobilizing savings is not an option, an RFI may have to rely on lines of credit from domestic financial institutions or on foreign sources of funds.

An RFI may at times be prevented from accepting deposits by limitations on the issuance of government licenses for savings mobilization. There may not always be a particular need for more depository institutions, because the supply of savings facilities in the market may be adequate. However, where there are no savings facilities close to the target clientele or no institutions interested in serving that clientele, governments may consider adjusting the regulations in rural areas to facilitate increased savings mobilization. Donors can draw government attention to regulatory constraints.

Any RFI that accepts deposits should have the financial strength and institutional capacity to do so. When neither the government nor donors are willing or able to be lenders of last resort, a poorly run RFI may experience financial distress that can lead to substantial losses for depositors and loss of confidence in financial intermediaries in general. Financiers of rural financial institutions should ensure that they meet minimum requirements before supporting their aspirations to mobilize savings.

Motivate and Invest in Staff

Because rural financial institutions are in a service industry, staff is their main asset: the

services delivered can only be as good as the staff that provides them. Many successful rural financial institutions appoint well-educated staff and invest substantially in staff training.[41]

Rural financial institutions should ensure that staff policies conducive to high productivity are put in place. Appropriate financial and nonfinancial incentives related to institutional objectives will motivate staff and reduce the incentive for rent seeking. Transparent procedures and strong controls (internal auditors and an effective management information system) will help to ensure staff behavior that contributes to meeting the objectives of RFIs.

Performance indicators for staff should be selected carefully. For example, the volume or number of loans as a singular indicator could induce nondiscretionary loan approvals and even coercion of clients. However, if staff incentives are tied to loan repayment performance, the volume of loans supervised and deposits mobilized, and the number of borrowing and saving clients, staff behavior will better meet the long-term objectives of the RFI. The discussion of three successful rural financial institutions in chapter 9 provides some examples of staff incentives and training undertaken by successful institutions.

Box 8.16 Risk and its consequences

Project failure is easily explained by risk. The most obvious manifestation of risk in credit projects is poor portfolio quality that leads to bad debt losses that erode the capital of the lending institution.

At one level failure occurs because of unexpected events that were not forecast in a project's design. In credit projects these events are often bad agricultural years; unforeseen increases in the cost of industrial production; and lack of markets for the skills, products, and services supported by credit. Opportunistic behavior by borrowers who refuse to repay and the unwillingness or inability of lenders to exert meaningful sanctions against such borrowers can also lead to failure.

At a more profound level the manifestations of risk suggest shortcomings in credit project design. It is often helpful to ask why these shortcomings from expectations were not foreseen and why the project design failed to include plans to deal with the unexpected.

At the outset of a project it is not necessary to identify potential catastrophic situations, such as political upheaval or the collapse of civil order. Instead, project designers should ponder the more mundane things that are likely to go wrong. They should ask the question, "What is most likely to go wrong?" This effort to identify the major credible threat is highly useful, in part because it encourages an expansive view. Once the thing most likely to go wrong is identified and plans are made to manage the risk, the questions become what else is most likely to go wrong, what damage can it do, and what response would be the most effective.

The effects of potential adverse events should be estimated and the estimate used to test borrowers' cash flows, which determine their capacity to repay. Unexpected events reduce this capacity. Awareness that this is so may lead to measures to manage the real risk faced by farms, industrial concerns, trading firms, and microenterprises. On the farm, for example, changes in cropping patterns or input use may make the farmer more secure.

Efforts are also required to manage the lender risk. Lenders can reschedule loans, provide additional credit, develop savings facilities to provide alternatives for borrowers who are also depositors, alter loan sizes to diminish future credit risk, raise interest rates to offset credit risk, and use any leverage that may be available to foreclose on security.

Risk management by lenders requires attention to liquidity. When adversity strikes, borrowers are less likely to repay, and depositors may want to draw down their savings balances. Funding of new loans becomes especially important during crises because credit is useful when the borrower's resources have been depleted.

Risk exists because things do not always work out as planned. Planning how to manage the risk that affects credit projects has positive benefits for all concerned. Planning helps the lender and others to accumulate knowledge about the problems faced by borrowers and how these problems can be managed. It encourages the lender to build robust systems for managing relationships with borrowers and the portfolios the relationships generate. Efforts at risk management by donors through improvements in credit project design enable them to contribute to development in a more sensible manner by making project design more responsive.

Source: Von Pischke 1991.

Information and Incentives

Two recurrent themes emerge in almost all the recommendations proposed for building institutional capacity. The first is the need to increase the availability of relevant information to enable RFI managers, staff, and clients to make informed decisions about financial transactions. The second is the need to provide appropriate incentives for parties to financial contracts. The most successful rural financial institutions have developed effective management information systems to meet their information requirements and have built incentive features into many aspects of their institutional design and operating procedures (see box 8.16).

Conclusion

Targeted credit without institution building in rural financial institutions is almost always a recipe for prolonged dependence on donor or state funds and bailouts (Yaron 1992c). It is not access to cheap credit that makes financial institutions successful, but competent people and sound management policies and practices. Institutional development should be an integrated and evolving process. It requires that the RFI's leadership develop a clear mission, which is communicated throughout the organization. The processes and procedures must be embedded in the daily activities of the institution, and the staff must have the necessary skills and incentives to ensure stability and continuous improvement of the modes of operation of the RFI.

CHAPTER 9

Best Practices: Three Success Stories

This chapter analyzes the management practices and modes of operation underlying the success of three rural finance institutions (RFIs):[42]

- Bank for Agriculture and Agricultural Cooperatives (BAAC), Thailand[43]
- Village Banks (Unit Desas, BRI-UD) of Bank Rakyat Indonesia (BRI)[44]
- Grameen Bank (GB) in Bangladesh.[45]

All three institutions are widely perceived as successful in achieving the primary performance objectives of outreach and self-sustainability, and for all three excellent information is available about their operations. These are not, however, the only successful RFIs. Several other promising rural financial programs have emerged in recent years, some of which are described briefly in previous chapters. It is not yet known, however, whether they will achieve long-term success in terms of outreach and self-sustainability.

The relative performance of RFIs should be analyzed in the context of their individual objectives and target clientele. The three institutions selected for this chapter differ from each other in many respects, but all three have consistently followed basic principles. The chapter provides an overview of each institution, followed by an assessment of the institution's performance in terms of outreach and self-sustainability. It also analyses the underlying factors (both internal and external) that contributed to the institution's success. Annex 9.1 presents additional details about each institution's policies, performance indicators, and modes of operation.

Summary of Main Features

The BAAC, the BRI-UD, and the GB each have millions of clients. These institutions are important in both rural and national financial sectors. Here are some of the features they share that have contributed to their success:

- Favorable macroeconomic, agricultural, and rural policies
- Adequate investment in the physical and social rural infrastructure (Thailand and Indonesia)
- High degree of management autonomy in the formulation of operational policies
- Staff policies that stress training, accountability, and reward through monetary incentives and promotion
- Innovative, low-cost distribution systems and mobile banking
- Innovative and flexible loan terms and conditions
- Close monitoring of loan performance, high collection rates, and low arrears
- Strong records of domestic savings mobilization as a growing source of funds, resulting in diminishing or eliminating the need for donor funds
- Positive and often relatively high on-lending rates
- Control over administrative expenses

Table 9.1 Operating costs
(percent)

Rural financial institution	*1987*	*1990*	*1993*	*1994*
	Percentage of average annual value of total assets			
BAAC	3.6	3.7	4.0	3.3
BRI-UD	12.3	8.0	5.9	5.4
GB	8.6	8.8	9.7	8.4
	Percentage of average annual value of outstanding loan portfolio			
BAAC	5.3	5.6	5.2	4.3
BRI-UD	16.1	12.9	15.1	13.8
GB	19.2	16.5	14.1	12.2
	Percentage of average annual value of outstanding loan portfolio plus deposits			
BAAC	4.0	3.7	3.3	2.6
BRI-UD	9.9	5.8	4.7	4.3
GB	13.9	11.9	10.0	8.9

Note: BAAC's operating costs include annual provisions for doubtful amounts.
Source: Authors' findings.

- Advanced management information systems that facilitate effective planning, control, and timely monitoring of loan repayment
- Operating in areas of high population density.

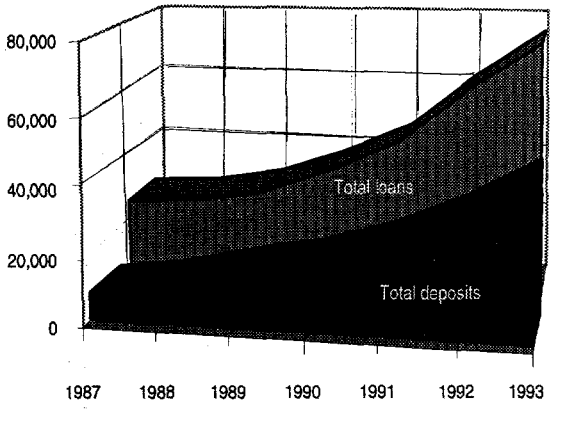
Overview of the Institutions

This section briefly reviews the evolution and basic institutional features of the three institutions. Table 9.1 summarizes data on their operating costs from 1987 through 1994.

Bank for Agriculture and Agricultural Cooperatives, Thailand

Thailand has enjoyed relative political stability and unprecedented economic growth over the past decade. Real annual growth in gross domestic product (GDP) averaged 8 percent per year during 1990–94, while inflation averaged 5 percent during 1984–94. Almost 80 percent of Thailand's population of 60.3 million lives in rural areas. The average annual growth rate in agriculture was 5.2 percent during 1965–73 and 3.7 percent during 1973–88. Real agricultural GDP showed phenomenal growth during the 1960s and 1970s, thanks to the availability of land, extensive road construction, and an active private sector increasingly involved in commodity exports. Agricultural

Figure 9.1 BAAC average annual total loans and total deposits, 1987–93
(millions of baht)



Source: Authors' findings.

growth slowed in the 1980s as expansion neared the limits of the cultivable land frontier. While agriculture has become increasingly intensive and commercial, nonagricultural activities in rural areas have also been expanding rapidly, and income from these activities is increasing faster than that from agriculture.

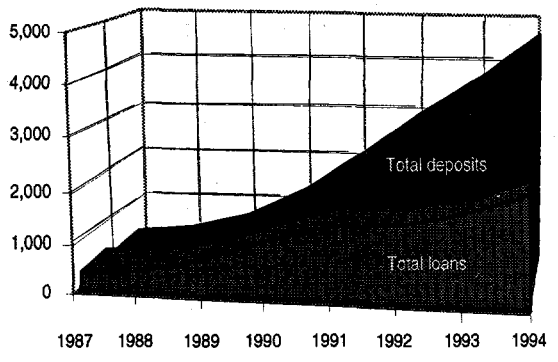
The Thai government started implementing financial policy reforms in 1989. By 1992 all interest rates were liberalized and the Bank of Thailand's rediscounting rates were also adjusted to reflect market-oriented rates. However, some priority sectors, including agriculture, still enjoy preferential rates.

The BAAC was founded in 1966 to stimulate agriculture by extending financial services to the agricultural sector. It replaced the Bank for Cooperatives, whose funding was limited and whose lending activities were restricted to agricultural cooperatives. The BAAC operates as a state-owned bank under the supervision of the Ministry of Finance; it can provide loans only for activities related to agriculture.[46]

The BAAC enjoys privileges because it lends to agriculture. For example, it is exempt from certain taxes (including income tax) and from reserve requirements on deposits.[47] The Bank of Thailand requires commercial banks to invest at least 20 percent of their deposits in agriculture, either directly or through the BAAC. Banks have opted mostly for the latter, providing BAAC with access to a large and consistent source of funds. The administrative costs associated with mobilizing and servicing these deposits have been borne by the commercial banks and not by the BAAC.

The BAAC enjoys substantial autonomy in setting its operational and financial policies. It has focused mainly on lending to borrowers in the low- to medium-income range. This strategy has been supported by a progressive cross-subsidizing interest rate policy, with higher interest rates charged on larger loans, ceilings placed on loan amounts, and loans offered to small farmers without traditional collateral through joint liability groups. At first the BAAC lent mostly through large agricultural cooperatives, but repayment problems led the bank to increase its direct lending to individual farmers.

Figure 9.2 BRI-UD average annual total loans and total deposits, 1987–94
(millions of rupiah)



Source: Authors' findings.

Unit Desas of Bank Rakyat Indonesia

Real GDP growth in Indonesia averaged 6.8 percent during 1990–94. This growth resulted in an increase in the demand for credit, which contributed to the rapid growth and success of the unit desa (village bank) program of the BRI.

The BRI is a state-owned bank. It ran a program of directed subsidized credit for rice farmers until 1983. The unit desa system (BRI-UD) was established in 1984 as a separate profit center within the BRI. A general manager who reports directly to the BRI board of directors supervises the BRI-UD.

The BRI-UD is a nationwide network of small village banks. The founding objectives of the BRI-UD were to replace directed agricultural credit with broad-based credit for any type of rural economic activity; to replace subsidized credit with positive on-lending rates with spreads sufficient to cover all financial and operational intermediation costs; and to provide a full range of financial services (savings as well as credit) to the rural population. All these objectives were achieved only a few years after the program's inception. The BRI-UD's phenomenal success in savings mobiliza-

tion is its distinguishing achievement. Other financial institutions, including the Badan Kredit Kecamatan, which targets the extremely poor among Indonesia's rural population, have guidelines similar to those of the BRI-UD.

Grameen Bank, Bangladesh

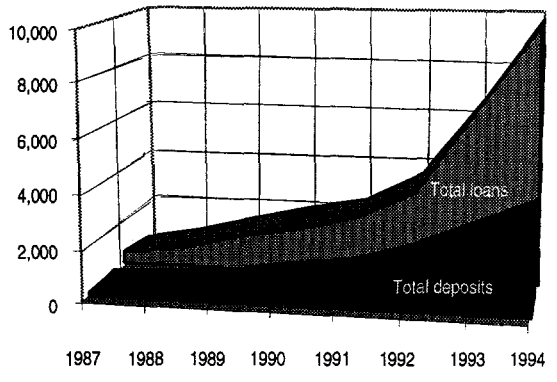
Bangladesh is one of the poorest countries in the world. In 1994 annual per capita income was US$223, and more than 70 percent of the population lived in poverty. Over the past few years, however, Bangladesh has shown steady economic growth. From 1990 to 1994 average annual real GDP grew 4.2 percent, and inflation remained below 10 percent per year.

Most of the population live in rural areas: agriculture accounts for more than 30 percent of the GDP and more than 60 percent of employment. However, the population of almost 130 million is growing at a rate of more than 2 percent per year, resulting in increasing land pressure and decreasing farm size.

Professor Muhammad Yunus started the GB as an experimental project in 1976 in the village of Jobra. The project was financed by a commercial bank and was personally guaranteed by Professor Yunus. In 1983 Grameen was established as a specialized financial institution under the Grameen Bank Ordinance. The Grameen Bank is not subject to the Banking Companies Ordinance or to any other law related to financial institutions in Bangladesh, nor is it subject to interest rate ceilings. It has also been partially insulated from other government policies. Today 92 percent of the Grameen Bank is owned by members; the remaining 8 percent is owned by the government.

From the start the bank's main goal has been to improve the conditions of the rural poor by providing them with access to credit, savings facilities, and some nonfinancial social programs. Its focus is on the lowest social strata, and the income level of its clientele is lower than that of the BAAC and the BRI-UD. Because of the low incomes of GB clients and their lack of access to traditional collateral, lending is done exclusively through joint liability groups, tied to compulsory savings. The GB has achieved phenomenal success with this approach, inspiring many other countries to copy its efforts.

Figure 9.3 GB average annual total loans and total deposits, 1987–94
(millions of taka)



Source: Authors' findings.

Performance Assessment

This section assesses the performance of the three institutions in achieving the primary goals of outreach and sustainability.

Outreach

All three institutions have achieved significant outreach in the depth and breadth of their coverage. Their success can be measured using several indicators.

Average size of loans and deposits. The average size of (outstanding) GB loans was $141 in 1995. In the same year BRI-UD loans averaged $541, and BAAC loans averaged $1,285. The value of the average deposits for each bank followed a similar pattern. The small size of GB loans and deposits indicates that the bank has succeeded in its objective of reaching a poorer clientele. The BRI-UD and the BAAC target a different market (low- to middle-income). The average size of loans and deposits in all three

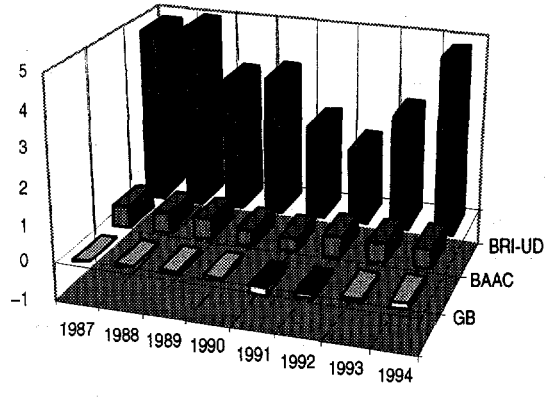
institutions has been increasing gradually. An impact study conducted by the BRI found that both the loan size and income levels of BRI-UD borrowers have increased, showing that repeat borrowers (the majority of the clients) have been economically successful (Yaron 1992b).

Women's participation. Because women usually have less access to resources than men, a higher percentage of female clients usually corresponds with a lower average loan size. About 94 percent of Grameen's clients are women, compared to 25 percent of the BRI-UD's clients. (Numbers are not available for the BAAC.)

Market penetration. All three institutions have attained high levels of penetration in their target markets. The BAAC serves about 76 percent (borrowers) of Thai farming households, the BRI-UD provides credit to approximately 5 percent (1.9 million borrowers) of all Indonesian households and extends savings facilities to as many as 14.5 million households.[49] The GB has 2.06 million clients and provides an estimated 36 percent of the total credit extended to poor, landless people living in rural Bangladesh.

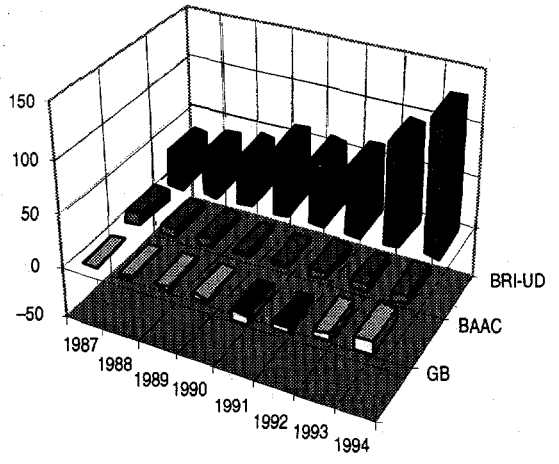
Growth. The three institutions have greatly expanded their assets and deposits over the past decade. The BRI-UD deposits overtook the volume of outstanding loans in the late 1980s.

Figure 9.5 Return on assets for BAAC, BRI-UD, and GB, 1987–94
(percent)



Source: Authors' findings.

Figure 9.4 Return on equity for BAAC, BRI-UD, and GB, 1987–94
(percent)



Source: Authors' findings.

By 1993 the volume of deposits was more than double that of the outstanding loan portfolio. This ratio has since declined somewhat to about 1:1.8.

Distribution network. All three institutions employ forms of *mobile banking,* which enables them to better serve clients and to keep overhead and transaction costs down. The institutions have vastly increased their branch networks and increased the size of their staff and the number and value of loans and deposits handled per branch and per staff member. These improvements have led to easier access for clients and gains from economies of scale because of lower per unit transaction costs. *Loan processing* is efficient; all three institutions disburse funds within two weeks of receiving an application.

Loan and deposit terms and conditions. All three institutions apply innovative methods to overcome information and collateral problems. The BRI-UD requires full collateral, but it often uses local character references and has highly flexible loan terms and various savings instruments. The BAAC and the GB both use joint liability to overcome screening, collateral, and enforcement problems, but they apply more

rigid loan terms. The BAAC offers various savings instruments; savings in the GB are compulsory and tied to loans and membership.

Transaction costs. The transaction costs of all three banks compare favorably to those of similar institutions. The banks' administration costs correspond to the type of clientele serviced, the average size of loans and deposits, the kinds of services rendered, and the ages of the institutions. For example, the small average size of GB loans and deposits and the bank's provision of nonfinancial services make the GB's administrative costs per outstanding loan portfolio and deposited higher than those of the BAAC or the BRI-UD. The larger average loan and deposit size of the BAAC has enabled it to have lower average operating costs than the BRI-UD and the GB.

Self-Sustainability

Although the financial performance of all three institutions has improved over recent years, each institution has performed differently (see figures 9.1–9.3). After incurring initial start-up losses, the BRI-UD steadily increased its profits. As indicated by the subsidy dependence index (SDI), the BRI-UD has reached its objective of becoming financially self-sustainable; it has not required a subsidy since 1988. Its success is attributable mainly to its (a) high positive on-lending interest rate, (b) high-quality loan portfolio with minimal loan losses, (c) high financial spreads, (d) relatively low administrative costs, and (e) extremely successful savings mobilization.

The BAAC is still marginally subsidy-dependent, and the GB, while still subsidy-dependent, has markedly reduced its subsidy-dependence over recent years.[50] The bank's dependence suggests that the on-lending interest rates do not fully cover the costs of financial intermediation. To reduce subsidy-dependence, an RFI could increase its income by increasing its on-lending rate or reduce its expenses by improving loan recovery and trimming operating expenses. The BAAC's administrative costs are very low; its subsidy-dependence results mainly from its on-lending rate, which is deliberately set below that of commercial banks. The GB has much higher administrative costs than the BRI-UD or the BAAC because it provides nonfinancial services that are not fully covered by income from lending.

Another factor that could affect the financial viability of an institution is the degree of *risk* associated with its loan portfolio. The BRI-UD and the GB both lend to clients engaged in a broad range of activities (not only agriculture-related activities) and have accordingly partially diversified the high covariant risk associated with lending strictly for agricultural purposes (see figures 9.6 and 9.7). The BAAC lends exclusively to agriculture-related activities, but has diversified its risk somewhat by extending loans to farmers throughout Thailand.

Modes of Operation

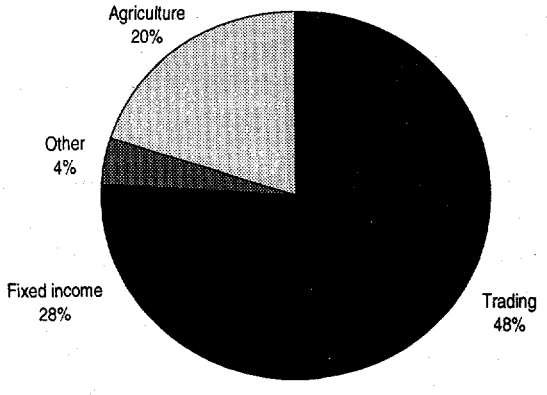
This section analyses the organizational principles and modes of operation that have contributed to the success of the three institutions. It includes data on management; staff and incentive policies; delivery mechanisms; lending policies, terms, and conditions; quality of assets—loan performance; savings mobilization policies; interest rate policies; administrative and transaction costs; and management information systems.

Management

All three institutions have significant (but varying) degrees of *autonomy* in determining operating policies and systems. A high level of *transparency* and *accountability* contributes to the effective management of the institutions.

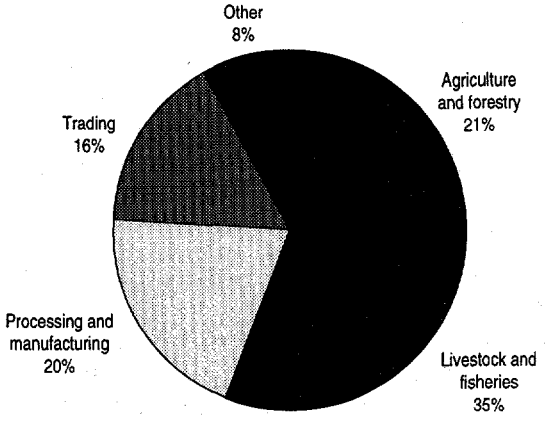
Although the BRI-UD forms an integral part of the state-owned BRI, it operates as a separate profit center and its management has a free hand in determining its interest rates and other operating policies. The Indonesian government implemented financial sector reforms in the

Figure 9.6 Sectoral distribution of BRI-UD loans, 1993



Source: Authors' findings.

Figure 9.7 Sectoral distribution of GB loans since inception



Source: Authors' findings.

1980s that deregulated certain interest rates and abolished interest rate ceilings. As the BRI-UD struggled to become financially self-sustainable, market forces drove its decision-making and it became increasingly subject to competition from other financial institutions.

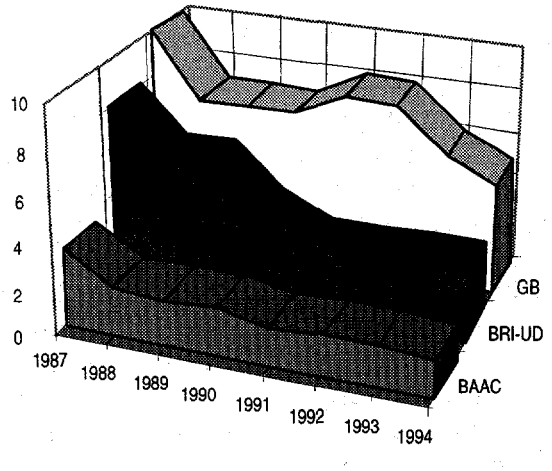
Management has a high degree of autonomy and full accountability for the performance of the BRI-UD. This accountability is pushed down the line; every unit is responsible for its own lending decisions and profits. Monetary staff incentives and the prospects of promotion reinforce individual accountability.

The BAAC is also state owned. The Thai Ministry of Finance holds 99 percent of its paid-up capital. The bank may sell up to 10 percent of its paid-up capital to private investors, but it has not yet attracted much interest and has only paid dividends since 1992. It receives some privileges (tax and reserve requirement exemptions) designed to facilitate its primary goal of stimulating agricultural activity, but it is also subject to directives (such as defining lending activities). Within this framework the BAAC enjoys relative autonomy.

The roles and powers of different entities in the bank are clearly defined. The board of directors is responsible for setting the overall policy direction; an internal executive committee is responsible for setting operational directives. Although it is state-owned, the BAAC is run largely according to the managerial principles of a typical commercial enterprise. Strict controls, a well- developed management information system, branch-level accountability, and staff incentive policies linked to the overall objectives of the institution all contribute toward the excellent performance of the BAAC.

Unlike the BAAC and the BRI-UD, which are both state owned, the GB is owned mostly by borrowers. The government owns only 8 per-

Figure 9.8 Personnel costs as a percentage of average annual total loans and deposits for BAAC, BRI-UD, and GB, 1987–94



Source: Authors' findings.

cent of the bank, borrowers own 92 percent. However, the government appoints four of the nine members of the board of directors. Even so, the GB has much autonomy in setting operational policies. In doing so it is guided primarily by its original financial and social principles. Decentralized loan approval and staff incentives tied to performance facilitate staff accountability.

Staff and Incentive Policies

The three institutions all employ *educated staff* and invest in the further development of staff through intensive *training*. The BRI-UD spent 1.9 percent (1995) of its total administrative costs on training, the BAAC spent 1.1 percent, and the GB spent 1.5 percent (see Annex 9.1).[51] To further improve motivation and overall productivity, all three institutions have staff *incentive programs* that tie employee bonuses and promotions to quantifiable performance indicators.

BRI-UD staff are among the higher-paid employees in rural Indonesia (World Bank 1995a). The bank's staff incentive system is linked to transparent and well-defined performance criteria, such as unit profits, loan portfolio quality, and savings mobilization. Rewards are tied both to individual and group performance. Staff can receive 10 percent of a unit's profits and a maximum of 1.5 months' salary in bonuses per year. A unit is given a car when it reaches the level of Rp 2 billion in savings deposits. Competitions are run between village units.

About two-thirds of the BAAC's credit officers are college graduates. They have multiple roles, but each manages up to 500 clients (Sacay, Rhandawa, and Agabin 1996). They are able to do so because the bank relies on joint liability groups and provides the officers with excellent training and transportation (motorcycles). The employee incentive system assesses performance by the number of clients officers serve and the number of loans they extend. The officers' loan recovery and savings mobilization records, as well as several qualitative indicators, largely determine the bonuses received. During 1994–95 each BAAC staff member received almost five months' salary as incentive bonuses.

With the rapid expansion of its business, the GB hired new employees. In 1985 it had 2,777 employees; by December 1995 it had 12,268 (Khandker, Khalily, and Khan 1995). The GB gives annual awards to the best branch managers and bank assistants according to their overall performance. Promotions depend on efficiency and seniority. Because of the GB's broader social agenda and the close relationship it wishes to maintain with its clients, the GB requires branch staff to live in the villages they serve. The GB provides training to its borrowers and center chiefs.

Delivery Mechanisms

All three institutions have a wide and growing *branch network* and use *mobile banking* to provide clients with easier access to services and reduce transaction costs. The BAAC and the GB rely on self-help groups to achieve financial discipline and high loan collection.

The processing of loans is efficient in all three institutions, although different processes are applied by each. The BRI-UD allows managers of village units to approve loans of up to about US$2,800, depending on their experience. Loans over this amount must be approved by a branch manager. *Simplicity* of terms and conditions also helps to facilitate fast (and consistent) loan approval. BAAC branch managers review all loan applications, although joint liability groups are involved in the initial approval stage. The GB has a participatory loan approval process that involves group members, village branch staff, and area managers. Personal banking technologies such as automated teller machines have not yet been used by any of the three institutions, although electronic banking is under development.

Lending Policies, Terms, and Conditions

All three institutions are restricted by lack of information about potential borrowers, prob-

lems with collateral, and limitations on their ability to exercise foreclosure. Innovative modes of operation have enabled the institutions to largely overcome these limitations.

The BRI-UD has no restrictions on the types of operations it finances, but it requires full collateral for most loans. It is generally not cost-effective for the GB or the BRI-UD to exercise foreclosure. The BRI-UD has highly flexible loan terms and conditions: minimum and maximum loan amounts are almost the only restrictions the bank imposes. The problem of not having adequate information about potential borrowers is sometimes overcome by soliciting recommendations from village leaders or from other borrowers.

The BAAC has three categories of lending: normal lending, special-projects lending, and policy lending. Normal loans and special-project loans are initiated by the BAAC and administered according to the BAAC's internal procedures; policy loans are implemented in response to government directives. The BAAC lends through large cooperatives and directly to individuals. The performance of cooperative loans has been poorer than that of direct loans, and the BAAC has been phasing-out cooperative loans, as illustrated in table 9.2. Full collateral is required from individual borrowers, but the BAAC makes allowance for individual loans with joint group liability when borrowers are unable to provide traditional collateral. Loan terms and conditions are rigid to instill financial discipline. The BAAC has no minimum loan amount requirement, but it does have a maximum amount that varies depending on the type of client and investment.

The GB does not require any collateral. It is not cost effective for the GB to exercise foreclosure. The bank uses joint liability and group pressure by extending loans only to individuals within a binding group context. No new loans are issued to the individuals in a group while an existing loan to one group member is in arrears. Loans are also tied to compulsory savings (individual and group-based savings) which serve as a form of collateral. Goods purchased with funds borrowed from the GB essentially remain the property of the bank until full repayment of the loans.

Quality of Assets and Loan Performance

The collection performance of all three institutions is exceptionally good. Each institution defines arrears differently, which makes comparison complex. Table 9.3 summarizes the policies and procedures the banks apply. (Figure 7.3 and table 7.1 in chapter 7 show the BAAC's system for monitoring loan collection through an advanced age analysis system.)

The loan collection rate in 1995 (as a percentage of current maturities falling due and old overdues) was estimated at 99 percent for the BRI-UD, 90 percent in 1995 for the BAAC (much of the BAAC arrears are repaid belatedly), and 99 percent for the GB. The BRI-UD and the BAAC consider a loan to be in arrears if the latest installment is not paid on time, but the GB allows a one-year grace period. The details of the three institutions' operation policies differ, but they share some important similarities with regard to loan collection: all three institutions hold clients accountable for loan

Table 9.2 Distribution of BAAC loans, selected years
(percentage share of total)

Client	*1975*	*1983*	*1992*	*1994*
Farmers and other individuals	55.1	77.7	90.8	92.0
Agricultural cooperatives	35.8	22.2	9.0	7.8
Farmers' associations	9.1	0.2	90.8	0.2
Total	100.0	100.0	100.0	100.0

Source: Sacay 1996.

Table 9.3 Loan terms and performance

	BRI-UD	*BAAC*	*GB*
Definition of arrears	Latest installment not paid on due date	Latest installment not paid on due date	One-year grace period
Estimated loan collection rate for 1995	98.9%	90%	98.6% on-time collection
Management information system	Well developed	Well developed	Well developed
Kind of character references required	Local residents, other borrowers, local government officials	Group lending	Group lending
Collateral requirements	100% (but no cost-effective option of foreclosure)	100% on individual loans; none for groups	None, but compulsory savings tied to loan
Group lending with joint liability	No	Yes	Yes
Individual lending (without joint liability)	Yes	Yes	No
Future loan eligibility	None if in default	None (for entire group) if individual defaults	None (for entire group) if individual defaults
Client incentives/penalties	Rebate of 0.5% per month on original loan amount for prompt payment	Penalty of 3% a year on arrears	None
Staff incentives	Yes	Yes	Yes

Source: Authors' findings.

repayment through collateral or joint liability, all three have established various monetary and other incentives and penalties for both staff and clients to encourage timely repayment, and all three have excellent management information systems, which enable them to track loan performance and implement and effectively manage their incentive systems.

The difference in performance among the various types of loans extended by the BAAC is worth noting. The performance of BAAC loans extended directly to clients has been very good, but the performance of loans to cooperatives and farmers associations, while improving, has been poor (table 9.4). Some participants in cooperative loans appear to benefit from the free-rider syndrome, with limited accountability and little incentive to repay loans.

Savings Mobilization Policies

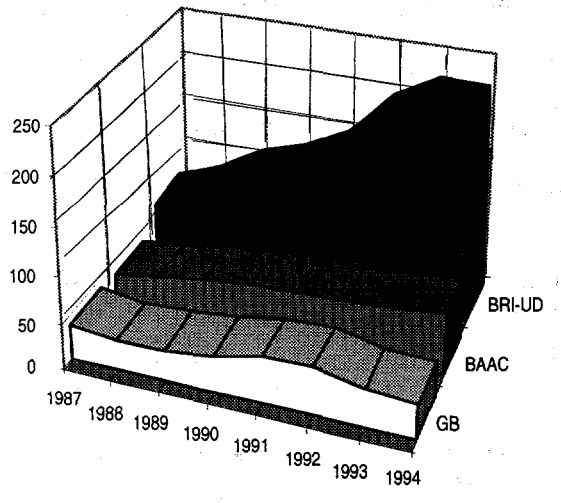
The BRI-UD's and the BAAC's success in savings mobilization can be partly attributed to the various savings instruments they offer. In addition to individual savings, the BRI-UD attracts savings from community groups (such as schools and municipalities). In 1985 the BAAC launched a successful special savings deposit facility targeted at middle- and higher-income

Table 9.4 Repayment performance of BAAC clients, selected years
(percentage of amount scheduled to be repaid by year)

Client	*1986*	*1989*	*1992*	*1994*
Farmers and other individuals	77.1	86.8	89.0	86.0
Agricultural cooperatives	45.3	68.9	68.8	68.4
Farmers' associations	41.2	72.8	71.3	60.0

Source: Sacay, Rhandawa, and Agabin 1996.

Figure 9.9 Average annual value of total deposits as a percentage of total loans for BAAC, BRI-UD, and GB, 1987–94



Source: Authors' findings.

groups. The BAAC's staff incentives are linked to savings mobilization performance.

The GB has a different policy for deposits, (which are primarily compulsory). Members are required to add one taka to their savings account every month, and 5 percent of any amount borrowed is placed in an interest-bearing savings account owned by the group they belong to. These savings act as a kind of insurance fund from which group members can lend to each other; they also serve as a form of compensating balance for the GB. Positive interest rates are paid on the savings, although the rates are significantly lower than those charged on loans. This policy should be seen in the context of the GB's target clientele, which is the lowest economic strata of the population.

Interest Rate Policies

The BRI-UD charges a flat interest rate of 1.5 percent per month, equivalent to an effective rate of 32.7 percent per year. An additional 0.5 percent per month is charged, which is returned to the client (through the savings account) for timely repayment of installments. The on-lending rate has been sufficient to cover the full costs of mobilizing funds and has allowed the BRI-UD to mobilize substantial savings with attractive deposit interest rates. As a result, the BRI-UD has become completely financially self-reliant and subsidy- independent.

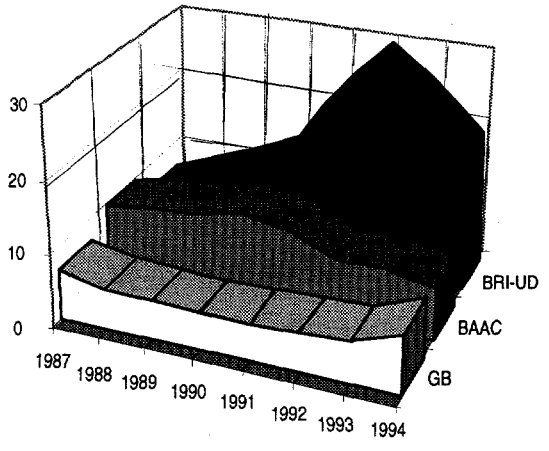
The BAAC has enjoyed the privilege of not being subject to interest rate ceilings, which were applicable in Thailand until 1992 (Sacay, Rhandawa, and Agabin 1996). However, the BAAC has always tried to keep interest rates one or two percentage points below that of commercial banks. Tax and reserve-requirement exemptions and special discount rates received from the Bank of Thailand enabled the BAAC to maintain a relatively low on-lending rate. However, the BAAC remains partially subsidy-dependent, although remarkable cuts in administrative costs, improved loan collection, and increases in voluntary savings have led to a reduction in its dependence on subsidies in recent years.

The GB is not subject to the Banking Companies Ordinance that is applicable to commercial banks and other financial institutions in Bangladesh, so interest rate regulations enforced by the Central Bank of Bangladesh are not applicable to the GB. The GB serves a much poorer clientele than the BRI-UD or the BAAC and provides various nonfinancial services. It has a much higher costing structure, and its interest rate policy does not aim to recover all of its financial and operational costs. The GB has remained subsidy-dependent, despite charging a relatively high interest rate on the bulk of its loan portfolio (20 percent, an increase from 16 percent in 1991). However, this subsidy-dependence has reduced markedly in recent years. It is difficult to determine exactly what the GB's effective interest rate is, because borrowers' obligatory compensating balances effectively reduce the loan amount and (ignoring the savings' potential benefit as insurance) increase the effective lending interest rate (see figure 9.10).

Administrative and Transaction Costs

The administrative and transaction costs of RFIs are often high because of small loan and

Figure 9.10 Financial costs as a percentage of average annual total loans for BAAC, BRI-UD, and GB, 1987–94



Source: Authors' findings.

deposit amounts, the geographic dispersion of clients, the efforts needed to obtain information about clients, and the use of nontraditional collateral. Nonetheless, controlling costs is crucial to the financial performance of RFIs because their income-generating capacity is often restricted by interest rate ceilings or other limitations.

The BAAC has succeeded in keeping its costs exceptionally low by offering relatively large loans and group-lending operations, which result in lower transaction costs. (It has also received funds that incurred almost no administrative costs in the form of obligatory deposits from other banks). Because of its exceptionally high market penetration, the BAAC is well known. It does not engage in costly promotional activities, and its large clientele enables it to gain from economies of scale. In contrast, the BRI-UD is growing fast and has placed much emphasis on voluntary savings, which are costly to mobilize. The GB has a much smaller average loan and deposit size than either the BRI-UD or the BAAC, and it provides nonfinancial services and extensive training to staff and clients. These factors lead to substantially higher administrative costs for the GB.

Management Information Systems

All three institutions have well developed management information systems, but the systems differ markedly. Each institution has developed a system that suits its particular methods of operation, facilitates transparency, and supports decisionmaking. The effectiveness of financial policies and operating procedures can be determined and adjusted as needed. The tracking of clients' repayment performance enables the institutions to improve loan collection, penalize defaulters, and speed the loan approval process. The institutions' systems facilitate staff incentive programs by enabling management to track the performance of individual branches and staff members and to tie that performance to the organization's overall performance.

Potential Improvements

The three RFIs reviewed in this chapter have made exceptional progress in improving their outreach to their target clienteles and in reducing or eliminating their dependence on subsidies. Could altering some of their operations result in even stronger performance?

Long-standing populist political pressures in Thailand that continuously test the level of the BAAC's managerial autonomy are (a) should the BAAC become a rural financial institution or remain a specialized agricultural bank, and (b) should interest rate policies be designed to achieve optimal resource allocation or should the BAAC continue to cross-subsidize small loans using distorted interest rates as a "compensating" mechanism? Eliminating cross-subsidization, changing the BAAC from a specialized agricultural credit institution to an RFI and applying interest rates that reflect the nonsubsidized cost of capital, loan-specific credit risk and administrative costs, would benefit the rural economy and enhance the efficiency of rural financial intermediation in Thailand.

The case of the GB is unique (and more complex) because it provides nonfinancial services

to a poorer clientele. However, the adequacy of the GB's on-lending interest rate in light of its dependence on subsidies is a concern. Assessing the adequacy of the bank's on-lending interest rates is of widespread and crucial importance to all credit schemes that target poverty alleviation and look toward the GB as a successful role model.[52]

Increasing on-lending interest rates is usually the most effective way to decrease the subsidy-dependence of an RFI. Such an increase (when not curtailing loan demand or having an adverse impact on loan collection) usually results in better outreach because scarce resources reach a larger number of clients. The GB applied an annual 16 percent interest rate on its regular loans until the middle of 1991, when it raised the rate to 20 percent a year. There is no indication that the increased interest rate reduced loan demand or increased arrears.

The issue becomes more complex when the GB's lending rates are adjusted for inflation. The inflation adjustment presents a much more volatile picture of real lending interest rates (see table 9.5).

The data suggest that real lending rates ranged from 5.5 percent to 20.0 percent—a wide range. If the high real lending rate of 1993 had no discernible adverse impact on repayment rates or on clients' demand for credit, then a plausible inference is that the real lending rate could have been higher in other years. That is, the GB could have increased its nominal lending rates to improve its self-sufficiency without damaging its outreach performance.[53]

The BRI-UD's performance and modes of operation seem to reflect the best-case scenario in rural financial intermediation with respect to subsidy-independence. Moreover, the BRI has had a *negative* SDI in recent years (that is, the BRI-UD could have markedly reduced its on-lending interest rate while still maintaining subsidy-independence). This situation prompts the question: what would have been the impact on the rural economy, and particularly on BRI-UD clients, if the value of negative subsidies had been used to decrease the spread between the BRI-UD's on-lending and deposit interest rates, instead of subsidizing other BRI non–unit desa activities? This question is of the utmost importance because the cross-subsidization within the BRI (as reflected in the negative SDI) results in adverse income distribution, with small-scale rural entrepreneurs subsidizing the more affluent clientele.

The Environment

Understanding how the three institutions have overcome limitations in their social, political, and economic environments may further guide the design of future rural finance efforts.

The three RFIs operate under relatively stable political and economic conditions, with inflation rates consistently below 10 percent. The economic bases of Bangladesh, Indonesia, and

Table 9.5 Nominal and real average annual GB interest rates on loans, 1989–94
(percent)

Interest rate	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*
Inflation in Bangladesh[a]	9.9	8.1	7.2	4.3	0.0	3.6
GB average annual interest rate charged on regular loans						
Nominal lending rate	16.0	16.0	18.0	20.0	20.0	20.0
Real lending rate	5.5	7.3	10.1	15.1	20.0	15.9

a. As measured by the consumer price index.
Source: Authors' findings.

Thailand differ substantially. Per capita GDP in 1994 amounted to US$223 in Bangladesh, US$892 in Indonesia, and US$2,417 in Thailand. The countries' annual average GDP grew at different rates over the past five years, with Bangladesh growing slowest at 4.2 percent, Indonesia growing at 6.8 percent, and Thailand leading at 8.3 percent.

Agriculture is important to the economies of all three countries. Agriculture accounts for 65 percent of the labor force and 30 percent of the GDP in Bangladesh, 55 percent of the labor force and 17 percent of the GDP in Indonesia, and 64 percent of the labor force and 10 percent of the GDP in Thailand. As would be expected, the percentage of the population living in rural areas is high for all three countries. More than 80 percent of the population lives in rural areas in Bangladesh and Thailand; close to 70 percent of Indonesia's population is rural. To improve rural access to the financial markets, the three RFIs instituted various forms of mobile banking. They continue to bring financial markets closer to rural clients by developing and planning the implementation of electronic banking.

Although the legal and regulatory frameworks that govern the three RFIs' operations differ substantially, each has overcome the shortcomings of its environment or devised ways to insulate itself from certain aspects of the surrounding environment. The institutions have developed joint liability groups, obligatory savings, or other methods to overcome collateral and enforcement problems. In 1994 and 1995 the GB overcame the exceptionally poor repayment culture in Bangladesh—most other Bangladeshi financial intermediaries had very poor recovery rates on agricultural loans during 1994 and 1995—and both the BAAC and the GB managed to prevent interest rate ceilings and other financial sector restrictions from being imposed on them (see table 9.6).

Conclusion

The success of the three institutions can be ascribed partly to the relatively favorable macroeconomic conditions under which they have been operating. Nonetheless, their ability to overcome limitations in their environ-

Table 9.6 Economic and demographic indicators for regions served by the BAAC, the BRI-UD, and the GB
(percent unless otherwise specified)

Indicator	*BRI-UD (Indonesia)*	*BAAC (Thailand)*	*GB (Bangladesh)*
Economic			
Average annual inflation, 1984–94	8.90	5.00	6.60
Inflation, 1994	8.53	4.37	3.58
Average annual GDP per capita, 1994 (U.S. dollars)	892	2,417	223
Average annual GDP real growth, 1990–94	6.81	8.27	4.18
Agriculture as a percent of GDP, 1994	17	10	30
Average annual agriculture growth, 1980–93	3.20	3.80	2.60
Agriculture as a percent of labor force, 1990	55	64	65
Demographic			
Population in millions, July 1995	203.6	60.3	128.1
Population growth, 1995	1.56	1.24	2.32
Population in rural areas, 1994	66	80	82
People per square kilometer, July 1995	33	398	957
Literacy rate for population, 1995	84	94	38
Literacy rate for men, 1995	90	96	49
Literacy rate for women, 1995	78	92	26

Source: Authors' findings.

ments by implementing innovative policies and operating methods provides invaluable lessons for the design of future rural finance projects. The elimination or remarkable reduction of subsidy-dependence by all three institutions can be attributed to efficiency gains rather than to changes in the business environment in which the institutions operate.

Guiding principles can be deduced from the institutions' operations, but care must be taken in replicating their operations: a solution adequate in one socioeconomic environment will not necessarily be suitable in another. It should not be forgotten that the income levels and income-generating activities of the target clientele largely determine the effectiveness of specific modes of operation.

Annex. Summary of performance and operating methods of BRI-UD, BAAC, and GB

A. General	BRI-UD Indonesia	BAAC Thailand	GB Bangladesh
Institution			
Year of establishment	1984[a]	1966	1976[b]
	Fiscal year ends December 31	Fiscal year ends March 31	Fiscal year ends December 31
Objectives	To provide credit to small, income-generating activities (primarily rural) and savings facilities for households	To provide financial assistance to farmers for agricultural and agriculture-related activities	To improve the economic conditions of the rural poor
Type of institution	Autonomous rural savings and credit program within a financial institution	Financial institution	Financial institution
Ownership	Bank Rakyat Indonesia (state-owned)	State-owned	Independent: 92% borrowers; 8% state-owned
Financial services	Loans and savings deposits	Loans and savings deposits	Loans and (compulsory) savings deposits
Other services	Payment of school fees and electrical bills	Marketing services; technical assistance and advice (on fertilizers, for example)	Social intermediation and training on various issues such as dowry, sanitation, education, and nutrition
Target clientele	Rural low- and middle-income; broad-based	Low- and middle-income farmers and farmers' associations	Rural poor
Country	*Indonesia*	*Thailand*	*Bangladesh*
GDP per capita, 1994	Rp 1,963,136 (US$892)	B 60,258 (US$2,436)	Tk 8,988 (US$223)
GDP average annual real growth, 1989–94 (percent)	6.8	8.5	4.2
Annual inflation rate, 1994 (percent)	8.5	5.0	3.6
Average inflation rate, 1991–94	8.9	4.2	4.6
B. Key outreach indicators			
Clients and staff			
Number of clients or members	14.5 million[c]	4.3 million clients[d]	March 1996: 2.1 million members (cumulative since 1983)
Agriculture or related loans (including livestock and fisheries) (percent)	18	100	1994: 61[e]
Total target clientele serviced (percent)	Percentage of total households: Loans: 5 Deposits: 20	Registered members: 76% of farming population; share of total credit to farmers: 36%[f]	About half of all villages in Bangladesh
Women borrowers (percent)	25	Not available	March 1996: 94
Number of staff	16,916	11,379	March 1996: 12,268

B. Key Outreach Indicators (continued)	*BRI-UD Indonesia*	*BAAC Thailand*	*GB Bangladesh*
Town units	3,520[g]	365	112 (area offices)
Village posts or units	437	840	1,056
Ratio of village posts to town units	0.12:1	2.3:1	9.43:1
Mobile banking in use?[h]	Yes	Yes	Yes
Loan outreach			
Number of loans outstanding (millions)	2.3 million[i]	3.1 million	2.1 million[j]
Volume of loans outstanding (annual average)	Rp 2,825 billion (US$1,224 million)	B 94,453 million (US$3,817.8 million)[k]	Tk 11,798 million (US$289 million)
Real annual average growth rate of total assets during last three years	41.6% (1993–95)	22% (1993–95)	35% (1992–94)
Minimum loan size	Rp 25,000	Not applicable	Not applicable
Maximum loan size	Rp 25 million (US$11,364)	B 60,000 to B 5 million[l] (US$2,425 to $202,000)	Tk 15,000 (US$372)
Average outstanding loan size	Rp 1,247,673 (US$567)	Individual farmers: B 31,800 (US$1,285)	Tk 5,708 (US$142)
Average outstanding loan as percentage of GDP per capita	54	52	64
Value of loans per staff member	Rp 167 million (US$75,909)	B 9.3 million (US$377,527)	Tk 958,428 (US$23,812)
Number of loans (all types) per staff member	134	270	245[m]
Savings outreach			
Average annual volume of savings	Rp 5,624 billion (US$2,556 million)	B 68.8 billion (US$2,780.9 million)	Tk 5,366 million (US$133.3 million)
Average annual savings as a percentage of average annual outstanding loan portfolio	1995: 199 1989: 131	1994: 66.5 1988: 42	1995: 45.6 1989: 55
Number of savers	14.5 million	3.1 million	2.1 million[n]
Value of average savings account	Rp 388,383 (US$177)	B 22,389 (US$905)	Tk 2,605 (US$65)
Value of savings deposits per staff member	Rp 332.5 million (US$151,136)	B 6.0 million (US$244,391)	Tk 437,374 (US$10,866)
Number of savers per staff member	856	270	167
Nominal annual deposit interest rate (percent)	Not established	5.0 to 10.75	8.50

C. Financial performance	*1989*	*1994*	*1988*	*1995*	*1989*	*1995*
Profitability						
Return on assets = (Net income before tax) / (Average annual assets) (percent)	3.6	4.8	0.52	0.55	0.1	0.14

Annex *(continued)*

C. Financial performance (continued)	BRI-UD Indonesia 1989	1994	BAAC Thailand 1988	1995	GB Bangladesh 1989	1995
Return on equity = (Net income before tax) / (Annual average equity) (percent)	45	127	7.6	7.1	3.4	1994: 10.4
Interest rate spread						
(a) Income from lending as percentage of average outstanding loan portfolio	28.0	30.9	14.0	10.4	12.0	16.0
(b) Financial expenses as percentage of average outstanding loan portfolio	11.2	9.3	9.1	6.3	4.7	8.1
(a) – (b) spread	16.7	21.7	4.9	4.1	7.3	8.0
Expenses						
Total operating costs as percentage of: Annual average assets	10.9	5.7	3.0	2.9	9.3	7.0
Annual average savings	12.4	6.1	—	5.8	—	23.1
Annual average outstanding loan portfolio	15.2	13.5	4.7	3.5	16.7	10.6
Annual average outstanding loans plus savings	6.8	4.2	2.9	2.2	—	7.6
Personnel expenses as a percentage of: Average annual assets	7.0	2.9	1.9	1.7	5.0	4.7
Average annual outstanding loan portfolio	9.7	6.9	3.0	2.0	9.0	7.2
Other administrative expenses as percentage of: Annual average assets	2.6	2.2	1.1	1.2	4.3	2.2
Annual average outstanding loan portfolio	3.6	5.2	1.7	1.5	7.7	3.4
Costs of training staff as percentage of:[o] Total administrative costs	7.3	1.9	0.58	1.08	28.1	1.5[p]
Annual average assets	0.8	0.1	—	0.03	2.6	0.1
Annual average outstanding loan portfolio	1.1	0.3	—	0.04	0.6	0.2
Financial expenses as percentage of: Annual average assets	9.9	8.8	9.1	5.5	3.0	5.3
Annual average savings	11.2	9.5	—	10.9	—	17.7
Annual average outstanding loan portfolio	13.7	20.9	9.6	6.5	5.3	8.1
D. Loan extension						
Terms and conditions of loans						
Eligibility requirement and types of activities financed	No restrictions on operations financed		Farmers and farmers' associations for agriculture and related activities		Households owning less than 0.5 acres of land, or assets worth less than 1 acre of land	

D. Loan extension (continued)	*BRI-UD Indonesia*	*BAAC Thailand*	*GB Bangladesh*
Collateral requirement	100%. Usually land (difficult to repossess); others include 80% of deposit amounts, or lease contracts	Joint liability and personal guarantee for loans not exceeding B 100,000 per person; over B 100,000 title to tangible assets	Indirectly through forced savings, joint liability, and peer pressure
Loans provided to cooperatives or farmers' associations?	No	Yes[q]	No
Lending to individuals?	Yes	Yes	Yes—to individuals within groups, with joint liability
Lending to groups?	No	Yes	Yes[r]
How are groups formed	Not applicable	By members	By members
Size of groups	Not applicable	5–30	5
Loan application processing (from submission to disbursement)			
For new borrowers	2 weeks (maximum)	1 week	1–2 weeks
For repeat borrowers	2 days	1 week	1–2 weeks
Loan approval by	Manager of unit desa, usually to Rp 5 million; branch manager over Rp 5 million[s]	Credit officer less than B 60,000; branch manager less than B 300,000; president less than B 5 million; board less than B 5 million	Area manager on recommendation of group members and bank workers[t]
Local leadership or local officials involved in approval of applications?	Yes	Yes	No
How?	Character reference for borrower	Character reference for borrower	Not applicable
Repayment frequency	Flexible—mostly monthly or quarterly	Short-term loans: upon maturity (11 months)	Weekly
Gradual increase in borrower's eligibility to *subsequent lending?*	Yes	Yes	Yes
How are loans monitored?	Special department at headquarters in charge of monitoring plus normal branch regional office supervision	Visits by credit officers; client meetings	Weekly loan supervision meetings held openly in village centers
Loan repayment incentives or penalties			
Social or peer pressure on borrowers to repay loans?	Yes—partial[u]	For group loans	Yes—all loans
Disciplinary measures for non-repayment of loans?	Yes	Yes	No
Penalty interest rate?	Yes, loss of 0.5% per month interest rate (on original loan amount) for timely repayment	Yes, 3% per year on arrears	None
Access to future loans?	No	No[v]	No[w]

Annex *(continued)*

D. Loan extension (continued)	BRI-UD Indonesia	BAAC Thailand	GB Bangladesh
Foreclosure or repossessions?	Yes[x]	Not established	Not applicable
Staff incentives for loan collection?	Yes—annual profit bonus up to 1.5 month's salary and special awards to staff of top performing units	Yes—annual bonus and promotions[y]	Yes—based on overall performance, profit sharing (up to 10% of branch profits)
On-lending interest rates			
Nominal quoted lending interest rate (percent)	1.5 per month[z]	8.0 to 14.5 per year	2.0.0 per year[aa]
Effective (nominal) annual interest rate (percent)	32.7	8.3 to 15.5	20[bb]
Real interest rate (percent per year)	23	2.6 to 6.9	16.0
Typical loan maturity	1–3 years	11 months (for short-term loans)	1 year
Formal annual nominal on-lending interest rate prevailing in the country (percent)	1994: 21	10 to 14.75	14
Informal annual interest rate prevailing in the country (percent)	Not established	25–60	106
Maximum legal on-lending interest rate?	No	No	Yes[cc]
Loan performance			
Definition of arrears used by the institution	Latest installment not paid on time	Latest installment not paid on time	One year overdue
(Annual loan collection) / (Old overdues + current maturities that fall due in the year) (percent)	Estimated 95	Approximately 90[dd]	98.2[ee]
(Arrears) / (Total outstanding loan portfolio) (percent)	6.5	8.3	3.6
(Annual provisions for loan losses) / (Total outstanding loan portfolio) (percent)	4.9	1.0	1.2
(Interest paid) / (Interest earned) (percent)	77	61	46

Note: Unless otherwise indicated, the figures and financial data in this annex were obtained from the institutions concerned or are the authors' calculations. The corresponding end-of-period exchange rates are as follows (unless stated differently):

a. BRI-UD developed the General Rural Credit, or the "KUPEDES," Program in 1983, but it did not provide financial services until 1984.

b. The Grameen Bank originated as a project of the Rural Economics Programme of the University of Chittagong in 1976, financed by a nationalized commercial bank and personally guaranteed by Professor Muhammad Yunus. In 1983 a government ordinance transformed it to a specialized financial institution for the rural poor.

c. Based on number of savings accounts.

d. BAAC financial statements, Fiscal 1994: farmer clients: 3,071,545; cooperatives and associations: 1,321 with membership of 1,238,712; total members: 3,072,866 or 4,310,257 clients.

e. Reflects disbursement of loans during 1983–1994.

f. BAAC financial statements, Fiscal 1994, and Sacay, Rhandawa, and Agabin 1996.

g. Numbers of "subdistrict" units or "unit desas."

h. This measure refers to the ability of staff to be in villages and poor neighborhoods daily or weekly, visiting borrowers, explaining requirements to potential clients, disbursing loans, and collecting repayments.

i. Based on number of borrowers.

j. Based on number of members.

k. Individual farmers: 1994: B 97,680 million; 1995: B 75,068 million
Associations: B 8,474 million; B 7,684 million
Total: B 106,154 million; B 82,752 million.
l. The loan size depends on the type of client: individual, group, or agricultural association.
m. Reflects number of borrowers per employee.
n. Although no data on the number of savers are available, this should be the minimum number since saving is obligatory.
o. Whereas the BRI-UD provides training only to staff, the GB and (to a lesser extent) the BAAC provide training to borrowers.
p. The number of new recruits, and therefore training expenditure on new recruits, dropped substantially after 1992.
q. Cooperatives have had dismal loan collection records, and the BAAC has taken measures to reduce the share of cooperatives and farmers' associations in its total lending portfolio.
r. Loans provided to individuals within group.
s. Unit desa is the village unit. The average unit desa serves 17 to 18 villages.
t. Each area manager supervises about 10 to 15 Grameen Bank branches. The GB's whole loan approval process is complex and participatory, involving group members, a bank worker, and an area manager.
u. The effectiveness of social pressure varies widely among different geographic regions.
v. Entire group is disqualified if individual member defaults.
w. Entire group is disqualified if individual member defaults.
x. Foreclosure is legally possible, but the time-consuming, costly process is rarely used.
y. In 1994/95 BAAC staff received up to five months' salary based on the overall performance of the BAAC.
z. Flat rate of 1.5 percent per month, excluding the upfront penalty fee of 0.5 percent per month, returned if all payments are made on time.
aa. Benjamin 1994. Calculation excludes impact of compulsory saving, which will effectively increase the rate.
bb. For irregular borrowers the GB calculates interest at 20 percent on the basis of a declining balance. For the regular borrowers GB collects Tk 2 every two weeks as interest against Tk 1,000 of loan disbursement with a grace period of two weeks.
cc. The terms of the Grameen Bank Ordinance of 1983 exempt the GB from interest rate ceilings.
dd. BAAC's direct loans to individual farmers have a much better loan performance (close to 90 percent) than the loans to farmers' cooperatives and associations (60 to 70 percent).
ee. Khandker, Khalily, and Khan 1995. This figure is for general loans (excluding collective loans) in 1992.

APPENDIX

The Subsidy Dependence Index of Rural Financial Institutions

Two main problems face the analyst who must rely on conventional accounting data to measure the financial performance of rural financial institutions (RFIs). First, on top of the expenses and income (including reimbursements of specific expenses by states or donors) that appear in the income statements of RFIs, there are other expenses and incomes that remain unrecorded. Second, there is no design in conventional accounting practices to reflect and appropriately report on all types of subsidies received by RFIs.[54]

Conventional accounting practice measures the cost of funds at actual cost. The opportunity cost of an RFI's borrowed funds—that is, the cost the RFI would have to pay for its funds if access to concessional funds were eliminated—is not taken into account. The subsidy dependence index (SDI) calculation assumes that the volume of an RFI's outstanding loan portfolio remains unchanged. Hence, the change in the cost of funds is caused by substituting concessionally borrowed funds with voluntary savings, obtained at a market deposit interest rate. Thus, if the central bank loans to an RFI at 2 percent, conventional accounting practices list the cost of the loan at 2 percent a year. However, if the cost of alternative nonconcessional funds is 12 percent a year, the SDI considers the 10 percent difference in interest rates on those funds and identifies this as a subsidy received by the RFI. The rationale is that if the subsidized RFI paid only 2 percent a year on central bank rediscounting facilities instead of the prevailing market deposit rate of 12 percent a year, the accounting profit and the financial ratios measuring the RFI's profitability would not convey that such ratios were obtained only because of the significant subsidy embodied in the cheap central bank rediscounting facilities. Providing an RFI with concessional funds is the most common method of subsidization, yet calculating the value of the subsidy implicit in the RFI's concessionally borrowed funds requires information not included in the RFI's financial statements. The same is true for the RFI's equity.

The profit maximizer does not differentiate between profit that is partially subsidy-dependent and profit that is fully subsidy-independent so long as continued subsidization is ensured. It is, however, crucial in assessing an RFI's performance. Determining the social cost of RFI operations, of which subsidies constitute a significant share, is essential in determining the social justification for RFIs' continued existence and operations, because rural RFIs are often public or quasi-public institutions. To understand the futility of the current financial reporting system, one might consider the meaning of a 20 percent return on equity when 50 percent of the RFI's financial obligations constitute concessional borrowed funds from the central bank (rediscounting

facilities); the funds carry an interest rate significantly below market deposit interest rates. Moreover, one-third of the RFI's payroll cost, 80 percent of its loan losses, and all training expenses are assumed by the government.

Breaking away from applying the financial prices of inputs and outputs and instead using shadow prices reflecting the social cost of investing in the real goods sectors has become common in assessing the social desirability of investments. Applying economic shadow prices permits calculation of the economic rate of return, which often differs from the financial rate of return. Applying the SDI calculation achieves a similar goal. The SDI measures more accurately the social cost involved in an RFI's continued operation. There is, however, a difference between calculating the economic rate of return and applying the SDI. The SDI does not fully assess and measure the social benefits of resource allocation through an RFI to the real goods sectors. The SDI, however, better estimates the social cost of subsidies by applying approximate market interest rates to the financial resources used by the RFI.

The objective of the SDI methodology is to provide a comprehensive method of measuring the overall financial costs of operating an RFI and quantifying its subsidy-dependence. The SDI methodology avoids overreliance on the financial profitability ratios of conventional accounting procedures in the financial analysis of RFIs. The SDI aims at providing a public interest analysis of RFI financial performance and subsidy dependence. Using the SDI allows for a full accounting of the overall social costs entailed in operating an RFI, including the full value of all subsidies received by the institution. The SDI makes explicit the subsidy needed to keep an institution afloat; this information is not gained through conventional accounting reporting. The SDI is a user-friendly device that is simple to calculate because it does not require collecting detailed information about an RFI's operational costs. The SDI helps in:

- Placing the total amount of subsidies received by an RFI in the context of its activity level, represented by interest earned on its loan portfolio (similar to calculations of effective protection domestic resource cost or job creation cost)
- Tracking an RFI's subsidy dependence over time
- Comparing the subsidy dependence of RFIs providing similar services to a similar clientele.

Lenders' dialogue with borrowing countries can be enriched by using the SDI routinely to measure an RFI's performance during appraisal, supervision, and completion of projects. As with any other financial measurement tool, however, the SDI is only as accurate as the data used to compute it.

The SDI requires the application of certain procedures as well as judgment. Consistency from period to period is more important than the absolute accuracy of the figures used to compute the SDI. The SDI is a ratio that measures the percentage increase in the average on-lending interest rate required in a given year to allow an RFI to eliminate subsidies and to achieve a return on equity equal to the approximate nonconcessional borrowing cost. The index assumes, for simplicity, that an increase in the on-lending interest rate is the only change needed to compensate for loss of subsidy, but it is clear that any saving in operational costs or reduction in loan losses would result in a decreased SDI. Although removing the subsidies received by an RFI is not always politically feasible or desirable, measuring them is always warranted, economically and politically.

Calculating the SDI requires aggregating all the subsidies received by an RFI. The total amount of the subsidy is then measured against the RFI's on-lending interest rate multiplied by its average annual loan portfolio, because lending is the prime activity of a supply-led RFI. Measuring an RFI's annual subsidies as a percentage of its interest income yields the percentage by which interest income would have to increase to replace the subsidies; the measurement also provides data on the percentage points by which the RFI's on-lending interest rate would have to increase to

eliminate subsidies, and on the total value of the subsidy.

In the computation of the SDI the amount of the annual subsidy received by an RFI is defined as:

$$S = A\,(m - c) + [(E * m) - p] + K$$

where

- S = The annual subsidy received by the RFI
- A = The RFI's outstanding concessional borrowed funds (annual average)
- m = The interest rate the RFI would be assumed to pay for borrowed funds if access to borrowed concessional funds were eliminated
- c = The weighted average annual concessional rate of interest actually paid by the RFI on its average annual concessional borrowed funds outstanding
- E = The average annual equity
- P = The reported annual (before tax) profit (adjusted, when necessary, for loan loss provisions, inflation, and so on)
- K = The sum of all other annual subsidies received by the RFI (such as partial or complete coverage of the RFI's operational costs by the state).

The financial ratio that is suggested as an SDI is:

$$SDI = \frac{S}{LP * I}$$

where

- SDI = The index of the RFI's subsidy dependence
- S = The annual subsidy received by the RFI
- LP = The RFI's average annual outstanding loan portfolio
- I = The weighted average on-lending interest rate earned on the RFI's loan portfolio.
- $LP * I$ = Annual average interest rate earned on annual average loan portfolio = interest earned on the loan portfolio as presented in the income statement, (adjusted if need be).

The SDI cannot clarify how a subsidy was used or whether it benefited most clients or went mainly to an inefficient bureaucracy. Determining how much of a subsidy is consumed by bureaucracy requires far more detailed data and even then is often subject to interpretation. The advantage of the SDI is its simplicity. It focuses exclusively on the intake subsidy, that is, the value of subsidy received by the RFI. The SDI should be seen in some instances as a lower bound, because full financing of the activities of an RFI whose financial performance is dismal is likely to be difficult at current market borrowing rates. However, calculating this lower bound is vital for ascertaining the RFI's progress toward self-sustainability and the social desirability of its continued subsidy-dependence.

An SDI of zero means that an RFI has achieved full self-sustainability. An SDI of 100 percent indicates that a doubling of the average on-lending interest rate would be required to eliminate subsidies. An SDI of 200 percent means that a threefold increase in the on-lending interest rate would be required to eliminate subsidies. A negative SDI indicates not only that an RFI has achieved self-sustainability, but that its annual profits, minus its capital (equity) charged at the approximate market interest rate, exceeded the total annual value of subsidies, if subsidies were received by the RFI. A negative SDI also implies that the RFI could have lowered its average on-lending interest rate while simultaneously eliminating any subsidies received in the same year.

Notes

1. The imperfect operation of financial markets is indicated by cases of incomplete diversification of idiosyncratic risks (Rashid and Townsend 1994).

2. Savings are deposited in exchange for a *promise* to return the deposits at a given date, usually with interest, and premium payments are made in exchange for a *promise* to indemnify insurees under contractually specified circumstances. Under an Islamic banking regime, fees or a share of returns may be promised in lieu of interest. However, the promissory feature of the transaction still holds.

3. The adverse impact of imposed interest rate ceilings is analyzed by González-Vega in "Credit Rationing Behavior of Agricultural Lenders: The Iron Law of Interest Rate Restrictions," in Adams, Graham, and Von Pischke 1984.

4. The term "formal financial services" refers to services provided by banks and other institutions recognized as formal financial intermediaries. Such intermediaries are defined as legally chartered financial institutions supervised by the monetary authorities. Semiformal financial intermediaries are legally chartered institutions that engage in a narrower range of financial transactions (deposit mobilization is often proscribed) not supervised by the monetary authorities. Informal financial intermediaries, such as moneylenders, are financial intermediaries that are neither legally chartered nor supervised by the monetary authorities.

5. Varying degrees of similar interventions have been made in capital markets, bond markets, insurance markets, and pension markets.

6. This issue was not so much one of promoting new, untested technologies, but of capital deepening and expanding the use of traction equipment, terracing, storage facilities, and other technologies previously available only to a small number of farmers. Consequently, the risks associated with these technologies stemmed more from uncertainty regarding the distribution of potential returns (given the vagaries of nature and of commodity markets) than from lack of knowledge about the technologies.

7. Other influences were W. W. Rostow's (1963) characterization of the take-off into self-sustained growth by industrialized economies and Prebisch's (1950) identification of a long-term decline in the terms of trade for producers of agricultural commodities relative to producers of industrial consumer products.

8. Recent theoretical work by Hoff and Stiglitz (1993) offers one reason for the prevalence of high interest rates. If there are fixed start-up costs to moneylending and government loans cannot reach the rural poor directly, then subsidized credit to traders, landlords, and other moneylenders reduces their cost of capital. However, the resulting profits encourage new entry into the moneylending business, which decreases the number of clients per moneylender and increases moneylenders' average fixed costs. The result may be higher interest rates to the rural poor than before the government subsidies. Similarly, government subsidies on formal credit may increase informal interest rates if entry into the moneylending business and greater competition among moneylenders weakens borrowers' bonds with given lenders and so reduces the effectiveness of reputation mechanisms in maintaining credit discipline.

9. The figures for Brazil and Mexico reflect the fiscal and quasi-fiscal transfers. However, they do not reflect the additional costs to the economy of foregone investment activity in nonpriority sectors that is crowded out by targeted lending, or of lower savings rates in the economy. These costs arise from the need to charge higher interest rates to other sectors (thus crowding out "nonpriority" borrowers) and to offer lower deposit rates to savers to cross-subsidize targeted lending programs.

10. Proponents of the traditional approach have often taken simple increases in physical production as indicators of success, without evaluating the value of those production gains in economic terms at border prices.

11. Financial depth is generally defined as the ratio of M2 or M3 to GDP, where M2 comprises notes and coins in circulation, plus current and (relatively liquid) deposit accounts; M3 broadens the definition of M2 to include less liquid forms of deposits.

12. This concept is referred to as "Pareto optimum." *Net economic benefit* refers to the private costs and benefits of participants and to the costs and benefits of the whole society.

13. Deep financial systems invite a large share of potential participants and provide them with a wide range of opportunities to increase returns and reduce risks. There is a substantial literature on the relationship between finance and growth. See Bencivenga and Smith (1991), Giovannini and de Melo (1993), and King and Levine (1993).

14. Economic agents seek to equate the marginal utility of consumption across time periods. If incomes are subject to idiosyncratic shocks, then state-contingent contracts with other agents (credit, savings, or insurance) can be used to insulate consumption from idiosyncratic variations in personal incomes. In credit transactions even risk-averse borrowers must bear some risk on loans if lenders have limited information about those borrowers. This risk of lower returns when a project is less successful entails a departure from full insurance of consumption against idiosyncratic variations in income, but it gives borrowers an incentive to increase efforts to succeed and to repay the loans. The question is whether fluctuations in borrowers' consumption levels can be explained by this incentive mechanism. If the fluctuations are greater than those required to achieve the incentive effects, then financial markets are inefficient.

15. Although market failures can occur in urban areas too, they are particularly severe in rural areas because of a legacy of urban-biased policies that reduced the profitability of rural investments and because of misguided government interventions in rural financial markets.

16. An exception is Phelan and Townsend (1991) who apply three models of markets with constrained information to United States data on consumption and find that these models explain consumption variations better than a model that assumes full information can. Nonetheless, according to Phelan and Townsend, even these models do not fully explain intertemporal or cross-sectional variations in consumption. This suggests that United States financial markets do not ensure constrained Pareto optimal resource allocations. Rashid and Townsend (1994) point out that Phelan's findings are not conclusive, because the findings depend on the way the models are specified (more sophisticated models might do a better job of explaining the consumption variations).

17. For an overview of the incentive problems associated with targeting, see Besley and Kanbur (1990) or Sen (1992).

18. For research along these lines, see Subbarao, Ahmed, and Teklu (1996).

19. Although this section focuses on the links between the macroeconomy and rural financial markets, a growing empirical literature links reduced growth in overall gross domestic product and lower investment rates to macroeconomic instability (Ramey and Ramey 1994, EBRD 1995, IDB 1995). This suggests that, even without reference to the impact of macroeconomic volatility on rural financial markets, establishing macroeconomic stability should be an overriding priority for policymakers.

20. Chile has shown that passing on foreign exchange risk to clients does not resolve the problem, doing so merely converts exchange rate risk into credit risk.

21. While Isham and Kaufmann (1995) findings suggest that some projects may be viable even in the presence of modest exchange rate distortions, the major risks to financial intermediation in distorted policy environments should be addressed before significant expansions in credit are initiated.

22. These distortions have been widely documented (World Bank 1986, Bautista and Valdes 1993, and Goldin and Knudsen 1990). Other subsectoral distortions in resource allocations are less well documented. For example, in the rural sector, insufficient attention has been paid to the potential for generating incomes and diversifying risk through nonfarm rural enterprises (World Bank 1990, and Chaves and Sanchez 1995). In agriculture the disproportionate attention paid to larger farmers may not have been warranted given the relatively high productivity of smaller farmers (Berry and Cline 1979; Binswanger, Deininger, and Feder 1993; van Zyl, Binswanger, and Thirtle 1994). Finally, resource allocations (for example, agricultural extension) have systematically favored men over women, although women account for a major share of production in most rural areas.

23. Direct interventions, such as price controls on agricultural products, immediately affect agricultural

terms of trade. Indirect measures, such as tariffs on industrial imports or disproportionate public investment in urban areas, have an indirect effect on relative prices of agricultural products.

24. For example, reducing industrial protection is likely to shift the terms of trade toward products for which countries enjoy a comparative advantage, and to increase returns on labor-intensive products, thus boosting rural employment and wage incomes.

25. For a discussion of best practices in trade policy reform, including the sequencing of macroeconomic and trade reforms, see Thomas and Nash (1991).

26. Poor fiscal and monetary policies induce macroeconomic shocks and amplify shocks to the system from external factors. These shocks can have damaging spillover effects in financial markets, particularly when the shocks are large in proportion to the size of the market. For example, the ratio of fiscal volatility to GDP in Latin America averages 3.4 percent, compared to 1.2 percent in industrialized countries. The effect on the monetary system in Latin America is however ten times greater than that in industrialized countries, because the ratio of financial depth to GDP is much lower (20 percent compared to 70 percent). (IDB 1995).

27. This chapter was contributed by Heywood Fleisig, based on the background paper prepared for this volume by Heywood Fleisig and Nuria de la Peña in 1996. The background paper is also the source for all boxes in this chapter unless otherwise indicated.

28. The fact that financial sector policies have been urban-biased has major implications for nontraditional clients. In the Dominican Republic, commercial bank lending to microenterprises is effectively ruled out by the combination of a 20 percent reserve requirement and high provisioning requirements (10 to 60 percent) for loans to clients with limited formal documentation. Unlike corporate clients, most microenterprises do not have acceptable documentation. Since the same norms apply to all financial intermediaries that mobilize savings, any financial intermediary that lends to the poor must effectively choose between offering savings services and offering credit services to its target clientele—it cannot profitably do both at interest rates that the market will bear.

29. As Sen (1992) notes, "There is not going to be any general formula here, and much would depend on particular circumstances. I should say in passing that I do not doubt that some expert in modern economics would find it helpful to say that targeting should be pushed exactly to the point at which the marginal benefit from it equals its marginal cost. Anyone who gets enlightenment from that wonderful formula fully deserves that enlightenment."

30. In Mexico the imputed cost of FEGA's equity and net reported profits, budgetary transfers to the guarantee and technical assistance fund amounted to US$63 million in 1992. Part of this cost went to cover support for technical assistance to commercial banks. In India the Deposit Insurance and Credit Guarantee Corporation (DICGC) had an accumulated deficit of Rs 1,200 crore (US$340 million) on the credit guarantee fund in 1995, which was largely covered by cross-subsidies from the deposit insurance fund. Morever, the current process of rehabilitating regional rural banks is likely to bring further substantial losses to the DICGC in the immediate future.

31. This section draws heavily on Hazell (1992 and 1995).

32. In Pakistan a pilot cotton insurance scheme launched in 1986 by a private insurance company was obliged to accept all clients in the pilot area who had received loans for inputs from the Agricultural Development Bank of Pakistan. In practice the insurees' farms were among the largest farms in the country, in the top 8 percent in terms of size (Roberts and Dick 1991).

33. Borrowers are usually required to purchase insurance to qualify for loans, and the bank often acts as an intermediary, collecting the premiums and receiving indemnities on behalf of borrowers.

34. This section draws heavily on the findings of the World Bank's Operations Evaluation Department (World Bank/OED 1981).

35. There are several ways in which an RFI might respond to decreased subsidization. For example, the RFI might eliminate its loss-generating activities and apply stricter loan approval procedures or more aggressive loan collection. A significant increase in the on-lending interest rate may also influence loan demand and loan losses (Yaron 1992a).

36. In cases in which monopolies or otherwise uncompetitive markets exist, a low, zero, or negative SDI does not necessarily imply efficient financial intermediation. Complementary ratios (such as the number and volume of loans and deposits per staff member and relative interest rate spreads) should be considered to adequately assess a rural financial intermediary's performance under conditions of imperfect competition.

37. This section draws heavily on Yaron (1994a). For further details about financial ratio analysis of RFIs see Mould (1991) and Barltrop and McNaughton (1992).

38. The IREQ and the FRR are closely interrelated when other variables are held constant, namely the investment cash flow stream before debt service, the percentage in investment financed by debt, loan maturities, and the lending interest rate.

39. Strong institutions can sometimes go far in successful rural financial intermediation even in unfavorable environments. Successful RFIs have been found in a wide range of environments. However, it is not known how these institutions would have performed in a more (or less) favorable environment. A more enabling policy environment usually facilitates improved institutional performance, although a sound environment obviously does not guarantee institutional success (see Pederson 1995 and Christen and others 1994).

40. With group savings and credit programs involving joint liability, the prospect of losing one's savings because of nonrepayment by another group member is likely to lead to significant peer pressure for loan repayment (see Bennett, Goldberg, and Hunte 1996).

41. External agencies sometimes attempt to manage local RFIs, but the systems and procedures that they develop will not become embedded in the organization and will not be transferable unless local RFI staff support the systems and procedures.

42. This chapter draws heavily on Yaron (1992b and 1994a).

43. Information on BAAC has been obtained primarily from BAAC (1994 and 1995), and Sacay, Rhandawar, and Agabin (1996).

44. The unit desa, or village bank, is a separate profit center of the Bank Rakyat Indonesia (BRI) and is referred to throughout this report as BRI-UD. Unless otherwise indicated, the figures presented in this chapter have been obtained from the World Bank (1995a).

45. *Grameen* means *village* in the Bangla language (Gibbons 1992). Reference to the Grameen Bank in this publication draws heavily from Gibbons (1992); Grameen Bank (1993); and Khandker, Khalily, and Khan (1995).

46. A proposal to allow the BAAC to lend up to 20 percent of its loan portfolio for nonagricultural activities is currently awaiting government approval (Sacay, Rhandawar, and Agabin 1996).

47. Income tax in Thailand is currently 30 percent. The reserve requirement on deposits for commercial banks is 7 percent, of which at least 2 percent must be deposited with the Bank of Thailand (Sacay, Rhandawar, and Agabin 1996).

48. The figures and financial data quoted and the corresponding end-of-period exchange rates are as follows (unless otherwise indicated):

BRI-UD:	December 1994:	US$1 = Rp 2,200
	December 1995:	US$1 = Rp 2,308
BAAC:	December 1994:	US$1 = B 25.09
	March 1995:	US$1 = B 24.74
GB:	December 1994:	US$1 = Tk 40.25
	December 1995:	US$1 = Tk 40.75

49. The BAAC's extremely high penetration rate could be partially attributed to the Thai government's legislated requirement that commercial banks lend a set minimum of their portfolio to the agricultural sector (5 percent in 1975, increased to 20 percent in 1987). Many commercial banks prefer to use BAAC as an intermediary in extending these loans, their use of the BAAC has contributed to the bank's phenomenal growth and high level of market penetration.

50. The GB's SDI computations are based primarily on calculations made by Professor Syed M. Hashemi of the Grameen Trust. The authors adjusted the market reference deposit interest rate to better reflect the opportunity cost of the concessional funds used by the GB.

51. We counted BAAC bonuses to employees as expenditures rather than as profit appropriations, which is how they are represented in BAAC financial statements.

52. A 1995 World Bank study, *Grameen Bank: Performance and Sustainability* (Khandker, Khalily, and Khan 1995), proposes a measure of the GB's subsidy dependence, the "subsidy dependence ratio" (SDR), which does not differentiate between interest earned on the loan portfolio and interest and dividends earned on capital market investments. This results in an understatement of Grameen's dependence on subsidies, particularly during its initial years of operation, when a larger share of its financial resources was invested in the capital market. The measure therefore also underestimates the subsequent progress the GB made in reducing its dependence on subsidies, as the share of funds invested in the capital market declined relative to the share of funds loaned to clients. Following this logic, a microfinance institution could appear increasingly independent of subsidies simply by reducing its loans outstanding. If a subsidy measurement device indicates a lower dependence on subsidies simply when an intermediary shifts resources away from loans to its target clientele to investments in the market, then something is basically wrong with the device.

Suppose a microlender receives additional soft loans that are fully invested in the capital market at market rates. Its profits increase, but so do the subsidies it receives. Therefore the numerator of the SDR, which is identical to that of the SDI (that is, subsidies net of profits), remains basically unchanged. On the other hand, the denominator—which unlike the SDI includes interest and dividend earned on capital market investments—increases by the gross amount earned in the capital market financed by the new concessional funds. The SDR therefore falls, thereby providing a misleading indication that subsidy independence has in-

creased, even though there has been absolutely no change in the microlender's activities with its clients.

53. The GB charges interest on housing loans at a rate of 10 percent a year—about half the rate charged on its regular loans, thereby substantially cross-subsidizing housing loans.

54. This appendix is based on Gurand, Pederson, and Yaron (1994).

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