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# DEPOSIT MOBILIZATION FOR RURAL LENDING

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DEPOSIT MOBILIZATION FOR
RURAL LENDING 1/

# I. INTRODUCTION

1. Major efforts have been made in the past two decades to develop and improve agricultural credit systems and expand the flow of loans to agriculture in low income countries (LICs). During the past several years, aid agencies have provided over 5 billion U.S. dollars for rural financial market (RFM) projects, and the volume of new agricultural loans in LICs was in excess of U.S. $ 30 billion per year in the early 1980s (Adams and Graham). Foreign assistance has played a major role in the design of RFM projects, providing funds for on-lending, linking external funds to the provision of internal funds, and through technical assistance and training. Although much has been accomplished during these two decades, serious problems are now evident and a fundamental reorientation is required in the development of RFMs.

2. Many LICs now face difficulty in obtaining adequate foreign funds for economic development. It is increasingly clear that internally mobilized funds must substitute for external finance (Abbott; Abdallah and Mustafa; FAO (1984a,b); Fry, (1984); ISBI; S.H. Kim; NENARACA;). External funds are not likely to be as abundant in the future as in the past; aid agencies face constraints on funds and commercial lenders are wary of increased lending to some LICs. Furthermore, the terms and conditions of both foreign assistance and commercial loans have hardened, and many countries must increase national savings to repay previous loans. The Latin American region faces the most serious savings challenge because in 1982 and 1983, net capital inflow actually turned negative (Caceres).

3. Considerable interest has emerged in the issues of national savings and domestic resource mobilization, especially in rural areas. The FAO and the UN have provided important support and leadership for recent regional and international conferences on these topics. Institutions such as the Swedish Savings Bank Association, the Swedish International Development Agency, Caisse des Depots et Consignations, Centre National des Caisses d'Epargne et de Prevoyance, and the Dutch Rabobank Foundation have shown great interest in these subjects. The International Savings Bank Institute and the Cassa di Risparmio delle Provincie Lombarde have sponsored several meetings on the development of savings banks, especially in Africa. Finally, the U.S. Agency for International Development (AID) sponsored the comprehensive 1973 Small Farmer Credit Review and with the World Bank and the Ohio State University co-sponsored the Colloquium on Rural Finance in Low-Income Countries in 1981, which included rural savings as a major topic. 2/

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2/ Citations to reports summarizing many of these meetings are found in the references.

4. Results of recent finance research have been reported at these meetings. Additional studies are underway such as the comprehensive work on domestic resource mobilization by the Asian Development Bank, a recent study funded by the German Ministry of Economic Cooperation, the studies of several researchers at CEREPI in France, and the African studies of FINAFRICA in Milan. Finally, studies in rural finance continue at the Ohio State University in the U.S. with emphasis currently on rural savings mobilization.

5. The objective of this paper is to summarize the arguments made for increasing rural deposit mobilization in LICs as a source of funds for investment. The central arguments concern national savings and RFMs and can be summarized as follows: National savings rates must be raised in many LICs. Household savings are the most important single component of national savings and are largely channelled to investments through financial institutions, but financial institutions must be strengthened in order to more effectively mobilize rural savings. To accomplish this task, policymakers must change priorities from pushing cheap credit for farmers to building viable rural financial institutions. A reorientation in priorities will facilitate making important policy changes such as the structure of administered interest rates. More deposit mobilization should improve rural savings and the performance of financial institutions. Several technical issues must be faced when institutions broaden the range of financial services they offer. Strong central banks and international assistance can facilitate the resolution of the challenges that will arise.

6. This paper is divided into the following sections as follows: Part II reviews the relationship between national savings and investment. Part III discusses financial intermediation and rural finance. Part IV discusses the potential for and determinants of rural deposit mobilization. A discussion of the link between rural savings and the viability of financial institutions is presented in Part V. Part VI analyzes concerns over intersectoral resource flows. Part Part VII identifies some of the technical issues that governments and international agencies will confront in implementing financial reform. Part VIII presents some concluding comments.

## II. NATIONAL SAVINGS AND INVESTMENT

7. Countries want to increase their rate of investment because of the subsequent improvements expected in production and incomes. Higher rates of investment imply higher incomes which in turn improve savings leading to even greater investment. National savings finance the bulk of investment in most countries, but foreign savings have been important in recent years (Abbott; Caceres). Since future aid and loans are scarce, countries must raise their national savings rates (ratio of gross national savings to gross national product) to maintain their investment rates (ratio of gross national investment to gross national product). This is a difficult challenge for countries with low national savings rates and especially so for those with declining savings rates.

National savings consist of savings by the government, the corporate sector and households with the latter typically representing the largest category (Fry (1984)). Government and corporate savings need to be increased, but several problems are evident. Many LIC governments dissave because they have difficulty in controlling expenditures and in raising revenues even though their current tax effort may be low (Benoit (1984b)). Furthermore, the returns from many public sector corporations are small or negative and act as a drain on government revenues. The efficiency of the corporate sector must also be improved in order to increase earnings and lower costs. For these reasons, the household sector holds the most promise, in the short term, for increasing national savings.

9. Government appropriation of savings takes many forms. It frequently involves involuntary mobilization through taxation, inflation, overvalued exchange rates, and unfavorable terms-of-trade. The role of the state varies widely in LICs. In socialist countries, savings and investment are generated principally within the state sector so that market transfers of savings are so unnecessary as they are distasteful in socialist doctrine (Gurley and Shaw). Demand for financial assets by households is depressed by constraints on personal income and wealth. Socialist economies also supply services for which households must save in capitalist societies. Thus, through involuntary mobilization of savings, governments reduce both the need for personal savings and the ability of households to save. In addition, many governments intervene in financial markets with policies designed to alter the cost and allocation of financial savings. These policies are intended to accelerate investment in priority sectors and activities, but contribute to financial repression that can, paradoxically, limit the capacity of financial intermediation to accomplish this task. More attention is being given by policymakers to the key role of financial intermediation for mobilizing voluntary savings and influencing the pace and pattern of investment. Financial intermediation is especially important for households because, unlike business and government savings, household savings are generally channelled into investment through financial markets

## II. FINANCIAL INTERMEDIATION AND RURAL FINANCE

10. Financial intermediation is the process by which financial institutions mobilize savings from surplus units (households and firms) and allocate them to deficit (borrowing) units. Surplus units reduce current consumption in order to increase future consumption. Deficit units do just the opposite. Interest payments are incentives for surplus units to postpone consumption. Financial intermediation involves formal and informal institutions using various financial instruments. Most LICs have relatively simple financial markets that increase in complexity as income levels rise. Financial intermediation in rural areas generally involves banks (commercial and specialized), postal savings offices, cooperatives, credit unions and a variety of informal intermediaries that utilize a small number of deposit and savings instruments and legal documents for farm household loans.

### Financial Intermediation and Growth

11. Many economists adopt Keynesian views that interest rates should be kept low to accelerate investment and accumulation of capital. A markedly different theoretical argument began to emerge with the attacks on financial repression in LICs by Shaw, McKinnon and others in the early 1970s. Whereas the Keynesian view emphasizes the impact of interest rates on investment, the Shaw-McKinnon argument focuses on the impact of interest rates and other controls on the supply of finance. They argue that the accumulation of real capital and the accumulation of financial assets in developing economies are complementary rather than competitive. A comprehensive review of the original Shaw-McKinnon argument, subsequent refinements and related empirical studies can be found in Fry (1982).

12. Financial repression refers to deliberate distortions of prices, including interest rates and foreign exchange rates, that reduce the rate of growth and size of the financial sector relative to the rest of the economy. Shaw and

McKinnon describe a repressed financial system as one with government imposed ceilings on loan and deposit interest rates, foreign exchange controls, high reserve requirements, and lending quotas and targets. An expansion in lending to priority sectors and activities is encouraged through targeting of loans, preferential rediscount rates, regulations on approved types and sizes of loans, specifications on margin and collateral requirements, and the creation of specialized institutions such as development banks. The result is a financial system which is fragmented, segmented and restricted. Savers are generally penalized by low rates paid on deposits, while privileged groups of borrowers are favored with preferential credit terms.

13. Debate continues over the relevance of the Shaw-McKinnon argument and its implications for specific countries (for examples, see Gupta; Roe). The rapid growth of Taiwan and South Korea following the introduction of financial reforms is often cited as support for the argument. Recent studies of several Asian LICs are also supportive by showing that an increase in real deposit rates increased financial savings, thereby improving credit availability (Abbott, Fry and Krishnaswamy; Fry (1984)). Furthermore, an increase in real deposit rates increased the average efficiency of investment. These two effects contributed to raising the growth rate in these countries.

Financial Intermediation and Equity

14. In addition to a positive impact on efficiency and growth, improved financial intermediation can also make an important contribution to equity through both savings and lending activities. Consider the impact on savings from the reduction of financial repression by raising both minimum lending and deposit rates. As discussed in Part IV, an increase in real deposit rates should stimulate financial savings by increasing incentives for postponing consumption 3/. Since the number of depositors in any financial institution generally exceeds the number of borrowers, an increase in deposit mobilization should benefit many saving households. Wealthier households have a variety of investment choices including both physical and financial assets. Poorer, less sophisticated households, however, frequently have access only to financial investments. An increase in deposit rates can, therefore, make a positive impact on income distribution through ownership of savings instruments.

15. An improvement in equity can also occur through lending. The lower that loan interest rates are set relative to equilibrium rates, the greater will be the excess demand for loans and the need for lenders to impose nonprice loan rationing through noninterest terms of the loan contract and the size of loan granted (Bhatt and Roe; Gonzales-Vega (1984a)). When interest rates are suppressed, loans become concentrated among wealthy borrowers who can meet high collateral requirements and who can use political connections to obtain loans. Poor borrowers without influence and collateral but with high rate-of-return investment projects are crowded out and are denied loans. Raising loan rates restores interest as the loan rationing mechanism. Poor borrowers have a better chance of getting loans and low rate-of-return projects are eliminated. This is the mechanism through which the above-mentioned increase in investment efficiency occurs, and it can also contribute to a more equitable distribution of loans.

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3/ Nominal interest rates (i) refer to those set in loan and deposit contracts. Real interest rates (r) refer to the difference between nominal interest rates and the rate of inflation (p), frequently calculated as simple i-p. When price changes are greater than nominal interest rates, the return on deposits or cost of loans can be negative in real terms.

Scope for Increased Financial Intermediation

16. Most analyses of LICs show great scope for increased financial intermediation, commonly referred to as financial deepening. Financial deepening can be analyzed by calculating the ratio of monetary liabilities (some measure of money and other monetary instruments) to GNP. Trends in this ratio over time show the extent to which financial deepening is occurring. Comparisons of ratios among countries at similar or different stages of development suggest the scope for further financial intermediation.

17. Several studies have analyzed financial development in LICs. Wan-Soon Kim analyzed the ratio $m_2$ (currency in circulation, demand deposits, savings and time deposits) to GDP for 14 Asian LICs and concluded there is scope for financial deepening, especially in the lowest income countries. The slower growing low income countries tended to have ratios ranging from 0.15 to 0.30, while faster growing countries had ratios of at least 0.6 during the 1970s. In comparison, Japan had a ratio of 0.65 during the 1950s. Ragazzi analyzed 16 African countries and concluded that the level of financial intermediation for 1978 was relatively high compared to some Asian countries, but claims on governments in Asia tended to be lower and/or declining compared to the high and increasing share in many African countries. Kwarteng also concluded there is scope for increased financial intermediation in Africa based on an analysis of monetary aggregates and the availability of bank branches. Surprisingly, his conclusion was the same for African countries that earlier nationalized their banking systems to meet financial objectives. Caselli analyzed financial growth in seven industrialized countries and most African countries for the 1960-1981 period. This study showed progress in financial development in most African countries with a slowdown after 1978 due to economic difficulties. Caselli also concluded that great scope exists for increased financial intermediation because the $M_2$/GNP ratio in 1981 for most countries was still in the 0.2 to 0.4 percent range.

Financial Intermediation and Farm Households

18. Agricultural specialists are frequently preoccupied with the credit "needs" of farm households. There is seldom recognition that financial services can provide several benefits to farm households (Adams (1984a)). First, monetization may make it less expensive for the farm household to meet obligations by transferring resources through a check or bank draft rather than through the transfer of physical assets. Second, resource allocation may be more efficient because a financial institution can facilitate resource transfers between surplus and deficit units separated too far by time and distance to engage effectively in direct exchange. Third, financial institutions can provide a credit reserve useful to farmers facing risk. Fourth, an intermediary can help a household accumulate savings to combine eventually, perhaps, with a loan to finance a large investment. Fifth, financial institutions help with intergenerational transfers of claims on resources.

19. The heterogeneity of farm households is widely acknowledged in terms of the types and sizes of farms for which RFM projects are appropriate (Donald, p.15), the ability of institutions to meet rural credit demands (FAO (1981a), p.4), and the credit needs of different groups of farmers (FAO (1981b), p.14). Differences among farm households in wealth, income, access to land and size of holding are important, but the heterogeneity in household cash flow is even more important for financial intermediation (Meyer and Alicbusan). This heterogeneity arises because of differences in cropping patterns, enterprise combinations, procurement and marketing strategies, consumption patterns, and family life cycles. RFM projects often assume that, because of crop

seasonality, most households will experience cash flow surpluses and deficits at approximately the same time of the year. However, detailed cash flow studies in LICs show that patterns of income and expenditures in farm households are more complicated. The fact that some households experience surpluses when others face deficits provides opportunities for financial intermediation. Since some surpluses are sizeable and exist for an extended period of time, many farm households could effectively use loans and also deposit and saving services to help synchronize income and expenditures. Furthermore, some households are continuously net savers and find long-term financial investments attractive.

## Problems with Traditional Financial Market Projects

20. Until recently, most RFM projects have been designed to push farm loans, frequently at subsidized rates, and the savings mobilization side of financial intermediation has been forgotten (Vogel (1984a)). The situation is similar in irrigation, fertilizer, integrated rural development and other projects which justify a cheap credit component to speed farmer adoption. Both RFM and integrated projects, as traditionally designed, contribute to fragmentation of financial markets. A few borrowers monopolize the subsidized credit, and the lending institutions are drained of their financial viability.

21. The design of traditional projects has been based on faulty assumptions; the consequences for efficient rural financial intermediation are well-documented and will be only summarized here (Adams and Graham; Adams, Graham and Von Pischke; APO; Donald; Howell; Inter-American Development Bank; Von Pischke, Adams and Donald). Common assumptions about farmer-borrowers are that they are highly risk averse, will resist adoption of innovations unless bribed by low interest rate loans, will misappropriate loans unless they are given in kind rather than cash and will not repay loans unless pledged with collateral or subject to the pressure of group lending. Surprisingly, these assumptions imply irrationality in the use of finance even though the concept of peasant rationality became well-established with the seminal work of Theodore W. Schultz in 1964. These assumptions lead to targeting of loans for specific borrowers; detailed specification of sanctioned loan uses and amounts; elaborate procedures for in-kind lending, loan disbursement and supervision; and required collateral substitutes like group lending or compulsory marketing schemes. Maximum lending rates are set below market equilibrium with subsidies provided by governments or international agencies through favorable rediscount arrangements or direct credit lines. Loan interest rates for small farmers and other disadvantaged groups are set at rates lower than for other borrowers. It is expected that low-income households will be pulled out of their poverty by properly adopting the recommended investment-credit-production package. It is also expected that subsidized credit will offset disincentives caused by high input prices or low product prices.

22. Assumptions about the behavior of rural savers and formal lenders are also imporant in the design of traditional projects. Rural households are assumed to be either too poor to save or indifferent to rewards for savings. Lenders, therefore, cannot mobilize rural deposits in a cost-effective manner and must receive subsidized funds for on-lending. Furthermore, commercial banks are risk averse and will not make socially desirable amounts of loans to farmers unless enticed or compelled to do so. Commercial banks may be nationalized and/or complemented with specialized development banks to increase farm lending. Since informal lenders are assumed to charge usurious rates and gobble up assets pledged to them, formal sources must be expanded to force down interest rates or, better yet, drive informal lenders out of business.

23. Some positive outcomes can be associated with credit projects: the aggregate amount of agricultural loans has increased in some countries, commercial banks have increased their technical capacity to make farm loans,

some farmers have received large amounts of loans and the expansion in use of mechanization, new seed varieties, fertilizers and chemicals and new cropping systems is attributed to increased lending in some areas. However, serious problems in many countries have led to a reassessment of traditional views about agricultural credit. Changes in the farm level use and distribution of loans have fallen far short of expectations. On the average, only about 15 percent of Asian and Latin American farmers and no more than 5 percent of African farmers have had access to institutional credit. The ratio of agricultural loans to agricultural GNP and the ratio of agricultural loans to total loans have often risen very slowly, if at all. All too frequently, donor funds have simply substituted for domestic sources with little net impact on total volume of agricultural loans.

24. Agricultural loans are often heavily concentrated in the hands of a few wealthy farm households (Gonzalez-Vega (1984b)); Vogel (1984b)). Even in the exceptional case of Brazil, where the agricultural credit to agricultural production ratio grew from 0.2 in the mid 1960s to over 1.0 by the end of the 1970s, it was difficult to increase the volume of loans going to small farmers and poorer regions (Araujo and Meyer; Meyer et al). Interest subsidies on loans equal billions of U.S. dollars and represent 20 to 30 percent of agricultural production in some cases (Sayad; Vogel (1984b)). The concentration of loans and subsidies, the impact on incomes due to leverage obtained from loans, and the concentration of loan delinquencies have seriously aggravated the distribution of rural incomes and wealth (Adams and Meyer).

25. Farmers continue to rely on informal loans. The reasons include the high borrowing (interest and noninterest) costs of formal loans caused by credit rationing (Ahmed; Ladman), the high value that farmers place on maintaining good relations with dependable informal sources relative to undependable formal sources, the convenience of informal sources and their responsiveness to customer needs (Holst), and the linkage between land and credit in some land tenure arrangements (Braverman and Srinivasan).

26. Although many attempts have been made, it is impossible to satisfactorily quantify the impact of increased agricultural loans on farm household production, income and choice of technology (David and Meyer). There are many factors other than credit that affect differences in economic performance between borrowers and nonborrowers. Funds are fungible so it is difficult, if not impossible, to effectively target loans. The additional agricultural production and investment associated with increased loans is usually much less than expected because of diversion and substitution of funds. However, the argument that cheap credit tilts factor proportions in favor of capital intensity in agriculture is also exaggerated because of fungibility (Adams and Gonzalez-Vega). Due to the methodoligical problems of credit impact studies, a more useful approach for evaluation is to analyze project impact on supply of funds and institutional viability.

27. Many financial institutions are experiencing problems even more serious than those at the farm level. Few institutions are eagerly expanding their agricultural loan portfolios, and most of the loans granted are short-term and rigid collateral requirements are still in effect. Actual loan allocations often differ so greatly from targets that the value of credit planning and programming is seriously questioned (Vogel and Larson). Many financial institutions are essentially bankrupt and exist only through government or external subsidies. Accrued interest on delinquent loans (frequently with little probability of being repaid) represents a large portion of reported income. Other methods to "cook the books" are used to disguise the viability problem and prevent a cut-off of foreign funds. Institutional recycling is common. An institution is created with great fanfare and a large infusion of funds. Because of high loan transactions costs, inflation and loan defaults,

the real value of the initial capital eventually disappears. The institution is subsequently renamed or merged with another institution, another injection of capital is provided and the cycle starts again.

28. The minimum interest spread between cost of funds and lending rates necessary to ensure financial viability is high. Intermediation costs are naturally high in LICs because of low volume, inefficiency, and poorly developed systems of transportation, communications and information in rural areas, but traditional RFM projects also raise costs through loan targeting. Dozens of individual agricultural credit lines and projects have been developed in many countries. Although the cost of funds lent may be low, total lending costs for institutions may be two or three times as high for loan-targeted programs because of the high administrative overheads required (Cuevas and Graham (1984a)). The interest spreads authorized may be far below costs, thereby discouraging lender participation. Lenders reduce lending costs and ration loans by transferring part of their transactions costs to borrowers. Borrowing costs tend to be highest for small loans, poor borrowers, borrowers of targeted loan programs, and first-time borrowers of an institution, which encourages informal borrowing (Cuevas and Graham (1984b)). Some institutions lack the motivation and means to reduce transactions costs (Bhatt), but spend much effort to avoid regulations that work against market forces (Kane).

29. Low loan repayment rates also drain institutional viability (Boakye-Dankwa; World Bank). The situation is even worse than the reported data imply because new loans are made to refinance old unpaid loans. Borrower inability and unwillingness to repay have been identified as major problems, but poor collection procedures may be more important in some institutions (Maharjan, Loohawenchit, and Meyer). The disastrous consequences of low loan recovery have been analyzed (Von Pischke (1981)). Funds are unavailable for recycling, collection costs rise, staff may become demoralized, respect for contracts declines, and institutions become vulnerable to political interference over who receives and who repays loans. Defaulting borrowers may be denied future access to financial services so their loans become one-shot income transfers, rather than the first step in developing a long-term relationship with a financial institution.

30. Finally, inflation destroys institutions because inflation rates are often high and variable while administered interest rates on loans and deposits are low and inflexible. Real deposit rates are often negative and, all too frequently, so are lending rates. Because of high operating costs, delinquency rates and inflation, institutional viability usually requires lending rates in excess of twenty percent, but many governments find that charging such rates is inconsistent with their cheap credit objectives.

31. Critics of traditional RFM projects argue that a fundamental reorientation must occur with emphasis placed on rural deposit mobilization. By pushing credit to farmers at cheap rates and supplying funds for on-lending, governments and donors create conditions that destroy institutional viability, discourage deposit mobilization and deny rural savers opportunities for financial savings. The ability of RFMs to expand is dependent on government funds, and this is an important reason why governments have eagerly embraced donor RFM projects. Deposit mobilization must expand if LICs are to break their dependence on foreign savings and if RFMs are to perform more effectively.

## IV. RURAL DEPOSIT MOBILIZATION

32. Deposit mobilization is fairly well developed in the urban areas of most LICs. The real growth potential is in rural areas, many of which are either unbanked or lack attractive financial instruments. A strategy is needed that recognizes the potential for expanded rural deposit mobilization and that develops institutions and instruments to effectively tap it.

33. The paradox in many LICs is that although it is common wisdom that agriculture must provide resources for other sectors during the early stages of development, few countries aggressively attempt to mobilize rural deposits. Five points must be emphasized regarding rural savings potential. First, all households save no matter how poor, even if in small amounts for short periods of time. Abstention from consumption is normal and necessary for survival even if the interval before consumption is fairly short (Von Pischke (1983)). Second, farmers save automatically. When production and consumption cycles are not synchronized, farmers regularly store some produce for consumption until the next harvest. Alternatively, they may choose to sell their harvest, pay past debts or expand consumption, and borrow before the next harvest (Bouman). Third, rural households are heterogeneous. Rich households exist alongside poor ones; some households experience surpluses while others face deficits, and the possibility exists for financial intermediaries to mobilize short and long-term deposits. Fourth, while some rural areas are growing at slow rates and barely keep up with population growth, other areas are experiencing rapid changes in enterprises and technology. Rapid income growth due to technological change can increase rural consumption, savings and investment (Mellor). Indian data show that savings/investment ratios in better-irrigated, more rapidly innovating regions were much better, up to 3 to 15 times the all-Indian average (Krishna and Raychaudhuri; Singh, Gupta and Singh). Fifth, foreign remittances offer new savings potential for several countries. Many offshore workers come from rural areas and show a propensity for low consumption levels and large scale transfers of liquidity to their country of origin (Gourvez). Some countries have been fairly successful at mobilizing these remittances, but much remains to be done. A recent study in Pakistan showed that much of the U.S. $ 2 billion received in annual remittances went to rural areas, but only 1.5 percent were channelled into financial assets (Jetha, Akhtar and Rao).

34. Analysts have identified a long list of determinants for household savings behavior (Dell'Amore; Ligeti; Mottura; Von Pischke (1983)). There is often conceptual confusion over the distinction between savings, defined as abstinence from consumption, and financial assets, which represent one form of holding a stock of savings. The decision to hold financial assets may or may not affect aggregate savings. Recent research makes a careful distinction between aggregate savings and financial assets, and tests the substitutability among forms of savings (Fry (1984); Gupta). Relatively more research has been done on the factors that affect aggregate savings than on the determinants of financial assets. Due to obvious differences among households and nations, the crucial factors in one case may be quite different than in another.

35. Political and economic stability are important for any economic activity. The threat of revolution, unrest, expropriation, and disruptions in production raise the risk premium on capital and encourage private capital flight and investment in unproductive assets such as gold (Dell'Amore (1977); Wachtel). Inflation and economic stability in the relation between domestic and foreign currencies affect the choice of currency held, while instability places a high risk premium on the required return to savings. Unfortunately, political and economic stability are difficult to achieve and have been illusive in many LICs.

36. The degree of monetization is an important factor affecting rural deposit mobilization (Chandavarkar (1977)). Both subsistence and barter are declining in many rural economies, but poor markets, high inflation, and political and economic uncertainty encourage rural households to hold excess crops, livestock and other physical assets. Even as monetization expands, households may prefer to hold currency or convert it into physical assets, rather than entrust financial savings to an institution, so monetization is not a sufficient condition for financial intermediation.

37. There is considerable debate over the influence of interest rates on savings. An increase in interest rates may stimulate savings by making current consumption expensive in terms of future consumption (substitution effect), or may lower savings by reducing the amount of present savings necessary for a given level of future consumption (income effect). The available evidence, based largely on Asian and Latin American experience, suggest the substitution effect is more important, but not overwhelmingly so (Lanyi and Saracoglu). The important issue for financial intermediation in LICs is the relationship between rates of interest paid on deposits and savings in financial forms. Advocates for higher rates argue that peasants are economically rational in their financial affairs, and even poor households need and benefit from attractive deposit and savings services. They feel that countries (such as Taiwan and South Korea) have mobilized surprisingly large amounts of rural savings when deposit rates were changed substantially, while rural savings have been depressed in other countries because real deposit rates have been highly negative due to high inflation rates (Adams (1984c); Bemoit (1984a); Mittendorf (1984)). Additional evidence on rural deposit potential is found in rehabilitation projects for rural savings institutions that successfully mobilized large amounts of deposits when interest rates were raised and other incentives were given to savers (Gonzalez-Vega (1984c); Poyo; Vogel (1984a)). Fry (1984) and Gupta found that financial deposits responded more to real interest rates than did national savings due to the substitution of financial investments for other investments. It appears, therefore, that deposit rates are directly more important for financial intermediation than they are for aggregate savings.

38. Transactions costs are important because they influence the net return obtained from any given interest rate. These costs for rural savers include the explicit costs of photographs, passbooks, travel costs, and other cash costs of depositing and withdrawing savings. Implicit costs include traveling and waiting time to make transactions. Few empirical studies are available, but it is expected that high transaction costs discourage savers, particularly those with small accounts. Besides explicit regulations on minimum size deposits, it is argued that lenders impose transactions costs to discourage small accounts.

39. The proximity of deposit-taking institutions may be the most important factor affecting access and transactions costs of financial services. Strong incentives have been given by some LIC governments to expand bank branches into rural areas (Kwarteng; Meyer and Esguerra). Progress has been uneven, however, so additional branch expansion is frequently recommended (FAO (1984b, 1981a); NENARACA)). Strong incentives for branching have sometimes led to uneconomic operations and uneven distribution with too many branches in some regions and too few in others. More effort is required to design methods which bring cost-effective financial services closer to rural households.

40. A final important factor expected to affect rural deposits is the linkage between savings and lending. Many analysts believe that an important reason for rural household saving is the possibility of eventually getting a lona. This implies that institutions should link savings mobilization with lending, but in practice many rural financial institutions are single function. Savings mobilization activities were expanded in Africa during the 1970s through the creation of new savings institutions and transformation of post office savings banks into savings and credit banks. Achievements were made in tapping the vast savings potential, but progress has lagged in the development of lending activities (Mauri). On the other hand, few specialized lending institutions in many LICs mobilize significant amounts of rural deposits. Specialization in only one side of financial intermediation appears to be inappropriate for two reasons; one is that the motivation for savings is destroyed when the link is broken between savings and loans, and the second is because of operational efficiency, which will be discussed in the next section.

## V. RURAL SAVINGS AND INSTITUTIONAL VIABILITY

41. Mobilization of rural savings can be expensive. Encouraging institutions to mobilize more rural deposits would seem to exacerbate their already serious financial problems, making them even more unviable. Although mobilizing more rural deposits could increase institutional costs, there are reasons to expect that costs will actually decline. Another important contribution to institutional viability may occur because increased rural savings could improve loan repayment.

### Institutional Costs

42. Growth in the share of deposits relative to other sources of funds would seem to increase an institution's average cost of funds. First, the liabilities of many institutions operating in rural areas are mainly composed of subsidized or "cheap" sources of funds. These funds are available through direct capital investments, special rediscount provisions, targeted lines of credit, and obligatory deposits of commercial banks that fail to meet lending quotas. Specialized lending institutions, in particular, rely on these sources (Bourne and Graham). Second, creating an extensive rural branch network to mobilize deposits appears to be expensive. Even if rural savings are more plentiful than normally assumed, the operational costs of regular rural bank branches might be excessive.

43. Recent research suggests that "cheap" funds are more expensive than they appear, and deposits may not be as expensive as feared for institutions that engage in both deposit mobilization and lending. It is frequently assumed that specialization in economic activities leads to increased efficiency in resource use, but there appear to be important qualifications to this rule for financial institutions. The cost-complementarities that financial intermediaries can attain through the provision of multiple services suggest that economies of scope may be more important than economies of scale. It appears cheaper for multifunction firms to provide intermediation services in combination than to provide them in separate specialized single-function intermediaries (Kane). An empirical test of this proposition was conducted in Honduras by comparing the cost structure of a commercial bank with the Agricultural Development Bank (ADB) (Cuevas). The results showed that the ADB would most efficiently expand by mobilizing mroe deposits, while the commerical bank would most efficiently expand by increasing agricultural lending. Lending costs were less than 3 percent for the commercial bank, but more than 8 percent for the ADB. Part of this difference was due to larger average size loans in the commercial bank and part was due to source of funds. The ADB mobilized only about 40 percent of its funds compared to over 90 percent for the commercial bank. The ADB operation was more centralized and expensive because of the reporting requirements for special credit lines and external funds. An analysis of commercial bank branches showed that even though the size of loans was much higher, lending costs for donor-funded loans were almost 8 percent compared to a range of 1 to 6 percent for loans made with the bank's own funds. Increasing mobilized funds and reducing donor programs is very cost-effective in this type of situation (Cuevas and Graham (1984a)).

44. Screening loan applicants is one of the important functions that increases the cost of lending. In Honduras this function was important for both institutions, especially so for the commercial bank. The ADB spent proportionately more on loan monitoring and supervision in an attempt to channel loans to targeted purposes (Graham and Cuevas). Institutions that both mobilize deposits and make loans have important advantages in loan screening because they frequently have additional information about the loan applicant. The institutions may be familiar with the applicant's cash flow, savings habits and

wealth, which contributes to better lending decisions. Furthermore, during the life of the loan, changes in a borrower's deposits and savings can serve as an early warning about potential future loan repayment problems.

45. A final factor that can influence costs and returns of financial institutions is their ability to develop local loan programs. When an institution limits its lending to targeted programs, it must follow regulations on authorized sizes and types of loans, amount to lend each borrower, disbursement and repayment schedules, and collateral requirements. For some borrowers, these regulations are too liberal for sound banking procedures. On the other hand, some applicants with good debt repayment capacity and proven repayment records are denied loans because their projects are not of the authorized type. When lenders mobilize their own resources, they can develop loan programs that simultaneously conform closer to their lending standards and supply the needs of local farmers and communities.

Loan Recovery

46. For many institutons, loan recovery is the most serious threat to viability. Administrative costs may be reduced through effective management, but an institution will still fail if it loses 20 to 30 percent of its assets each year through loan default. It is impossible to pass losses of this magnitude on to repaying borrowers through higher interest rates. Furthermore if delinquency and default reach visible enough proportions, the demonstrations effect on other borrowers can result in no one repaying on time. This problem is underestimated by analysts who argue that most loans are eventually repaid. Such logic obscures the fact that, first, slow repayment and non-repayment reduce an institution's ability to recycle funds to other worthy borrowers and, second, loan collection activities raise administrative costs and the spread required between deposit and lending rates.

47. Increased deposit mobilization could improve loan recovery for two reasons. The first reason is the psychological factor associated with the willingness of borrowers to repay. When funds are provided by the government, they frequently become identified with gifts or grants, and borrowers assume they need not be repaid or that few effective sanctions will be imposed for nonrepayment. If loan funds are drawn from savings made by members of the community, the willingness of borrowers to repay is often dramatically increased. The use if local savings, thus, promotes borrower responsibility (Deguefe).

48. The second reason is that attitudes of lenders towards loan recovery are also likely to change when the source of funds changes. Specialized credit institutions often consider loan recovery of lesser importance than lending. They spend relatively less effort on loan collection because incentives are greater for meeting lending targets (Graham and Cuevas; Nyanin). When lenders assume farmers won't repay and take little action to collect, borrowers confirm their assumptions by not repaying. The records are so disorganized in some institutions that no one really knows who owes how much and when it was due. Yet, a study in Nepal showed that collection efforts were more imporant in explaining loan repayment than farm income and other variables (Maharjan, Loohawenchit, and Meyer). Lenders will become more concerned about collections and accountability when a) deposits are a large source of funds, b) lending volume depends on recovery of past loans, c) incentive are given for mobilizing deposits, and d) the safety of savers' deposits requires closer scrutiny of lending activities and institutional operations.

49. Political intrusion in lending is hard to avoid because of the benefits that borrowers obtain from additional liquidity. The opportunity for political

interference increases in subsidized credit programs because low interest rates cause an excess demand for loans, (Gonzalez-Vega (1984a)). The greater the subsidy, the more valuable the loan is to borrowers, and the greater the temptation to use influence, bribery and other means to gain a loan. Political influence can be exerted at the highest levels due to the centralization of decision-making that frequently exists for large loans in specialized credit institutions. It can also occur at the local level when advisory committees determine eligibility for loans. When loans are made from deposits mobilized locally, the potential for political intrusion declines because lenders can more easily allocate loans solely on the rate-of-return of a project, and debt repayment capacity and integrity of the borrower. Bribery and corruption should also decline when lenders must become more aggressive in seeking borrowers for the expanded funds available to lend from mobilized resources. Borrowers may feel little need to repay loans "bought" through bribes so as corruption declines, loan recovery should also improve.

## VI. INTERSECTORAL FLOW OF FUNDS

50. Increased deposit mobilization will raise the question of what to do with the funds. There is great concern in many LICs about the uses of mobilized funds, and many rules and regulations are designed to prevent financial institutions from "siphoning off" rural funds and channelling them into urban areas or even into other rural areas. There is a great deal of muddled thinking and poor analysis regarding the factors for and the impact of the intersectoral flow of funds.

51. One of the most fundamental economic generalizations concerns the relative decline of agriculture which occurs as incomes rise. In the early stages of development, agriculture represents the largest sector and is the only significant source of resources available for the development of other sectors. This fact leads governments to extract resources from agriculture. The problem is that the agricultural sector also needs resources at crucial periods in its development for investment in research and extension systems, rural social infrastructure, and marketing and supply networks. If these resources are too scarce, agricultural productivity will lag and reduce the rural surplus available for nonfarm development. Empirical studies of the magnitude and direction of resource flows in several countries show periods of investment in agriculture occurring simultaneously with the extracton of resources for non-agricultural purposes (Mellor; Sideri).

52. Several aspects about the role of financial institutions in intersectoral resource transfers need to be clearly understood. First, the total transfer of resources must be evaluated, not just those that flow through financial institutions. Financial institutions often just implement the decisions of households and firms to transfer resources so the reasons for these decisions must be analyzed (Chandavarkar (1981)). Second, even within the financial system, the direction of net flows is not straightforward. Rural entrepreneurs may hold their deposits in rural branches while borrowing from urban branches. Third, both the supply and demand conditions for rural loans must be evaluated if rural institutions lend less than is socially desirable. Fourth, the existence of a reliable rural lending institution can provide a credit reserve that encourages farmers to commit more of their own resources for investment and use their borrowing capacity to meet emergencies (Baker and Bhargava1). The impact of financial institutions on rural investment may, therefore, be greater than their reported loans. Fifth, a financial institution has the obligation to generate high and safe returns for depositors. If institutions fail to do so, they will lose the confidence of their customers. Quotas, targeted-lending programs and other policies that attempt to hold resources in rural areas may jeopardize depositors by increasing the risks and decreasing the returns to financial institutions.

53. Far too much emphasis has been placed on forcing or enticing institutions to lend, and far too little concern has been given to demand for loans. Expanded rural savings mobilization will not only provide important savings benefits to rural people, but will also increase the demand for loans for several reasons. The first reason is that loan demand will likely rise with improved linkages between savings and borrowing because some households will increase savings, believing that at a later date they will be eligible for a loan (Causs). Some of these households will gain the confidence of institutions through saving and will be granted loans. Secondly, rural people will develop confidence in the dependability of an institution that serves their long-term financial needs by offering a secure place for deposits and making loans. Specialized lending institutions in may LICs are very undependable because of the wide swings they suffer in availability of funds (Bourne and Graham). Third, the potential exists for expanding loan demand by reducing borrowing costs. The structure of administered interest rates must be changed and with greater rate flexibility, lenders have more scope for reducing borrowing costs. A Honduras study found that interest rates and borrower transaction costs were negatively related, suggesting that lenders absorb more administrative costs and simplify procedures when interest rates are higher (Cuevas and Graham (1984b)). This result was particularly significant for small loans. When lenders reduce borrowing costs, farmers are encouraged to borrow more from formal sources.

54. Long-term farm profitability is frequently ignored in the analyses of the demand for farm loans and the willingness of lenders to lend to agriculture. Many LICs have cheap food policies that undervalue agricultural products in order to promote industrialization. Input subsidies, public investments in research, extension and irrigation and cheap credit are means to offset the adverse effects of such policies. The penalization of agriculture is not fully compensated, however, because the subsidies are usually relatively small and only a few farmers benefit from them, but all farmers suffer from low prices (David; Ray). Cheap credit cannot compensate for price and technology problems that result in low factor productivity (Pollard and Heffernan). The diversion and substitution of loan funds in targeted programs is likely to be high when sanctioned loan purposes produce low returns compared to other farm and nonfarm activities (Graham and Pollard). Frequent changes in agricultural pricing and subsidy policies have discouraged farm investments by increasing farmer uncertainty about future profits. Successful rural savings programs have been linked to well-defined agricultural technical packages which use the largest part of the savings (Mittendorf (1984)). Funds are invested in rural areas when investors feel there are good potential investments, but flow out when the returns on investments are higher elsewhere.

55. Policy makers can do several things to ensure that rural deposits stay in rural areas. They can increase the rate of return for agricultural investments through changes in price policies, agricultural technology and markets. They can introduce more stable policies to decrease risks and uncertainties faced by farmers. These changes will have more long-term impact on farmer demand for loans and lender willingness to lend than further efforts to push the supply of loans. They can also give lenders more flexibility and incentives to make innovations and create loan programs to meet local needs. For example, the distinction between production and consumption loans must be reevaluated. Large farmers are permitted to borrow to cover production costs, including labor payments that are spent by workers for family consumption. Small farmers, however, are not permitted to borrow for family consumption that represents their labor costs. Many countries restrict lending to only sanctioned crop and livestock activities, while nonfarm enterprises are often ineligible even though they provide much employment and income. Rural nonfarm firms, such as processing firms and input suppliers, are also often excluded from loans to finance working capital and investment needs (Meyer; Kilby, Liedholm and Meyer). Lenders must be encouraged to make loans based on debt repayment capacity and borrower integrity, and move away from fixed standards for sanctioned production

and consumption activities. This will require supportive government policies and decentralization in the design of lending programs and the granting of individual loans.

## VII. IMPLEMENTING FINANCIAL REFORMS

56. Mobilizing rural savings will help reduce depedence on foreign assistance and will improve performance of RFMs in LICs. Comprehensive changes must be made in rural financial institutions and in government policies and programs to facilitate rural deposit mobilization. International agencies can play an important supportive role, but they will need to alter their approach to rural finance. Recent projects to strengthen rural deposit mobilization and broaden financial institutions in Jamaica, Peru, Honduras, the Dominican Republic and Bangladesh suggest the following factors are important for success (Gonzalez-Vega (1984c); Graham and Connally; Poyo; Vogel (1984a)).

### Government Policies and Programs

57. Governments must first shift priorities from pushing cheap credit for farmers to building viable financial systems. They can then begin to design ways to improve deposit mobilization. A revision in rural interest rate policies will be a necessary step in many LICs because interest rates for deposits frequently must be increased to mobilize more savings. Interest rates on farm loans will also have to be raised to permit an increase in interest spreads so institutions can cover costs. Flexibility in interest rates is required to adjust for variability in inflation. The rate structure and the extent to which markets are permitted to determine rates will vary from country to country. "Optimum" rates are difficult to determine, but policymakers should at least evaluate the structure of nominal interest rates compared to real interest rates, world interest rates, rates of return on investments, the spread between savings and lending rates, and interest rates in informal credit markets (Pereira Leite). Maintaining rates that are normally positive in real terms will be a minimum standard for most LICs. Alternatives to interest rates must be provided in countries where religious beliefs discourage explicit payment of interest.

58. Governments need a strong institutional framework for stimulating and monitoring the financial sector. Many institutional arrangements are possible, but the central bank is often the key regulatory agency. Some LICs need to create a central monetary authority, while others should strengthen their existing central bank. Instead of emphasizing rural credit supplies (FAO (1981a)), the primary role of the central bank should be to oversee the development of viable rural financial institutions. Several technical issues must be resolved, and the central bank is the logical government agency to provide leadership for the following tasks.

A. Develop an appropriate mix of rural financial institutions.

It is unlikely that a single type of rural financial institution will be optimal for all LICs. Each country must develop a mix of institutions consistent with its particular needs with emphasis on two criteria for institutional development. First, multifunctional institutions that link savings and credit activities should be expanded. This involves strengthening the lending activities of specialized savings institutions and the savings mobilization activities of specialized lenders. Second, a range of institutional forms must be provided to meet the needs of specific rural markets. A full-service bank branch may be appropriate for semi-urban areas, while a simple institution may be sufficient for smaller isolated areas. Links between formal and informal institutions should be explored. some institutions may be encouraged to retail financial services in unbanked areas but offer only wholesale services where other local retailers are operating efficiently. Incentives should be given to institutions for testing the efficiency of alternative forms of financial services in rural areas.

B. Foster and regulate competition.

Expanding multifunctional rural financial institutions opens up possibilities for increased competition and efficiency in the provision of financial services through a broader scope of operations. A trade-off exists between competition and economies of scale (Khatkhate and Riechel). Restricting competition may permit a few institutions to achieve economies of scale, but may also encourage monopoly powers that prevent desired reductions in prices of financial services. Competition may be encouraged at the national level but controlled in specific rural areas due to small market size. Central Bank rules that authorize the creation of new financial institutions, sanction specific services and regulate branching must be applied with caution because of their impact on competition and economies of scale and scope.

C. Assist with liquidity and risk management.

Risks for institutions may decline when they increase their scope of financial services, but there are also ways in which liquidity and risk management problems will increase. Specialized lending institutions, dependent upon reliable government or donor funds, may find that deposits are more volatile and difficult to manage as a substitute source of funds. Specialized savings institutions may find that the risk of their asset portfolios increases with agricultural lending. Even though lenders broaden the range of activities funded in rural areas, loan portfolios composed only of loans for farm related enterprises may represent more risk than those diversified across several economic sectors. The central bank must explore methods that help institutions to manage risk and liquidity problems such as interbank lending agreements, occasional rediscounting facilities, and loan guarantee and insurance programs. Reserve requirements must be flexible and adjusted in response to changes in liquidity positions. Rules on debt to equity requirements for rural institutions must be stringent enough to encourage capitalization for possible loan losses, yet liberal enough so institutions can increase income through greater leverage.

D. Create and supervise management information systems.

Many institutions have record-keeping systems that primarily produce reports required for government agencies or donors. These reports typically require information on loan disbursements by type, size, enterprise funded and size and type of borrower. This information clogs information channels and provides little useful data for managers on income, expenses, cost of funds and quality of portfolio. Likewise, central banks emphasize global measures such as deposits mobilized and loans made but rarely collect and analyze data that evaluate institutional viability. Management information systems must be totally restructured by stripping away nonessential information on loan targeting and concentrating on data collection to monitor the financial health of institutions (Graham and Firestine). The introduction of micro-computer hardware and software systems could greatly facilitate data management and analysis within the central bank and individual institutions. Careful audit and inspection functions must be performed by the central bank to maintain customer confidence in financial institutions.

E. Create a research and analytical capability.

Development of viable RFMs requires research and analysis of rural households and firms, financial institutions and national monetary and credit issues. Institutions must be developed and strengthened to undertake this research. Research will be needed in many LICs on topics such as: inflation projections for interest rate analysis, market studies to identify consumer preferences regarding financial instruments, design and evaluation of savings campaigns, scope and magnitude of potential financial services for specific rural market areas, incentives for improved institutional efficiency and demand factors that influence the allocation of credit. This broad range of issues requires researchers within the central bank and financial institutions, and private and public research institutions. The creation of TBAC (Technical Board for Agricultural Credit) in the Philippines a few years ago is an interesting innovation that greatly increased that country's ability to analyze rural finance. The central bank must develop capacity to conduct research on issues for which it is best qualified and should suggest where and how research on related issues is institutionalized. The central bank should also identify key topics for study as the financial sector undergoes change and growth.

F. Design and conduct training and technical assistance programs.

Personnel problems of financial institutions have led to research on training requirements and the content of training courses (Roberts). Manpower constraints will become even more serious when single function institutions broaden their scope of financial services. New skills will be necessary when savings institutions require expertise for lending activities, and lending institutions need personnel trained in deposit procedures. Loan officers must learn to evaluate loan applications based on creditworthiness rather than merely following regulations for targeting enterprises. Demands on managers will increase when financial viability becomes an important evaluation criterion. Managers will need to design loan programs and develop criteria for creditworthiness instead of simply following instructions issued for lending programs. Productivity measures will be needed to measures costs of operations, profits or surplus per unit/branch, transactions costs and margins required to cover costs. Decisions will be required on which branches to expand, the rate to expand new services, the minimum size of market area for opening a new unit/branch and new innovations for lending and deposit mobilization. The central bank can design some of these concepts, suggest standards, develop courses and materials for staff training and arrange technical assistance to transfer ideas used successfully elsewhere.

59. Governments undertaking financial reforms will find that at least two issues in addition to bank operations will affect success. The first concerns policies and programs that affect the magnitude and variability of farm profits and farmers' debt repayment capacity (Von Pischke (1984)). Demand for loans, loan recovery and the financial strength of rural financial institutions are directly related to incomes of farm households. Steps have been taken in some LICs to change policies that undervalue agricultural products, but more are required. Additional long-term investments must be made in research and extension to improve agricultural technology. Irrigation, price and marketing policies, crop guarantee and insurance programs and other measures are needed to combat production and income variability. The second issue concerns use of mobilized funds. The expanded pool of rural deposits will provide greater opportunities for rural and urban investors to successfully compete for loans. Private investors will be crowded out of the financial markets, however, if governments choose to appropriate these deposits by raising mandatory reserve requirements, by increasing targets for nonagricultural loans or setting high interest rates for government securities. If this happens, the positive impact of deposit mobilization will be limited to improved income for rural savers but with little improvement in the magnitude of private investment.

A Different Role for International Agencies

60. International agencies can play an important supportive role in rural financial reforms, but their priority should be to support governments trying seriously to create viable rural financial institutions. There will be limited scope for traditional large scale transfers of funds for on-lending through RFM and other projects. Such transfers, in fact, diminish or destroy the incentives needed for reform. If a transfer of funds to agriculture is desired for foreign exchange purposes, the funds should be directed towards easing adjustment problems in countries undertaking financial reforms or towards investments in agricultural research, extension, education, markets or other infrastructure. Important small to medium scale projects can be developed to strengthen central banks and other financial institutions, to subsidize start-up costs for institutions broadening their financial services, to develop research capacity and to fund experiments to test financial innovations. Foreign exchange may be useful for technical assistance to transfer technology and procedures from successful institutions in other countries, and for programs to develop and operate regional training and research centers. Selected expenditures for foreign manufactured equipment and supplies may be important for new information systems. An active program is needed to facilitate the international exchange of ideas and lessons learned from financial reform programs.

Monitoring Performance

61. Programs to reform and broaden RFMs require monitoring to determine how much progress is being made, what bottlenecks or constraints are developing and what changes in policies are needed. Monitoring requires, first, the selection of a set of monitoring criteria and, second, the collection and analysis of appropriate data. The primary criterion for evaluation of many credit projects in their early stages of implementation is the amount of funds lent. Later, when loan collection problems begin to develop, the criterion of loan recovery is added. After a project is completed, ex post evaluations frequently try to measure loan impact on borrowers. The emphasis is largely on the borrower at all three stages, rather than on the financial health of the institution. Five criteria are proposed for use in monitoring performance. 4/.

A. Access.

Financial institutions are intended to provide services to customers so an important logical evaluation criterion is the number of people with regular access to these services. In rural areas, this criterion implies monitoring the number of persons who regularly use deposit accounts and receive loans. The geographic spread of persons with access to financial institutions and their income and wealth characteristics will be important to measure. An approximation of trends in access can be obtained by periodically constructing a profile of the users drawn from a sample of rural savings and loan accounts. When financial services become more complex and rural households use more than one institution, an occasional field survey of households may be needed to determine the number and characteristics of people who do not use any financial institutions.

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4/ This section draws on a recent paper by Adams (1985) in which four variables are proposed for use in monitoring programs with an emphasis on lender viability: a) number of people with regular access to financial services, b) transactions costs, c) quality of services provided and d) savings mobilization.

B. Savings mobilization

The second performance criteria is savings mobilization and, it should be considered in several dimensions. The aggregate amount of deposit and savings accounts in rural areas is important because it influences the supply of funds available for lending. Trends in deposits of individual institutions may reflect success in employing different methods in savings mobilization. Measuring trends in total deposits in a given market will show the extent to which competition for savings results in disintermediation among institutions rather than an increase in aggregate savings.

C. Loan recovery.

Loan repayment is indicative of the value borrowers place on maintaining long-term relationships with an institution. Borrowers who value the relationship and desire future loans will make every effort to keep existing loans current and will work closely with lenders to resolve delinquencies. High arrears rates may reflect unusual production and marketing problems, but may also reflect poor quality of loan services and high borrower transactions costs for new loans. Therefore, monitoring loan recovery and the time structure of delinquencies is a useful proxy for quality of service. Loan recovery data also are important because of the impact of delinquency on institutional viability.

D. Efficiency.

The fourth criteria is efficiency because the human and physical resources used in financial intermediation have alternative economic uses. For management decisions, efficiency measures are needed within an institution, such as number of deposit or loan accounts per bank officer and profits or surplus per unit of savings mobilized, or loans made. The long-term objective of financial intermediation is to increase the real rate of interest paid on deposits and decrease the real cost of loans. Transactions costs influence the net return received by savers and the total cost of borrowing, so they are important efficiency measures to monitor. Transactions costs borne by the institution determine the minimum spread required to cover its costs. It is useful to monitor transactions costs of both institutions and their customers because a decrease in one may be offset by an increase in the other. Differences in transactions costs among institutions may suggest ways for high cost institutions to reduce costs.

E. Institutional viability.

The final criterion refers to an institution's ability to maintain self-sustaining growth. This measure is affected by performance in the other four criteria. An institution that provides access to a large number of users, mobilizes a large share of the resources it lends, has a high recovery rate on loans, and is efficient will likely achieve long-term growth and stability. Profits or surplus are traditional measures of viability, but other valuable indices are the amount of government subsidies received and the minimum spread between cost of funds and loan rates required to cover costs and lending risks. Measures of an institution's ability to withstand adversity are also useful to monitor such as debt to equity ratio and reserve for bad debts.

62. The interrelationships among these criteria must be monitored in addition to the individual items. Improvement in one criterion may come at the expense of another. For example, an institution may reduce its costs by concentrating its loan portfolio in a few loans to large farmers. Conversely, an institution can expand its services to many new small farmers, but may fail to cover costs given the structure of administered interest rates within which it must operate. Policymakers need information on all five criteria and their interrelationships to make correct policies.

## VIII. CONCLUDING COMMENTS

63. LICs face two interrelated challenges. One is to increase the national saving rate and the second is to improve the performance of their RFMs. This paper has argued that an important contribution to both will be made by mobilizing more rural savings. This task is not expected to be easy; it will be tough, challenging and long term. A first step must be to drop the priority to channel cheap credit to farmers and concentrate instead on creating viable rural financial institutions that mobilize a large share of funds for lending. By shifting priorities, it will be easier for policymakers to make difficult choices, including changes in interest rate structure. Several technical issues will arise as institutions are transformed from providing the single function of savings or lending to offer broad multifunction services to rural people. These challenges will require harnessing the talents of local officials, principally in the central bank, and international agencies. The benefits derived from successfully meeting these challenges will be improved rural financial intermediation, long-term self reliance and greater independence for each country to chart its own destiny.

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