

Funding and Viability of
Rural Development Banks

by

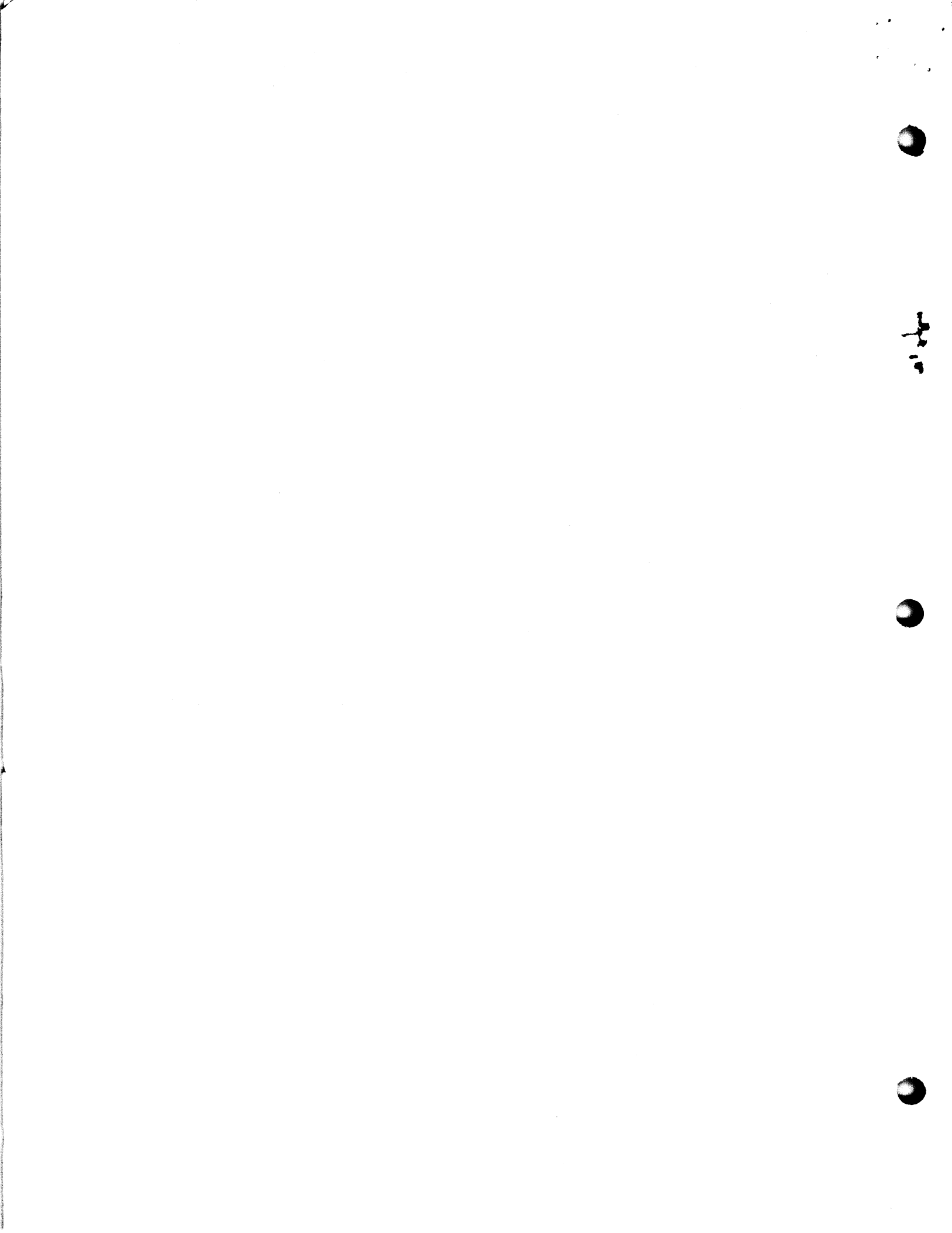
Compton Bourne* and
Douglas H. Graham**

April, 1980

* Senior Research Fellow, Institute of Social and Economic Research, University of the West Indies (Jamaica), and Visiting Associate Professor of Agricultural Economics, The Ohio State University.

** Professor of Agricultural Economics, The Ohio State University.

Agricultural Finance Program
Department of Agricultural Economics and Rural Sociology
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210



FUNDING AND VIABILITY OF RURAL DEVELOPMENT BANKS¹

INTRODUCTION

Governments of many less developed countries have established rural financial agencies as important instruments for rapid agricultural development. In this paper, we examine some "funding problems" experienced by these rural development banks.² We argue that the credit operations and long run viability of rural development banks are affected by the sources of loanable funds. The basic funding problem confronting these institutions is to secure that volume and composition of loanable funds consistent with efficient credit operations and sustained growth of the financial institutions.

This aspect of rural financial institution behaviour has been neglected by researchers. The rural finance literature, surveyed by Adams (1977), Lele (1974), and Lipton (1976), has devoted a great deal of attention to problems of credit disbursement, pricing, and loan recovery. A consensus has emerged that distributional equity is not achieved by concessionally priced credit programs, that allocative inefficiencies result from interest rate subsidies, and that the financial viability of credit institutions is undermined by low nominal loan rates of interest, high lending costs, and by high rates of default, particularly among large farm borrowers. These conclusions have been derived from analyses of the assets of credit institutions.

It is doubtful, however, that the performance of rural credit institutions and their viability can be divorced from considerations of their funding. The study of the liabilities or the inflows can improve our understanding of the credit operations of rural development banks, as well as identify additional factors germane to the sustained growth of rural financial markets. Such an analysis is the subject matter of this paper which is divided into five sections. The first section describes the main sources of funding, while the second and third sections examine their short term implications. The fourth section discusses the timepaths of inflows of loanable funds, and posits their implications for longer run institutional growth. The fifth section examines three ways of optimizing funding arrangements.

Empirical reference is made to the Jamaican Development Bank, a governmental credit institution established in 1969, largely at the initiative of the World Bank, for the purpose of extending development loans. Since development banks in many countries have similar origins, funding patterns, and operational features, we suspect that more than a few of the conclusions derived here have wider applicability. However, comparative analyses are required before general conclusions can be drawn.³

Conventional Sources of Funds

Public sector rural development banks conventionally have two major sources of funds, namely foreign funds and domestic budgetary contributions. Foreign funds are occasionally grants,

TABLE 1

Major Sources of Funds for the Jamaica
Development Bank 1970-1977

	Sources J\$ Million	%
Foreign	43.4	23.6
Jamaica Government	96.5	52.4
Jamaica Government Agencies	6.6	3.6
Local Commercial Banks	11.1	6.0
Repayments	6.6	3.6
Miscellaneous*	19.9	10.8
TOTAL	184.1	100.0

Source: Compiled from sources and uses tables and balance sheet statements in annual reports of the Jamaica Development Bank.

*NOTE: Decrease in bank balances and cash balances comprised 19 percent in 1972 and 26 percent in 1973. Decrease in investment in subsidiaries comprised 16 percent in 1974. These sources account for the large percentage share of "miscellaneous" over the period.

but more usually loans by foreign governments and by multilateral agencies. The governments of the United States, Canada, the United Kingdom, and West Germany have made important contributions to the financing of agricultural development through the medium of rural development banks in low income countries. Multilateral development agencies, particularly the World Bank, and regional development banks such as the Inter-American Development Bank have made sizeable loans to public and private development finance institutions serving rural communities in developing countries.

Table 1 describes the composition of the total annual inflows of financial resources into the Jamaica Development Bank from 1970 to 1977. Foreign sources accounted for 24 percent of these flows. Three external agencies accounted for the bulk of these foreign funds. The Inter-American Development Bank was the major single foreign source providing some 40 percent of foreign financial resources, followed by the World Bank with 25 percent, and the Caribbean Development Bank with 20 percent.⁴ Jamaica Government loans and capital subscriptions accounted for 52 percent of total inflows. From 1974 onwards, most of these financial transfers were in the form of equity. Loans from local banks accounted for only six percent of total resource inflows.⁵ Repayments of loans by Jamaica Development Bank borrowers accounted for as little as four percent. It is evident, therefore, that for the period as a whole, external agencies and the Jamaican Government were the main sources from which the Jamaica Development Bank received its funds and that

employment. The rural credit agencies and their governments, generally incorporate these recommendations in their loan programs. This may be due to the fact that they share the developmental philosophy of donors or know they can circumvent the restrictions, and for other reasons such as their own limited knowledge and experience in agricultural development and financial planning, their anxiety to obtain funding, and their perception of little negotiating space. The identification of target groups emphasizing the adoption of modern technology frequently results in loan portfolios biased towards labor-displacing imported capital goods, and towards larger farmers.⁶ These biases negate the employment and equity objectives articulated by both local governments and donors.

Following President McNamara's address to the Annual Meeting of the World Bank in Nairobi in 1973, official funding sources have sought to directly tackle the equity problem by devising small farm credit programs and preferential schemes. Potential political gains from small farm programs give governments another reason for promoting these types of programs. In practice, concessionary interest rate policies combined with the high unit costs of small farmer loan programs cause development banks to favor large farmers. Sociopolitical realities of rural communities and bureaucratic inertia frequently reinforce this tendency (Lipton, Blair). However, the main point we wish to make is that the banks may be influenced by their funding agencies into servicing particular target groups which may not match their own loan management capabilities.

repayment inflows have been insignificant. The percentage contributions of the individual sources of financing varied over time. For all years, however, Jamaican Government contributions and foreign receipts were the largest elements.

Similarly detailed information is not available for the agricultural sector portfolio specifically. However, the data obtained from the Bank's Annual Reports reveal that foreign funds comprised between 35 percent and 67 percent of the total agricultural loan portfolio. The World Bank, the Inter-American Development Bank, and the Caribbean Development Bank have supported the agricultural loan portfolio.

IMPLICATIONS FOR LENDER BEHAVIOUR

The sources and terms of obtaining financial resources can have a strong influence on credit policies and operational efficiency of banks. Donors and governments often try to influence the behaviour of credit institutions in ways that can affect their viability. Funds obtained from private financial institutions also have behavioral implications for rural banks.

One important restriction is the specification of target groups and enterprises to be serviced by the banks. External funding agencies, while not generally stipulating the size and wealth characteristics of eligible farms, usually recommend types of enterprises that should receive favourable treatment. This kind of recommendation stems from their views about the catalytic roles of particular types of agricultural activity and about the suitability of these activities as instruments for technological progress, improved nutritional levels, and expanded rural

Another type of restriction concerns short period production loans. It has not been unusual for external donors to prohibit the financing of working capital requirements out of project funds. For instance, the Inter-American Development Bank and the World Bank contracts with the Jamaica Development Bank contain such provisions. Underlying this kind of stipulation may be the belief that investment capital requirements should be accorded priority, that the private financial system can or should satisfy demands for working capital loans, or that the credit agency should fund its working capital loans from other sources. There are signs that the position of external creditors on working capital loans has become less rigid, as the following excerpt makes clear:

"In the initial stages of the transition to a more productive agriculture, access to short-term credit for purchasing fertilizer, improved seeds, pesticides, etc., is often of greater importance for small farmers than long-term credit. Accordingly, in the credit programs for small farmers, emphasis will be placed on short-term seasonal credit in the context of overall on-farm development planning. World Bank lending could provide a permanent working capital fund for this purpose which is rolled over and reused from year to year. As the Bank loan or IDA credit is repaid, domestic sources of credit and capital can gradually replace external funds."

(World Bank, p. 19).

Following upon Adam's work (1971), the influence of governmental agencies and of external donors on interest rate policies has been more widely recognized. Recent events in Jamaica give support to findings in other countries. The Jamaican government, and foreign agencies provide funds at

concessionary rates of interest and require the Jamaica Development Bank to onlend at concessional nominal loan rates which in real terms are either substantially negative, or close to zero when positive. Concessionary interest rate policies result in high loan administration costs and a bias towards large farmers. This worsens income distribution and undermines institutional viability. There is no doubt that external donors are aware of the limitations of concessionary rates of interest for the financial sector, the rural economy, and for general economic development. The World Bank (1975, pp. 12-13) has discussed factors such as resource misallocation, wealth gains by larger farmers, losses incurred by lenders, and political corruption and abuse. At the same time, local governments perceive certain advantages in concessionary loan rates, using them to partially correct for the adverse terms of trade between agriculture and the rest of the economy, as hidden subsidies, and as convenient means of political patronage and manipulation. Consequently, while piecemeal and gradual interest rate reform is occurring in a few countries, progress towards interest rate politics that reflect the scarcity value of capital and the costs of funds is likely to be slow.

Restrictions on lender behaviour are also associated with the foreign currency debts incurred by rural banks in their acquisition of foreign funds for onlending locally. The banks are usually required to repay their foreign debts in the currencies in which the debts are denominated. Since devaluation of the

local currency will automatically increase the local currency value of debts denominated in foreign currency, foreign exchange risks are associated with the foreign currency debts of rural banks. Local governments sometimes assume these foreign exchange risks. However, it is not uncommon for external donors to stipulate that the sub-borrowers (i.e., rural bank customers) bear the foreign exchange costs associated with their loans, i.e., incur the additional local currency costs growing out of any future devaluations.

A few other short run aspects of the type of funding arrangements described in the previous section also merit discussion. To the extent that loans from local governments, their agencies, and local commercial banks tend to be of short maturities, rural development banks may be predisposed to lend for quick gestation projects. The fact that this tendency counter-balances the bias towards long term loans created by external funds emphasizes the importance of harmonizing the sources and uses of funds and the desired loan operations of rural banks.

Further, unless there is a large rollover or debt rescheduling, the short maturities of their debt places considerable demands on annual inflows of new funds. Debt service and amortization consume large proportions of new resources thereby reducing that which is available for new lending to farmers. Between 1971 and 1977, total debt service and amortization payments by the Jamaica Development Bank averaged 20 percent of its annual available resources.

The final aspect of external funding pertains to the negative influence of a too rapid disbursement of funds on the quality of the loan portfolio. Both local governments and foreign agencies inject large amounts of financial resources into rural banks in the early stages of their operations, usually before well-functioning loan appraisal and monitoring systems are organized and staffed. Rapid growth of loan approvals and disbursements seriously burden these weak loan management systems and result in poor loan quality and high arrears ratios. These problems are compounded when funding agencies measure the performance of rural banks by the growth of their loan disbursements. Frequently, this is the only performance measure used in the early years when few loans fall due and incipient arrears problems go undetected. In these circumstances, the banks themselves may yield to the pressure to approve and disburse as many loans as possible, sacrificing efficiency and loan quality in the process.

IMPLICATIONS FOR LOAN PORTFOLIO PERFORMANCE

We have argued that funding agencies influence the credit operations of rural banks. By so doing, they contribute to the loan repayment problems experienced by these banks. Our demonstration of this proposition will center on the possible implications of lender preferences for particular enterprises and inputs, the nonprovision of working capital loans, and the policy on foreign exchange costs.

Debt financed expansion of farm enterprises increases the borrower's financial risks. Any variation of expected returns tends to increase with consequent greater potential loss of equity capital. Hopkins, Barry and Baker (Chap.7) demonstrate this principle of increasing risk with the aid of the following simple model. Let the model for the growth in equity be:

$$(1) \quad G = (L(r-i) + r)(1-c)(1-t)$$

when G = percent growth in equity; L = leverage ratio, i.e., the ratio of debt to equity; r = rate of return; i = interest rate on debt; c = farmer's average propensity to absorb gross farm income; and t = rate of income taxation. Then assuming constant numerical values for i , e , and t , one can trace the effects on G of increasing L for equal absolute variations of r around zero. Negative proportionate changes in equity (i.e., equity loss) increasingly outweigh positive changes (i.e., equity gains) as leverage increases.

Some farm liquidity is reduced by the act of borrowing itself. Some degree of self-financing is generally associated with debt-financed capital formation. Counterpart requirements imposed by lenders usually ensure that some of the farmer's own resources complement loan funds. In this way, some or all of the farmer's actual liquidity might be absorbed. Also, depending on the degree to which farm enterprises utilize their existing assets as loan collateral, there is a corresponding reduction of unutilized borrowing capacity or potential liquidity

(Hopkins, Barry, Baker, 1973, Chap. 8). The seriousness of the loss of potential liquidity is of course moderated by the degree to which farm enterprises can obtain unsecured credit. They often manage to do so but only in small amounts and at high cost from the informal rural credit markets. Paradoxically, liquidity is often scarcest during the period of greater financial risk when more liquidity is needed.

Farmers traditionally attempt to reduce financial risk by diversifying their output in order to stabilize gross income flows. The scope for stabilizing net income flows is greater to the degree that input use is sufficiently flexible to permit downward adjustment when warranted by product demand conditions and relative factor prices. Lender restrictions and preferences reduce the scope for these forms of risk minimization.

Lender preferences for particular types of enterprises will usually alter the optimal product mix of farm debtors (Hopkins, Barry, Baker, Ch. 8). Assuming for simplicity, perfect competition in product and factor markets, the optimal output mix in the absence of credit is given by the condition:

$$(2) \quad \frac{-dY_2}{dY_1} = \frac{P_1}{P_2}$$

where Y_1 and Y_2 are products, and P_1 and P_2 are expected product prices. The optimality condition in debt situations is:

$$(3) \quad \frac{-dY_2}{dY_1} = \frac{P_1}{P_2} + \frac{C_1}{C_2}$$

where C_1 and C_2 are terms reflecting differences in the availability and cost of credit for the two products. Only in those rare cases where $\frac{C_1}{C_2} = \frac{P_1}{P_2}$ will the optimal product mix be unaltered by the enterprise preferences of lenders.

Similarly, the optimal combination of inputs may be altered by lender preferences, the without-credit optimality condition being:

$$(4) \quad \frac{-dx_1}{dx_2} = \frac{F_2}{F_1}$$

and the with-credit optimality condition being:

$$(5) \quad \frac{-dx_1}{dx_2} = \frac{F_2}{F_1} + \frac{i_2}{i_1}$$

where X_1 and X_2 are inputs with factor prices F_1 and F_2 respectively, and i_1 and i_2 are the marginal costs of financing those inputs.

The possible outcome of stipulations concerning specific product types and pure stand cultivation is a lower level of product diversification, particularly with respect to those short term cash crops which would not only create a greater degree of flexibility in product choice, but would also help to boost farm incomes in the early stages of the longer gestation projects which rural banks prefer. The technological bias implies that farmers adopting the lender-preferred technique of production might be locked into a situation where reductions in the utilization of capital goods cannot be efficiently made, and in which there is limited scope for substituting a cheaper factor, e.g., family

labor, for more expensive capital services. Consequently there may be an increase in their vulnerability to falling product prices and to rising costs of capital services (especially important under conditions of exchange rate depreciation). Any pressure on net farm income might well put pressure on debt-servicing capacity and result in loan delinquency.

A farm enterprise can attempt to moderate temporary debt service difficulties by reducing its average propensity to consume, or more likely by attempting to obtain short-term credit. However, as we have argued earlier, rural development banks are not usually a source of short-term credit. Nor are such resources readily forthcoming from commercial banks that are the predominant mobilizers of local financial savings and the principal short-term lenders. Commercial banks in lesser developed countries employ quite restrictive credit criteria and portfolio preferences. These exclude most potential agricultural borrowers. Selective loan guarantee and rediscount schemes have not been successful in encouraging a greater volume of commercial bank credit to agriculture, since attempts to collect on defaulted or delinquent loans that are guaranteed involve expensive and time consuming legal procedures. A case can be made, therefore, for rural development banks to directly provide production loans. Where external funding agencies preclude the use of their project funds for working capital loans, the rural banks can nonetheless attempt to fill this

credit gap by mobilizing local resources either by borrowing from the private financial sector or by directly providing a deposit service.

We turn now to the implications of the policy on foreign exchange costs. This centers around the question of who should bear the risk and the additional unpredictable rise in loan costs associated with fixed foreign currency obligations when there is a devaluation of the local currency. Essentially, these costs if borne by the farmer can be incorporated into the interest rate variable in equation (1). An increase in foreign exchange costs reduces farm capital growth by reducing the net rate of return. The foreign exchange costs implied by the stipulations on exchange risk are uncertain in nature but do assume serious proportions in countries experiencing large and repetitive exchange rate devaluations. These costs are not easily absorbed by farmers under conditions of weak product markets.

Donor agencies have argued that with devaluation-induced increases in domestic farm product prices and with improved international price competitiveness, domestic sub-borrowers should be net gainers from repetitive devaluations and should therefore experience no great difficulty in repaying loans with the added devaluation costs. However devaluation-induced increases in factor costs and the continuing price control policies for farm products erode these potential gains. As a result, the conditions assumed to be operative by donors are

not readily satisfied at least in the short run. Severe debt repayment problems are more likely to result because of the abruptness of the exchange rate adjustment which raises debt costs immediately whereas the income effects of attempts to phase out price controls takes much longer. Some reconsideration of this policy seems warranted. It seems reasonable to assume that the rural banks, by virtue of the larger scale of their operations and by the adoption of loan pricing policies which include a small premium for exchange risk, can better hedge against foreign exchange risks associated with foreign currency debt.

Another consequence of the foreign exchange stipulation under conditions of currency depreciation is an increase in the rural bank's risk exposure. The upward readjustment of the current local currency value of a loan is unaccompanied by a similar revision of pledged collateral. This implies that the existing collateral covers a smaller proportion of current loan value than the bank regards as prudent. In effect, the bank's risk exposure increases.

LONG RUN VIABILITY AND GROWTH

Rural development banks in order to perform a meaningful credit role through time must expand the nominal volume of their loans on a continuous basis. The underlying requirement is for sources of funds whose time profiles are consistent with continuous growth in lending capacity. This feature of financial institution behaviour, so much in the forefront of management decisions of

private financial institutions such as commercial banks, has been neglected in the study of rural development banks. The omission is potentially serious. An examination of the time profile of inflows of loanable funds from external agencies and local governments often reveals that they do not constitute an adequate basis for sustained institutional growth.

External funding tends to be large in the early life of the rural development bank, but declines after a period of years. The cessation of external funding may reflect one or more factors. Funding agencies as a matter of policy may wish to prevent continued reliance on their resources. Furthermore, the arrears problem, typically disguised in the earlier years by extensive grace periods, becomes clearer as more loans fall due. This may result in the suspension of disbursements on existing loan contracts and a refusal to replenish resources by new contracts unless institutional reforms occur. The prospects for reform, of course, are conditional upon debt recovery and, at the same time, by the overall economic environment affecting the prospects for economic recovery, the restructuring of interest rates and the political environment influencing the prospects for foreclosures on collateral. Another possibility is that drastic shifts in the economic policy position of governments of developing countries may induce a slowing down of disbursements and other financial sanctions by the donor agencies. In practice it is the first two which seem to be responsible for the decline in foreign resource flows to rural development banks in less developed countries.

Capital subscriptions by the government cannot be relied upon for continued growth. A study of the Jamaica Development Bank's funding pattern shows that periodic capital subscriptions, while

increasing the flow of governmental resources over time, have not been the main vehicle for channelling governmental resources to the institution. Rather, there has been an increase in the importance of governmental loans. This funding pattern can create a problem since continued reliance on loans from the budget is constrained by the usual competition for budgetary resources within the government. Furthermore, economic and political limitations on the growth of the government budget constrain the degree to which governmental contributions can maintain their momentum and continue to offset the decline in external resource inflows.

Repayment inflows ideally should provide an increasing stream of resources in the evolution of development banks. In practice, however, the later stages of banking operations may be characterized by rapidly expanding arrears and increasing provisions for bad debt rather than by smoothly upward rising payment inflows. Consequently, repayment inflows net of the bank's repayment outflows to foreign donors may be negative, since an increasing proportion of the long-term external debt falls due some ten to fifteen years from the original loan dates.

Given the time profiles of funding described above, rural development banks are likely to become increasingly prone to resource crises. In many cases, these crises are averted by new injections of foreign funds. In the Jamaican case, the crises have culminated in institutional credit cycles in that

crisis-ridden institutions go out of existence or become moribund, and are replaced by institutions which constitute a new basis for government and foreign funding, providing the same range of services as the defunct institutions. Thus, the Agricultural Credit Board in 1960 replaced the Agricultural Loan Society Board, which in turn was replaced by the Jamaica Development Bank commercial window program and the Self-Supporting Farmers Development Program in 1970.

POSSIBLE MEANS OF RESOLVING FUNDING PROBLEMS

We have contended that rural development banks' patterns of funding may seriously constrain their allocative and operational efficiency, and their long run growth. One solution to this problem is to attempt to alter the operational criteria and loan preferences of the funding agencies themselves. Another solution is to develop new sources of funding that are not subject to the same limitations. The latter solution is analyzed in this section. Three methods of developing new sources of funds are examined, namely deposits, bond issues, and earmarked taxes.

Public sector development banks do not usually accept deposits from the public. Nonetheless, there are potentially important gains to be derived from providing deposit facilities. The provision of these facilities removes a peculiar constricting feature of this type of financial institution, namely, that their credit operations and debt repayments do not themselves provide a steady return flow of funds to the banks as deposits. This is quite unlike the case of deposit-taking institutions,

e.g., commercial banks, where expended credit balances and deposit withdrawals return partially at least to the financial institutions in the form of new deposits thereby ensuring no full and permanent leakage of loanable resources from the financial institutions. For rural development banks, which do not have deposit facilities, the leakage is both full and permanent. Furthermore, deposits constitute a more general and diversified source of loanable funds. There is accordingly a greater degree of freedom from portfolio restrictions and control by funding entities. Additionally, the fact that the continued ability of a bank to attract deposits depends on potential depositors' confidence in the banks' financial management forces greater adherence to financial discipline. This can result in more efficient loan appraisal and more effective loan collections. Finally, where loan customers are also depositors, rural development banks have a potentially greater informational basis for monitoring the financial performance of their debtors.

In retrospect, it would appear more promising to incorporate a development bank portfolio within a well established commercial banking institution rather than the other way around. This would ensure financial discipline and effective monitoring of the portfolio from the very beginning. This latter point illustrates one of the most promising opportunities lost by donors and LDC's in the 1970s, namely, the incorporation of a small but viable and slowly growing long run development portfolio within a nationalized commercial banking network. Instead, donors and LDCs moved headlong into

promoting separate limited service development banks which were ill prepared to design, evaluate, disburse and monitor their loan portfolio with the insight, discipline and caution that a well trained and experienced commercial banking staff could have brought to the task.

Local and foreign bond issues are another mechanism for raising resources. Some external funding agencies such as the World Bank certainly see this option as a preferred one for national and regional development banks attempting to reduce their reliance on multilateral concessional funding. Both means of financing impose some degree of market discipline on rural banks. The difficulties of international bond issues are well known. They include: (1) legal and other institutional barriers to entry into developed countries' capital markets; (2) the inability of lesser developed countries to satisfy the informational requirements for bond placements; (3) quantitative limits on foreign country issues in the domestic capital markets of the developed countries; and (4) discriminatory taxation of interest income derived for foreign bondholdings. Efforts at improving developing countries' access to capital markets in developed countries are currently being made at the international level (Development Committee, 1978). At the present time, however, one cannot hold out much hope for substantial foreign bond financing of national development banks.

Domestic bond issues are also subject to difficulties. Low levels of private wealth, rudimentary capital markets, and

financial risk aversion among households and corporations are characteristic of underdeveloped financial structures. Each constitutes a major barrier to successful bond issues. Private financial institutions which command most domestic financial savings tend to confine their equity investment to short-term and long-term government securities. Therefore, greater access to their resources can only arise through competition with central government financing or from policy measures that explicitly favor acquisition of development bank bonds. The Jamaican experience reveals that short-term budgetary requirements of the government may prevail over the financing requirements of public sector development banks. However, this need not be the case, and development banks may prove capable of bidding away financial resources from the recurrent budget.

Proposals are sometimes made to compel private financial institutions to acquire development bonds. Among the devices proposed are earmarking part of the proceeds of central bank legal requirements, and the imposition of legal requirements that private financial institutions invest directly a portion of their assets in development bank bonds. While providing for automatic growth of resources, these devices reduce financial discipline in rural credit institutions, and may reduce the overall efficiency of financial resource use.

An issue of optimal timing arises with respect to both deposit mobilization and bond issues by rural development banks. The ability of the banks to attract funds through either mechanism

depends on the state of their financial portfolios. The tendency of rural development banks to experience serious arrears and liquidity problems implies that public issues of bonds or deposit acceptance are not likely to be particularly successful if they are attempted after the institutions' public image is one of financial mismanagement and near bankruptcy. In effect, a case can be made for the early adoption of these two financial mechanisms given the difficulty of doing so later, and the role they can play in instilling financial discipline at a crucial early stage of the institutional life cycle. As mentioned earlier, the issue of optimal timing for creating a stronger liability base can also be tied in with the issue of the optimal institutional method of incorporating a development portfolio in the young and imperfectly developed capital markets of LDCs. Building this portfolio within the institutional setting of a nationalized commercial bank may prove to be a more viable and self-sustaining institutional vehicle for promoting the growth of development financing in many LDCs.

At the level of governmental budgetary support, taxes can be earmarked for contribution to the rural development bank. This would essentially result in linking the growth of budgetary resources to the growth of fiscal revenues. However, like other forms of government budgetary support, it may result in political interference with credit allocation and loan collection operations, and in financial laxity.

CONCLUSIONS

Some important conclusions can be drawn from the foregoing analysis. First, public sector rural development banks are heavily dependent on local governments and external agencies for their funding. Local private sector financial institutions and loan recoveries within the rural banks themselves are not significant sources of loanable funds. Second, the influence exerted by the two main sources of funding on the lending practices of rural banks may contribute to the weakening of loan portfolio performance and overall financial viability of these banks. Third, none of the resultant portfolio decisions are necessarily consistent with allocative efficiency, distributional equity, or higher levels of rural employment. Fourth, the tendency of the major resource inflows to diminish drastically after the first decade of a rural development bank's life-cycle threatens the long run viability and growth of these banks.

These short and long period implications lead to the overriding conclusion that the sources of funding should be broadened to include less restrictive and more dynamic resource inflows. Three extensions, namely, deposit mobilization, bond issues, and earmarked taxes were examined briefly. Deposit mobilization and local bond issues are preferable and are also potentially more successful methods of funding, provided they are initiated at a relatively early stage in a rural development bank's life-cycle.

However, once the banks have evolved into the classic resource crises discussed in this paper, the policy space for effective restructuring of resource inflows will have been severely reduced. In this case, no formula for reform and survival is easy to devise. Liability structures appropriately designed from the outset may prevent or moderate many of the short and long run problems typically experienced by rural development banks.

FOOTNOTES

1. This paper is a revised version of one presented at the Second International Conference on Rural Finance Research Issues in Calgary, Canada, August 29-September 1, 1979. We are grateful for the comments and advice of Dale W. Adams, Claudio Gonzalez-Vega, and J.D. Van Pischke.
2. For convenience of expression, we maintain the convention of referring to these institutions as "banks" despite the fact that they rarely accept deposits from the public.
3. Claudio Gonzalez-Vega has informed us that his study of 50 development banks in Latin America confirms our thesis.
4. Jamaica is a member of the World Bank, the IDB, and the CDB. However, loans from these institutions are treated as external since Jamaica does not exercise a decisive influence on their credit operations.
5. Loans from overseas banks are treated as foreign loans. Loans from resident-expatriate banks are treated as local.
6. The bias towards large farms results from the fact that the range of imported capital goods tends to be suitable only for larger scale operations.

REFERENCES

1. ADAMS, Dale W., "Agricultural Credit in Latin America: A Critical Review of External Funding Policy", American Journal of Agricultural Economics, 53 (1971): 163-172.
2. _____, "Policy Issues in Rural Finance and Development", Paper No.1, Conference on Rural Finance Research, San Diego, California, July-August, 1977.
3. BLAIR, Harry W., "Rural Development, Class Structure and Bureaucracy in Bangladesh", World Development, 6 (1978): 65-82.
4. DEVELOPMENT COMMITTEE (WORLD BANK and IMF), "Developing Country Access to Capital Markets", Washington, D.C., 1978.
5. HOPKINS, John A., Peter J. BARRY, and C.B. BAKER, Financial Management in Agriculture, Danville, Illinois, The Interstate Printers & Publishers, Inc., 1973.
6. LELE, Uma, "The Roles of Credit and Marketing in Agricultural Development", in Agricultural Policy in Developing Countries, (ed.) Nurul Islam, London, Macmillan, 1974.
7. LIPTON, Michael, "Agricultural Finance and Rural Credit in Poor Countries", World Development, 4 (1976): 543-53.
8. WORLD BANK AGRICULTURAL CREDIT, Sector Policy Paper, Washington, D.C., 1975.

