

## WHAT MAKES RURAL FINANCE INSTITUTIONS SUCCESSFUL?

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*Providing affordable credit to the rural population has long been a prime component of development strategy. Governments and donors have sponsored and supported supply-led rural finance institutions both to improve growth and equity and to neutralize or mitigate urban-biased macroeconomic policies. But because of high risks, heavy transaction costs, and mounting loan losses, many of the programs have drained state resources to little purpose, reaching only a small part of the rural population and making little progress toward self-sustainability.*

*There are, however, a few success stories. This article reviews the policies, modes of operation, incentives, and financial performance of four publicly sponsored programs in Asia that are widely perceived to be successful, to find out what economic, social, and institutional factors contributed to their success.*

Two objectives are paramount for a rural finance institution (RFI) to be successful: financial self-sustainability and substantial outreach to the target rural population. These criteria were used to assess the performance of four RFIs generally considered successful: the Bank for Agriculture and Agricultural Cooperatives (BAAC) in Thailand, the Badan Kredit Kecamatan (BKK) and the Bank Rakyat Indonesia Unit Desa (BUD) in Indonesia, and the Grameen Bank (GB) in Bangladesh.

The BAAC was founded in 1966, the BKK began operations in Central Java in 1972, the BUD initiated the KUPEDES program in 1983,<sup>1</sup> and the GB began as a pilot project in August of 1976, becoming an independent bank in October 1983 when it began to lend to self-help groups. By 1989 (the latest year for which the study has data),<sup>2</sup> the BAAC was serving the credit and savings needs of more than 2.6 million clients; the BKK offered credit to 500,000 rural clients for off-farm activities; the BUD's lending reached 1.6 million clients, and the GB served 660,000 rural clients, about 91 percent of whom were women. These four are not the only successful RFIs, but they are preeminent examples.

## Assessing Performance

There is no generally accepted definition of a successful RFI. The traditional quantifiable measures of success—profit figures presented in standard financial statements—are not helpful in assessing the degree of self-sustainability an RFI has achieved and the extent of its outreach. The discussion that follows suggests some ways in which performance can be assessed according to these criteria.

### *Measures of Financial Self-Sustainability*

Financial self-sustainability is achieved when the return on equity, net of any subsidy received, equals or exceeds the opportunity cost of funds. Dependence on subsidies is the inverse of self-sustainability. Traditionally, RFIs have been sustained by various types of implicit or explicit subsidies to ensure continued operations. The most common subsidies have been differences between the market interest rate and interest rates paid on concessional borrowing from the state or donor, state assumption of foreign exchange losses on loans denominated in foreign currencies, obligatory deposits by other financial or public institutions at a below-market rate, direct reimbursement by the state or donor of some or all operating costs, and exemption from reserve requirements or forced investment.

The value of any subsidy extended to an institution should be measured against the institution's volume of business. In view of high initial start-up costs, a dynamic approach is required to measure progress in reducing reliance on concessional funds over time. To eliminate dependence on subsidies, an RFI must:

- Have positive on-lending interest rates high enough to cover nonsubsidized financial costs, as well as administrative costs, to maintain the value of equity in real terms
- Achieve a high rate of loan collection
- Have deposit interest rates high enough to ensure that voluntary saving becomes increasingly significant in financing the loan portfolio
- Contain administrative costs through efficient procedures for assessing investment plans, screening borrowers, processing loans, collecting repayments, and mobilizing and servicing savings to ensure that lending rates do not become prohibitive.

### *Measures of Outreach*

RFIs have often had different stated objectives for providing credit and other financial services to the rural population and sometimes to particularly disadvantaged population segments. Outreach is assessed here on the basis of the type of clientele served and the variety of financial services offered, including:

- The value and number of loans extended
- The value and number of savings accounts
- The type of financial services offered
- The number of branches and village sub-branches
- The percentage of the total rural population served
- The real annual growth of the RFI's assets over recent years
- The participation of women as clients.

The growth rate of an RFI's assets might, under given conditions, also serve as a crude proxy for new clients' access to financial services.

Before examining the performance of the four relatively successful Asian programs according to these criteria, it is worth briefly considering why RFIs have so frequently failed to achieve these objectives.

## Why RFIs Have Failed

Generally, the performance of state- or donor-sponsored rural finance operations has fallen substantially short of expectations, and many of the credit programs have become a costly drain on government budgets. The programs have reached only a minority, often the wrong minority, of the rural population, generating an unintended "grant" in the form of negative on-lending interest rates, which are captured by wealthy and influential farmers. Administrative interventions have retarded the establishment of efficient financial markets and have impeded the development of other sectors of the economy, mainly by depriving the institutions of loanable funds and increasing their borrowing costs. Many of the large RFIs have been associated with heavy losses generated either by inadequate indexation in a highly inflationary environment (such as Brazil and Mexico) or by poor loan collection in a stable economy (such as India).

Specialized agricultural credit institutions established to implement targeted and often subsidized loans have suffered from inadequate planning and inefficient operation or have been hamstrung by economic, political, social, and institutional environments inimical to their effectiveness. Among their most important deficiencies has been the imbalance between the institutions' sizable, supply-led loan portfolios and mobilization of savings. Inadequate, depressed deposit interest rates have combined with concessional funds from state or international donors to discourage savings mobilization. The RFIs have consequently ended up as mere disbursement windows, rather than balanced, full-service financial institutions, and often the costs of the indirect subsidization implicit in this access to cheap sources of finance have not been properly disclosed.

Unmotivated by commercial imperatives, these institutions have suffered from inadequate credit evaluation, management, and monitoring, with inevitably poor loan collection. Meanwhile, their attempts to ensure the eligibility of borrowers and to avoid diverting funds not only have resulted in high costs

but also have imposed high transactions costs on borrowers, who must wait long periods to receive their loans. Legally imposed ceilings on lending interest rates, prevalent in developing countries, have not allowed compensation for the high risk necessarily present in lending to agricultural operations, given their exposure to the vagaries of nature. To minimize the risk and administrative costs, RFIs have often favored large-scale borrowers at the expense of small-scale entrepreneurs.

## **Policies of Four Asian Programs**

How have the few managed to steer clear of the shoals on which the many have foundered? The four RFIs reviewed here differ from each other in many respects, and extrapolating from their experience should be done with caution. Nonetheless, an examination of both the differences and the similarities has highlighted some critical issues that must be taken into account in any exploration of the routes to success.

The RFIs reviewed have differed in their target clientele, in their years of experience in providing financial services, and, notably, in their objectives. Only the BAAC has devoted funds exclusively to agricultural producers; the other three have financed any rural income-generating activity, with a concentration on nonfarm operations. Among the four institutions, the GB's performance in banking is outstanding in reaching a distinct target group of very poor people—the more so considering that the GB, in addition to its regular financial programs, provides nonfinancial services to its clients in such areas as health, education, and nutrition. Any assessment or comparison of the GB with the other three RFIs should take into account that these extra services clearly increase the GB's operational costs.

The difference in economic status of the clientele served is noteworthy: the BUD and the BAAC have had an average outstanding loan size of about \$300 and \$500, respectively, whereas outstanding loans for the BKK and the GB have averaged less than \$100.<sup>3</sup> The gap between these two pairs is crucial to understanding some of the differences in the delivery mechanisms and procedures applied. The effect of loan and deposit size on administrative costs per dollar lent cannot be overestimated. It heavily influences an institution's potential and progress toward self-sustainability. An RFI's performance in pursuit of financial sustainability—as well as of outreach—should thus be evaluated in the context of the clientele served.

### *Financial Policies*

The financial policies of principal importance in RFI activities concern the nominal and real interest rates on loans and deposits, financial incentives for inducing better repayment and collection, and loan security requirements.

All four RFIs have charged positive real interest rates on their loans, with nominal rates ranging from 11 to 130 percent a year (the upper bound has been charged only on a very small share of the BKK short-term loans). For the BUD and the BKK, real rates have been greater than 15 percent annually, and for the BAAC (which has specialized in “mass production” of uniform short-term loans to self-help groups) and the GB, real rates have been less than 6 percent. These data support the notion that access to credit, rather than the subsidy embodied in negative interest rates, has been the important factor for the ultimate borrowers. Some of the RFIs would have had to increase rates or reduce lending, if their access to cheap sources of funds had been eliminated. Despite the positive and frequently high on-lending rates used, the rates were still significantly below those prevailing in informal money markets. The BAAC and the GB have functioned within legally imposed ceilings on lending interest rates, but the other two RFIs have been free to adjust lending rates.

All four institutions have provided savings services, with varying degrees of success when the amounts were measured against the value of their loan portfolios. All four started as supply-led credit institutions whose primary function was to deliver credit rather than to meet the demand for deposit and savings services. Only later did the mobilization of savings become significant in the growth of the BUD, and the most rapidly growing financial resource for the BAAC. Deposit rates have been positive for the BUD and the BAAC, with the average value of deposits significantly higher than those of the BKK and the GB. Rates applied by the BKK and the GB to obligatory savings were lower than the lending rates, implying higher effective lending interest rates and a smaller effective loan size.

The RFIs have used an array of incentives to ensure financial discipline and to build a positive relationship between the lender and borrowers. Both the BKK and the GB, the two RFIs that targeted the lowest-income clientele, have required obligatory savings. This requirement has introduced and enhanced financial discipline among inexperienced, first-time, small-scale borrowers and has also reduced the RFIs’ financial risk.

The two Indonesian RFIs have offered a monthly interest rebate on the original loan value for timely repayments—0.5 percent of the loan for the BUD and 1 percent for the BKK. In view of the declining balances of the loans extended by the BUD and given the typical monthly repayments involved, the rebate has amounted to about 12 percent on an annualized basis for a loan scheduled for repayment in twelve-month installments—a substantial rebate and an effective incentive for prompt repayment. The BAAC, by contrast, has preferred to impose a penalty rate of 3 percent a year on arrears, equivalent to about a quarter of its nominal lending interest rate.

Strict collateral requirements are frequently incompatible with small-scale loans to the poor. How the RFIs solved the loan security problem, while simultaneously obtaining high rates of loan collection, is crucial to understanding their success. The BKK and the GB, characterized by very small average loan size,

have extended loans without collateral; the BKK used character references exclusively; and the GB used joint liability mechanisms.

The BAAC too has relied on joint liability for short-term loans, using a small, homogeneous group that did not pose the "free rider" problem that would be inherent, for example, in its lending to large cooperatives.<sup>4</sup> A joint liability can be effective only within a small homogeneous group, in which peer pressure can be brought to bear. The BAAC has required collateral only for individual loans exceeding \$2,400. The BUD has required cosigners, usually the applicant's spouse, as well as evidence of ownership of assets such as land, buildings, or other property. A statement of ownership based on land tax payments signed by a government official was sufficient to receive a loan up to the equivalent of \$540; certificates of ownership were necessary for loans exceeding that amount. Foreclosures in Indonesia are rare and difficult to execute. Even though the BUD cannot economically foreclose on the collateral on all bad loans, the threat that it could do so has deterrent value, especially if willful default is suspected. Three of the four institutions, therefore, have departed significantly from the traditional requirements established by supply-led credit institutions and, despite conspicuously different methods of securing their loans, have successfully obtained adequate loan collection.

### *Delivery Mechanisms*

The four Asian programs have devised a variety of delivery mechanisms to avoid the deficiencies that have impeded the progress of traditional RFIs toward self-sustainability and significant outreach. Two problems in particular confront RFIs: first, ensuring efficient and relatively low-cost operational procedures for screening borrowers, processing and monitoring loans, and mobilizing and servicing voluntary savings; and second, achieving adequate loan collection so that continued operations are feasible without constant reliance on state concessional funds or bail-outs.

LOAN PROCESSING. All four of the RFIs have processed loans efficiently, although each has applied a procedure tailored to its specific clientele. The flexible repayment patterns in the two Indonesian institutions have meant that loan repayments could be adjusted to the wide variety of activities financed and their typical cash flow patterns. The BKK generally has collected repayments weekly; the BUD, monthly. Through its small loan amounts, flexible repayment terms, and delivery mechanisms tailored to client needs, the BKK's services have resembled those provided by money lenders. Although standard loans have predominated, the BKK has permitted balloon repayments and even daily repayment schedules when justified. The time between submitting an application and disbursement of the loan has ranged between one and two weeks for first-time borrowers for all four RFIs; the BKK, however, has required only one day for a repeat borrower, thanks to a one-page application form. The four

systems have differed markedly from those of supply-led financial institutions, whose pervasive red tape has led to high transactions costs for their clients.

**SOCIAL MECHANISMS.** All four programs have used existing social structures or have formed social and peer groups to ensure that borrowers are selected appropriately and repayments are made on time—two key areas in which the problem of asymmetric information puts the formal RFI at a distinct disadvantage (Llanto 1990; Hoff and Stiglitz 1990).

The two Indonesian RFIs have used the authentic and official leadership in the village to help screen loan applicants and secure prompt loan collection. The banks have relied on the reputation, authority, and official and social status of the village leader to overcome one of the principal deficiencies of formal RFIs: inadequate information on the creditworthiness of potential borrowers. The penalty for poor performance was immediate: additional borrowing was prohibited, and the borrower's access to credit was eliminated. By contrast, a sound collection record enhanced the status of the village head, who inevitably became the link between formal lenders and the village, both for first-time borrowers and for repeat borrowers who became eligible for larger loans. No information is available on whether applicants paid the village heads for approving loans. But even if they did, the overall costs to the borrower are estimated to be significantly lower than those charged by money lenders.

The GB and the BAAC have leaned heavily on self-help groups to promote and deliver loans, thus generating substantial savings in their transactions costs. The smallness of the group (five members in the GB and up to thirty in the BAAC) has eliminated or drastically reduced the emergence of free riders. Each individual's performance is crucial in determining the group's success or failure, thereby creating a sense of affiliation that has resulted in efficient, successful financial intermediation. As Joseph Stiglitz (1990, p. 361) points out, "the members of the peer group must be provided with incentives to monitor the actions of their peers. In the Grameen Bank this is provided by the fact that members of the peer group are jointly liable for repayment of loans, and by the fact that they cannot gain access to credit until the debts of the group are discharged." Formation of the group itself, however, has imposed some costs on the GB.

**LOAN REPAYMENT.** The GB and the BAAC have applied a standardized, rigid structure of loan repayments to achieve financial discipline. The GB has introduced poor, inexperienced borrowers to financial discipline by requiring fifty equal weekly loan repayments followed by two weekly interest payments. The pattern of frequent repayments has been critical in preventing borrowers from accumulating cash that they might have been tempted to spend rather than using it to repay the loan. This rigid pattern of repayment, buttressed by routine meetings of the GB group members in which social pressure was applied to achieve prompt repayments, has also probably saved administrative costs and

loan losses. Because these meetings are concerned with social, health, and education issues, a common bond between members existed, making voluntary default an occasion for loss of social standing.

With short-term loans accounting for 75 percent of its annual disbursements, the BAAC's standardized structure required a balloon repayment of principal and interest eleven months after loan disbursement. Prompt payment was a condition for a follow-up loan one month later. Borrowers unable to pay on time were expected to borrow elsewhere to cover the full amount due; indeed, they sometimes preferred to incur the high financial costs of borrowing from money lenders rather than lose their eligibility to borrow from the BAAC—the only possible access to formal credit.

By contrast, the standard three-month loan repayment procedure for BKK loans has been flexible and transparent, making it easy for both the client and staff member to calculate the amount required for each weekly installment. Each of the twelve weekly payments made within the three-month period was equivalent to 10 percent of the original value of the loan, with the first ten repayments covering the principal, the next for obligatory savings, and the final installment serving as the interest payment. This simple system has proven to be understandable even to inexperienced, often illiterate, clients.

The type of clientele, the nature of the business financed, and the variety of services provided have determined the different procedures the four RFIs used for loan repayment. The two RFIs that have been associated with group lending (the BAAC and the GB) have preferred the standardized rigid repayment pattern. Both these RFIs have been motivated to save on transactions costs, probably because they both have faced a legal ceiling for on-lending rates, and, because their clientele has been more homogeneous, a standardized and rigid repayment pattern has been a reasonable way to reduce administrative cost per dollar lent.

Under all four programs, borrowers who made timely repayments gradually increased the amount of credit they were eligible to receive; in fact, timely repayment has become the only assured way to gain access to repeated loans at the lowest financial cost available. In both the BAAC and the GB, default by any member disqualified all participants in the joint liability group; thus, maintaining and increasing the group's eligibility has been a crucial incentive for timely repayments. In most cases, losing this eligibility would have meant facing significantly higher financial costs (from money lenders) or even aborting the proposed investment.

All four RFIs have used components of mobile banking as an innovative way to provide low-cost savings and lending services to very poor clients. A BKK field staff member, for example, visited a different village each day of the week, often on market day, collecting savings deposits and weekly loan repayments. This practice has greatly reduced transactions costs for both the client and the BKK. The BAAC too has offered investment assistance at the village level,



although disbursements and repayments were handled at the more central branch locations.

**STAFF INCENTIVES.** The four RFIs have instituted regimes that reward staff members for better performance in assessing, extending, and collecting loans and in promoting and servicing savings. The BKK has distributed 10 percent of a branch's profits to its staff. The BUD has provided a yearly bonus of up to one month's salary and special awards for outstanding performance. The BAAC has based its promotion system on three quantifiable factors: loan extension, loan collection, and savings mobilization. The GB has also promoted staff members according to the profits a branch made, as well as distributing 10 percent of those profits to its staff. By tying employee bonuses to quantifiable performance criteria, these incentive programs have succeeded in increasing accountability and motivating staff.

## **Performance Indicators: Self-Sustainability and Outreach**

All four RFIs have made profits. But profit figures are of limited use as an indicator either of self-sustainability (because some of the four have benefited from subsidies not captured in conventional accounting reporting) or of level of outreach (because profits do not reflect the nature of financial and nonfinancial services provided to the target population). Because dependence on subsidies is in inverse proportion to self-sustainability, a subsidy dependence index (SDI) is suggested for tracking the progress an RFI makes in reducing its dependence over time, and for comparing the degrees to which RFIs that provide similar services to a similar clientele depend on subsidies. For outreach, assessment must be based on the different, stated objectives of each RFI in terms of services offered, intended outcomes, and clientele served.

### *Self-Sustainability*

The subsidy dependence index measures the percentage increase in the average on-lending interest rate required to compensate for eliminating subsidies, including the subsidy an RFI receives through paying interest below the market rate on its borrowed funds (mostly rediscounting facilities with the central bank or soft loans from donors). The index assumes for simplicity that an increase in the lending rate is the only change made to compensate for loss of subsidy;<sup>5</sup> it should not be inferred, however, that adjusting the interest rate is always required, feasible, or even desirable. The subsidy is measured against the interest earned on the RFIs' annual average outstanding loan portfolio because lending is the prime activity of a supply-led RFI.

A meaningful assessment of subsidy dependence must recognize that RFIs differ in their ratio of debt to equity. An RFI with a low debt-to-equity ratio

might appear to be performing better than an RFI with a higher ratio because a smaller subsidy is needed for a given volume and complexity of operations. This is because an RFI's equity is presented as a costless item in accounting terms, while the financial obligations of a more leveraged RFI incur interest costs. To resolve the debt-to-equity bias in measuring the subsidy dependence of an RFI, the cost of equity is imputed.

The approximate market rate the RFI would pay on financial resources in the absence of concessional borrowed funds is difficult to establish precisely, particularly in undeveloped financial markets. Precision is not essential here, however, for what is needed is information on the order of magnitude and trends. For example, treasury bill rates or certificates of deposit with maturities of six months to one year (with adequate risk premiums) could serve as a reference rate. The SDI is a sensitivity test that shows the required change in the average on-lending interest rate, all things being equal, for the RFI to maintain its operations without a subsidy; it does not pretend to shed light on how the subsidy was used and whether it benefited the clients or shored up a bloated, inefficient bureaucracy.

An SDI of zero means that an RFI is fully self-sustainable. An SDI of 100 percent indicates that a doubling of the RFI's average on-lending rate is required if subsidies are to be eliminated. A negative SDI indicates that the RFI not only has achieved self-sustainability, but that its annual profits, minus its imputed return on capital as calculated by applying the approximate market interest rate, exceed the total annual value of subsidies—or that the RFI does not receive any subsidies, and the return on equity exceeds the cost of imputed capital. A negative SDI also implies that the RFI could have lowered its average on-lending rate while simultaneously eliminating any subsidies received in the same year.

The SDI for the four institutions was calculated for the most recent year for which financial statements were available and for two years earlier to determine whether an RFI was actually making progress toward self-sustainability (table 1). Data indicate that the four RFIs have differed substantially in their level of dependence on subsidies. This information was not included in the audited financial statements that supplied much of the data used to calculate the index. Furthermore, all of the RFIs presented profits in their income statements from 1986 to 1989, despite an enormous variance in the SDI results. The BUD's SDIs of 3 percent and -8 percent in 1987 and 1989, respectively, mean that it depended marginally on subsidies in 1987 and no longer depended on them by 1989. The speed with which the BUD reached that negative level of subsidy dependence may be linked to its ability to build onto the existing infrastructure of its parent system at the village level, thereby avoiding the large investments often required as start-up costs.

In contrast, the figures for the GB indicate a high level of dependence on subsidies. The GB's SDI of 180 percent in 1987 suggests that its on-lending interest rate would have had to be increased by 180 percent, from 13.3 percent to 37.2

**Table 1. Subsidy Dependence Index**  
(percent)

Indicator	BKK		BUD		BAAC		GB	
	1987	1989	1987	1989	1986	1988	1987	1989
Index reading	24	20	3	-8	28	26	180	130
Effective annual lending rate	35.8	33.8	41.9	40.1	12.3	11.9	13.3	12.0
Effective lending rate required to eliminate all subsidies	44.4	40.5	43.0	37.1	15.7	15.0	37.2	27.6

*Note:* The index represents the percentage change the RFI would have to make in its on-lending rate to eliminate subsidies.

*Source:* Author's calculations.

percent a year, or by 23.9 percentage points, to compensate for full elimination of subsidies. The GB made significant progress in reducing its SDI to 130 percent in 1989 but was still far from self-sustainable. The International Fund for Agricultural Development provided the GB with low-cost credit funds, many of which were held in private banks as high-return time deposits. The GB's 1989 SDI means that, to eliminate its subsidies fully, it would have had to more than double its average on-lending rate, from 12.0 to 27.6 percent, or about 15.6 percentage points.

As mentioned earlier, four factors critical for eliminating dependence on subsidies are positive on-lending interest rates, high rates of loan collection, the encouragement of voluntary savings, and the containment of administrative costs.

**INTEREST RATES.** All four institutions have applied positive interest rates, which have compared favorably to the rates offered by informal money market lenders. When positive and relatively high, on-lending interest rates allow improved coverage of the institution's operational costs and loan losses. Combined with increased efficiency obtained over time, this can significantly decrease dependence on subsidies by reducing the administrative cost per dollar lent or serviced in savings accounts. Although it is argued that the poor clientele need low, subsidized interest rates, it is access to credit, not its price, that has been the most important factor for the clientele these financial institutions intend to serve.

**LOAN COLLECTION.** Attaining a high rate of loan collection is a necessary condition for an RFI to become self-sustainable; loan losses often have been the largest cost borne by RFIs and the principal cause of insolvency, illiquidity, and increased reliance on state bail-outs. The four RFIs have reported high annual collection rates, ranging between 80 and 98.6 percent (table 2).<sup>6</sup> Even those with lower recovery rates—the BKK with 80 percent and the BAAC with 83 percent (for individual loans)—could not be considered to have a serious loan loss

**Table 2. Arrears and Related Financial Ratios**  
(percent)

<i>Arrears and ratios</i>	<i>BKK</i>	<i>BUD</i>	<i>BAAC</i>	<i>GB</i>
The RFIs' definition of arrears	Due date for final installment	Due date for final installment	Amount not paid on due date	1 year past maturity
Annual loan collection/old overdues + current maturities that fall due in the year	80	95 (est.)	83 individuals 40-43 cooperatives	98.6
Arrears/total outstanding loan portfolio	20	5.4	18	1.4
Annual provisions for loan losses/average annual loan portfolio	—	2.9	1.0	0.4
— Not available.				
<i>Source:</i> Financial statements of the RFIs.				

problem. The BKK's rate was adversely affected by arrears accumulated in the past, and the BAAC, where reporting on arrears was well advanced, eventually recovered the lion's share of the due-date arrears. The high collection rates were attributable in large measure to the success of the four RFIs in promoting financial discipline among their borrowers—this is perhaps the principal achievement that distinguishes them from most traditional supply-led credit programs.

Table 3 provides the information needed for an age analysis of the BAAC's arrears and an ultimate assessment of its loan losses. This unique and advanced reporting system is based on information presented annually in the BAAC's au-

**Table 3. Collection Records of Overdue Short-Term Working Capital Loans from the BAAC**  
(millions of baht)

<i>Loan cohort (loan falling due during the year)</i>	<i>Amount falling due during the year</i>	<i>Overdue at the end of the</i>					
		<i>Year</i>	<i>Second year</i>	<i>Third year</i>	<i>Fourth year</i>	<i>Fifth year</i>	<i>Sixth year</i>
1981-82	7,444	1,765	1,141	545	361	258	193
1982-83	8,451	1,883	760	346	251	180	
1983-84	10,493	2,298	1,169	637	413		
1984-85	12,056	2,865	1,374	623			
1985-86	12,782	2,593	925				

*Source:* BAAC Annual Reports, as reported in Siamwalla and others (1990).

dated financial statements. It demonstrates how arrears, measured in relation to their original maturity dates, become loan losses after several years of belated arrears repayments. Because past performance of arrears recovery is taken into account, this method of reporting allows a sound assessment of the adequacy of the provision against loan loss and of the pricing of the cost factor attributable to loan losses in adjusting lending interest rates.

**MOBILIZING SAVINGS.** Promoting better deposit and savings facilities is essential for rural development. Improved savings facilities encourage the rural population to store value in an efficient way and thus increase domestic savings. For most RFI clients, the exposure to deposit and savings facilities is often the only way to obtain services offered by a formal financial institution. An RFI's success in mobilizing savings is crucial to its becoming self-sustainable. (Mobilizing savings is also, of course, important to outreach; see table 8 in the discussion of outreach indicators, below.) The financial ratio of the value of an RFI's savings deposits to its loan portfolio and changes in this ratio over time indicate how successful the RFI has been in replacing concessional funds from the state or international donors with savings (table 4).

An RFI's savings facilities can potentially reach a far greater number of clients than its lending activities, with the average outstanding value of deposits and the savings account significantly smaller than that of the average loan extended. When the financial intermediary is genuine, and not a mere disbursement window, it generally provides savings services to far more depositors than borrowers. Frequently, borrowers use their savings as their equity contribution in financing an investment, with the rest of the funds lent by the financial institution. Of the four RFIs, the BUD has clearly been the most successful in mobilizing

**Table 4. Savings Ratios and Interest Rates, 1989**  
(percent)

<i>Rate</i>	<i>BKK</i>	<i>BUD</i>	<i>BAAC</i>	<i>GB</i>
Total savings as percentage of loan portfolio	20	110	42	31
Voluntary saving as percentage of loan portfolio	5	110	42	0
Annual real deposit interest rate	—	2.3–8.9	1.2–4.0	–1.4 <sup>a</sup>

— Not available.

a. In the GB, savings are actually compensating balances that are part of the package involved in getting loans. As a matter of fact, their negativity should be looked at as a higher cost paid for getting loans.

Source: Financial statements of the RFIs and author's calculations.

savings, with 6.7 million depositors compared with only 1.8 million borrowers at the end of 1989—a ratio of 3.7 to 1. The BKK has been much less successful in backing its loan portfolio with voluntary savings, with a ratio of savers to borrowers of only 1 to 1. The BKK's comparatively poor performance reflects the unattractive savings options it provided—in particular, the lack of passbooks that would allow low-income clients immediate access to their savings.

Savings requirements have varied among the RFIs. To ensure the mobilization of savings, it is essential to protect the value of savings in real terms and to ensure convenient accessibility. Stable economies can better guarantee the value of savings. Mobile banking techniques have dramatically and efficiently enhanced accessibility and have helped reduce transactions costs to creditors, borrowers, and savers. In particular, when very small savings amounts have been involved and when weekly or biweekly visits could satisfactorily meet the financial needs of the depositor or borrower, mobile banking has allowed a tremendous saving in the RFI's transactions costs without causing inconvenience or significant increase in transactions costs to its customers.

The BUD's outstanding success in mobilizing savings over five years—moving from a ratio of 31 percent of its loan portfolio in the first year of operation (1984) to 110 percent in 1989—is a remarkable finding. It strongly suggests that traditional supply-led credit institutions have underestimated their clientele's demand for savings, and that states or donors could, and possibly should, limit the financial assistance extended to RFIs to the period required for the value of savings to match the outstanding bankable loan portfolio. A program of financing designed on a sliding scale could help a newly established RFI to build up a savings base, which increasingly would substitute for reliance on external or state funds.

**ADMINISTRATIVE COSTS.** Clearly, keeping administrative costs within bounds is of paramount importance for self-sustainability; RFIs designed to benefit rural poor or small-farmer populations are notorious for their high administrative costs per dollar lent. Indeed, the inevitably high transactions costs of lending to low-income rural populations have often deterred commercially oriented financial intermediaries. For the four RFIs reviewed, administrative costs as a percentage of annual average total assets varied for the last year reviewed from 3.0 percent for the BAAC to 12.7 percent for the BKK. As a percentage of the annual average loan portfolio, administrative costs ranged from 4.7 percent for the BAAC to 16.7 percent for the GB (table 5). The rising administrative costs for the BKK and the GB were not surprising given their focus on servicing very poor clients. The GB's apparently deteriorating performance was principally attributable to rapid growth and a corresponding increase in training costs. The BKK's poor showing could simply have reflected the introduction of more revealing accounting procedures, which have shifted directly to the BKK expenses previously ascribed to "others." The BUD improved its performance significant-

**Table 5. Administrative Expenses Measured against Assets and Loan Portfolio**

Administrative and operating costs as a percentage of	BKK		BUD		BAAC		GB	
	1987	1989	1985	1989	1986	1988	1985	1989
Annual average total assets	11.6	12.7	15.6	10.2	3.5	3.0	7.6	9.3
Annual average loan portfolio	12.9	14.3	20.6	15.9	4.3	4.7	16.5	16.7

Note: Administrative expenses exclude foreign exchange losses and provisions for doubtful loans.

Source: Financial statements of the RFIs and author's calculations.

ly during the same period, lowering its administrative costs from 20.6 percent of average loan portfolio in 1985 to 15.9 percent in 1989.

The BAAC's administrative costs related to average annual total assets and to annual average loan portfolio have been exceptionally low—a superb performance compared with the other RFIs reviewed and with the performance standards of traditional rural credit institutions. The BAAC's veteran status—it started operations in 1966—gave it advantages unavailable to the younger RFIs. Its extensive coverage—52 percent of the farming population of Thailand—meant that, unlike the BUD and the GB, it did not need to engage in extensive promotion efforts because it was already well known to its potential clientele. The BAAC's modest real annual rate of growth of assets of 4 percent, against the BUD's 36 percent and the GB's 34 percent growth rates over 1987–89 (see table 8, below), has allowed it to maintain a very efficient ratio of administrative costs to outstanding loan portfolio.

A consistently high growth rate of total assets is likely to require opening new branches that initially perform less well and entail high training costs. The BUD, founded in 1984, has dedicated a substantial amount of resources to training and other operations where improved efficiency and a decline in administrative costs measured against assets has been expected to be achieved only over time. Training costs have been even higher for the GB, accounting for about 29 percent of its total administrative and personnel costs, compared with only about 7.5 percent for the BUD in 1989; the GB's training costs amounted to 4.7 percent of its annual average loan portfolio, compared with 1 percent for the BUD. The GB's training costs alone, measured against the annual average loan portfolio, were equal to the BAAC's total administrative and personnel costs as a share of annual average loan portfolio (4.7 percent).

Much of the BAAC's efficiency (as measured by the ratio of total administrative costs to annual average loan portfolio) is attributable to the relatively large size of its loans, group-lending techniques, and the mobilization of sizable financial resources on account of the obligatory deposits of other banks. Those deposits generated enormous savings for the BAAC, allowing it to avoid a costly system of mobilizing and servicing voluntary rural savings. Unlike the BAAC, the BUD has emphasized voluntary saving, which is costly to mobilize and service. Savings accounted for 110 percent of the BUD's loan portfolio value but

for only 42 percent of the BAAC's loan portfolio value in 1989 (see table 4, above). The BAAC intensively used mass production of repeat, group-based lending, whereas the BUD emphasized individual lending for a wide variety of activities with diversified maturity and flexible and frequent repayments. The BUD has served as a window for payments for services such as school fees and electrical bills, which has generated administrative costs. However, when properly priced, these services can generate income through fees and encourage potential clients to save with or borrow from an RFI.

The stage of growth of an RFI and the rates at which cost per dollar lent and cost per dollar saved decline as a typical branch matures are important determinants of the ratio of administrative costs to annual average assets, as the data for the GB in table 6 indicate. Data on the BUD's personnel costs also provide supporting evidence: these costs declined sharply, from 44 percent of the annual average loan portfolio in the first year of operation (1984) to 17.2 percent in 1985 and to only 9.2 percent in 1989.

The BAAC has been constrained by a legal ceiling on interest rates on agricultural loans. Two factors have accounted for the BAAC's remarkably low spread between lending and deposit interest rates. First, it has achieved a significantly lower administrative cost per dollar lent than the other RFIs, and second, it has benefited from obligatory low-cost deposits from the Thai commercial banks, which have enabled it to tap substantial financial resources without incurring the high administrative costs associated with attracting and servicing small deposits. This observation regarding the BAAC's advantage is demonstrated by reviewing the financial ratio of the amount of interest paid measured against the amount of interest earned. This ratio is influenced not only by the spread between the on-lending and deposit interest rates, but also by the RFI's debt-to-equity ratio, its access to concessional funds, and the interest income unrelated to the loan portfolio.

The financial ratio of interest paid to interest earned in 1989 was 11 percent for the BKK, 37 percent for the BUD, 30 percent for the GB, and 56 percent for

**Table 6. Unit Costs of Operating Grameen Bank Branches, by Branch Age, 1984-85**  
(thousands of taka)

<i>Age of branch</i>	<i>Personnel expenses (I)</i>	<i>Other administrative expenses (II)</i>	<i>Total personnel and administrative expenses (III) = (I)+(II)</i>	<i>Outstanding annual average loan portfolio (IV)</i>	<i>Personnel and administrative expenses as a share of outstanding loan portfolio (percent) (V) = (III)/(IV)</i>
Up to 6 months	30.8	9.6	40.4	165	24.5
3+ years	107.6	20.8	128.4	2,259	5.7

Source: Hossain (1988).



the BAAC. The BKK's equity-to-assets ratio of about 45 percent was exceptionally high, a clear departure from the typical pattern of equity ratios of financial institutions. This high equity ratio and the BKK's access to low-cost concessional funds generated the very low figure of 11 percent. For the BAAC, the amount of interest paid represented a high percentage of interest earned (56 percent), showing how the BAAC had become an efficient financial intermediary. In contrast, the GB's lower ratio (30 percent) could be maintained only through generous access to concessional funds that helped to cover its relatively high administrative costs and resulted in a very low average cost of borrowed funds.

Comparing the financial expenses illustrates the importance of subsidies relative to access to concessional funds. Although the BUD and the BKK both operated in Indonesia, the BUD paid the equivalent of 9.5 percent of its annual average assets in financial expenses in 1989, while the BKK's expenses were only 5.2 percent. The GB's financial expenses were very low, only 3.0 percent of its annual average assets in 1989. The BAAC's cost of funds dropped from 9.1 percent of annual average assets in 1985 to 6.2 percent in 1989. A distinct type of cost structure was found in the BKK and the GB, the two programs that concentrated on very low-income clients. Administrative expenses accounted for more than 70 percent of total expenses (administrative plus financial) in 1989, a likely indication that subsidies have been received in the form of a very low financial cost (the GB) or a very high equity ratio (the BKK). Another revealing feature is the volatility of the GB's cost structure, with financial expenses dropping from 46 percent in 1985 to 24 percent in 1989.

### *Outreach*

Performance indicators of outreach (table 7) need to be considered in the context of the stated objectives of each RFI, which define the target clientele. Of course, the differences in these objectives, and in the working definitions of targeted clientele, make comparison of achievement in this respect very complicated—a problem compounded by lack of data (which, even when available, often apply to different years). Nonetheless, the information presented below does give some indication of the level of outreach achieved by the four RFIs.

Both the BKK and the GB want to reach the rural population, but the BKK's objective has been to finance off-farm, income-generating activities, whereas the GB has aimed to improve economic conditions in general by providing financial and nonfinancial services. The difference is far from semantic. The GB has shouldered a wide array of nonfinancial activities along with its primary activity of extending credit (to groups with five members). The BKK's half million borrowers in 1989 represented 1.8 percent of the rural population in central Java. In 1986 the GB's borrowers totaled 17.2 percent of the rural poor (defined as households with less than half an acre of land or assets worth less than one acre of land) in the five districts of Bangladesh in which the GB was active—about 4 percent of the total rural population at that time.

**Table 7. Outreach: Performance Indicators**

Indicator	BKK	BUD	BAAC	GB
<i>Target coverage</i>				
Region/country	Central Java	Indonesia	Thailand	Bangladesh
Clientele	Rural poor	Rural, low/mid-income	Farmers, low/mid-income	Rural poor
Activities	Off-farm, income-generating	Rural, income-generating	Agricultural production	Rural, income-generating
<i>Indicators</i>				
Number of borrowers <sup>a</sup>	510,000	1,600,000	2,600,000	660,000
Number of staff	1,875	13,666 <sup>b</sup>	6,900	6,000 <sup>c</sup>
Town branches	502	2,843	96	729 <sup>d</sup>
Village posts/units	2,938	835	584	n.a.

n.a. Not applicable.

a. BKK (1989); BUD (1989) (loans outstanding as proxy for total number of clients); BAAC (1988); GB (1990).

b. When supervisory staff in regional offices are included, the total for the BUD is 15,000.

c. Approximate figure.

d. A branch typically covers 15 to 20 villages (200 groups, 1,000 borrowers).

Source: Financial statements of the RFIs, author's calculations, and Hossain (1988).

The BUD and the BAAC have directed their efforts to a clientele in the low-to medium-income range, but whereas the BUD's credit and saving facilities are intended to cover the rural population as a whole, the BAAC's credit operations are confined to agricultural producers. Its 2.6 million borrowers in 1988–89 represented 52 percent of the targeted farming population.

The relation between the number of village posts and town branches illustrated in table 7 gives an idea of the different hierarchies of banking units used. Two of the RFIs, the BKK and the BAAC, had 85 percent of their service units at the village level. With the BKK and its sister institutions in other provinces already firmly entrenched at the village level, the BUD has offered its services predominantly at the town level, with a ratio of three village posts for every town branch, financing nonagricultural activities of low- and medium-income clients. The GB's several hundred small town offices had active outreach to villages: each branch supervised the activities of 15 to 20 villages (around 200 groups, 1,000 clients).

For all four RFIs, the data indicate a significant level of outreach as measured by the volume of outstanding loans and savings, the number of loan accounts and saving deposits, and real annual growth rates over 1987–89 (see table 8). The most recently established RFIs, the BUD and the GB, each had a real annual growth rate in total assets exceeding 34 percent a year, although they served completely different socioeconomic strata. The more experienced RFIs, the BKK and the BAAC, had significantly lower growth rates.

A cost-effective process for reviewing loan applications is important to keep down administrative costs for the RFI and transactions costs for the client. All four RFIs were able to disburse funds within two weeks of receiving an application, but they differed in the amount of responsibility for loan approval each assigned to the local manager. The BKK branch heads could approve loans in amounts up to only \$14 (when the average outstanding loan was \$26), with the subdistrict manager responsible for larger amounts. The BUD's village office manager could approve loans up to \$837 (when the average outstanding loan was \$434), and the branch manager reviewed amounts higher than this threshold. The GB developed a participatory system, which included group members, bank workers, and the area manager in the approval process. The BAAC's approach appeared more centralized, because the branch manager reviewed all loan requests. But none of the four systems could be considered purely centralized because the self-help groups (for the BAAC and the GB) and the local village heads (for the BKK and the BUD) played a substantial role in selecting and approving borrowers.

**Table 8. Outreach: Loans and Saving, 1989**

<i>Indicator</i>	<i>BKK</i>	<i>BUD</i>	<i>BAAC</i>	<i>GB</i>
Volume of loans outstanding	\$13 million	\$478 million	\$1.1 billion	\$30 million
Average annual assets: real growth rate over preceding three years (percent)	15	36	4	34
Minimum loan size	\$5	\$14	—	—
Average outstanding loan	\$26	\$290	\$560	\$80
Number of savers per staff member	267	458	—	127
Value of savings deposits per staff member	\$1,400	\$39,400	\$58,800	\$2,800
Number of loans per staff member	272	120	203	127
Value of outstanding loan portfolio per staff member	\$6,900	\$29,300	\$131,800	\$4,900
Number of savings accounts (millions)	0.50	6.30	1.68	0.66
Value of average savings account	\$6	\$85	\$274	\$24
Volume of savings	\$2.6 million	\$539 million	\$460 million	\$17 million

— Not available.

*Note:* The staff workload information should not, of course, be taken to imply that the entire staff is directly involved in either portfolio management or savings mobilization.

*Source:* BAAC Annual Reports, as reported in Siamwalla and others (1990).

Another indication of outreach is found in the workload of the average staff member. The number of savers per staff member varied widely, from 127 for the GB to 460 for the BUD. For size of savings deposits, the differences were even more pronounced, with a low of \$1,400 per staff member for the BKK and a high of \$58,800 for the BAAC. The average outstanding loan portfolio managed per staff member demonstrated the greatest variability of all, ranging from \$4,900 for the GB to \$131,800 for the BAAC. Although the BAAC's average loan size was in the same range as the BUD's, a BAAC staff member managed four times as much in total value of loans. A conspicuous difference between the two Indonesian RFIs emerged: the BUD's average outstanding loan size was about sixteen times greater than that of the BKK. The RFIs, in their pursuit of financial survival, might be inclined to increase their loan size to save on transactions costs. The BUD has systematically and significantly increased its average outstanding loan size over time in real terms, by 23 percent in 1988 and 16 percent in 1989.

Women have accounted for 91 percent of the GB's borrowers and 60 percent of the BKK's clients; in contrast, women made up only 25 percent of the BUD's beneficiaries. (No data are available on women's share of the BAAC's lending.) The GB and the BKK were poverty-oriented, and their loans were typically very small, with the average outstanding loan less than \$100. The correlation between the smaller loan size and high female participation is not a coincidence. Generally, women have had limited access to material and human resources, and their businesses have been likely to be among the smallest (Holt and Ribe 1991). Their restricted mobility, because of the need to cope with other family roles, and their relatively limited ability to offer collateral, have therefore made them prime clients for the BKK and the GB. Not surprisingly, then, the two programs that have been more oriented to poverty alleviation have benefited women most.

## Conclusions

Any attempt to replicate the achievements of one of the more successful RFIs by imitating its mode of operations should be carried out with great caution. A solution that works in one socioeconomic environment will not necessarily work in another, where social values are different. Nonetheless, the experiences of the four RFIs reviewed here do highlight a series of critical issues that must be considered when tackling the complex issue of providing financial services to the rural population.

One key to success appears to be the introduction of a social mechanism that lowers transactions costs, while supplying effective peer pressure for screening loan applicants and collecting loans. The quest for such a social mechanism should include a careful review of the past track record of similar programs in the country involved and the targeted clientele's experience and

perception of the moral obligation associated with loan collection. Local cultural barriers could make it difficult for other RFIs to replicate the social intermediary methods used by the RFIs reviewed. For instance, the use of the village head as an intermediary, so successful for the BKK and the BUD, may be quite unsuitable in societies with entrenched caste systems. Other techniques and procedures (for instance, mobile banking) need to be assessed in the context of local features, such as population density and existing physical and human infrastructure, which may offer special limitations or opportunities.

Financial resources made available by the state or donors (not necessarily at a subsidized interest rate) can contribute substantially to developing a newly established RFI during the initial, negative cash flow stage. How much support is needed and how long it should continue before being phased out will depend on specific conditions such as initial staff training, the development of new branches, and the speed at which clients become independent and no longer need the institution's special services. Savings mobilization should not become the minor residual balance—as it too often is in supply-led credit institutions—that constitutes the difference between the loan portfolio and concessional borrowed funds. On the contrary, state or donor lending to the RFI should assist only in temporarily closing the gap between an RFI's fully motivated savings mobilization and its bankable loan portfolio.

The BUD's impressive demonstration that mobilization of savings can be the driving force behind an RFI's expansion suggests that less support over a shorter period of time is needed than has been the rule in the past. Obviously, servicing new clients, opening new branches, and providing services to an increased share of the rural population can and should, if necessary, prolong the period and increase the financial support rendered to the RFI. The BUD's example indicates that its access to funds was important to its rapid growth only during the initial stage of development. However, the BUD's negative SDI in 1989 demonstrates that a subsidy in the form of concessional borrowed funds carrying a cheap interest rate was unnecessary for that growth. Availability of funds, not their cost, was the issue to be resolved during the BUD's initial stage of operations.

State or donor support to an RFI should concentrate on institution-building. Careful institution-building often constitutes the difference between an RFI that could eventually become self-sustaining after a few years of support during its start-up period and an RFI that would need permanent subsidies and bail-outs. Often, supply-led credit institutions have failed to pay enough attention to institution-building. Too few resources are committed to guarantee adequate training, efficient managerial information systems, incentive systems, promotion of savings mobilization, and the like, all of which are crucial to making RFIs independent, well balanced, and increasingly self-sustainable.

## Notes

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1. The BRI-Unit Desa KUPEDES program is designated by the abbreviation BUD in this paper. The Unit Desa system is a separate profit center within BRI, which has operated many branches in both rural and urban areas. The figures presented are taken from several internal World Bank documents, unless otherwise cited. Correspondence from Mr. Kuiper of the Ministry of Development Cooperation of the Government of the Netherlands indicates that the BRI system has its historical roots in the Volkskredietbank experiment begun in 1969 in Yogyakarta.

2. Unless otherwise stated, all figures and financial data mentioned in this article for the BKK, the BUD, and the GB are for 1989; for the BAAC, they are for the fiscal year ending March 1989.

3. All figures presented are stated in U.S. dollar equivalents, although all lending and savings activities were carried out in local currency. The exchange rates are based on *International Financial Statistics* (IMF) for 1989. All annual averages are based on the sum of balances of the first and last day of the year, divided by two. Therefore, seasonal variations may not be adequately reflected in the averages presented.

4. "Free riders" are members who do not fully bear the individual costs of participating in group activities, knowing that they will be able to reap all or most of the benefits associated with group membership.

5. In reality, an RFI might respond to a loss of subsidy in several ways, including eliminating its loss-generating activities, using stricter criteria for assessing investment plans and processing loans, and applying more aggressive and efficient loan collection.

6. Defined as annual loan collection divided by the sum of overdues at the beginning of the year plus maturities that fall due during the year.

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