BIBLIOGRAPHIC DATA SHEET	1. CONTROL NUMBER	2. SUBJECT CLASSIFICATION (695)
	PN-AAH-349	DE10-0000-0000

3. TITLE AND SUBTITLE (240)

Fungibility and the design and evaluation of agricultural credit projects

4. PERSONAL AUTHORS (100)

Von Pischke, J. D.; Adams, D. W.

5. CORPORATE AUTHORS (101)

Ohio State Univ. Dept. of Agr. Economics and Rural Sociology

6. DOCUMENT DATE (110)	7. NUMBER OF PAGES (120)	8. ARC NUMBER (170)
1979	26p.	332.71.V945

9. REFERENCE ORGANIZATION (130)

Ohio State

10. SUPPLEMENTARY NOTES (500)

(In Paper no. 4, Second International Conference on Rural Finance Research Issues, Calgary, Canada, 1979)

11. ABSTRACT (950)

12. DESCRIPTORS (920)

Agricultural credit
Agricultural economics

Project design
Project evaluation
Rural finance system
Small farmers

13. PROJECT NUMBER (150)	
931116900	
14. CONTRACT NO.(140)	15. CONTRACT TYPE (140)
AID/ta-BMA-7	
16. TYPE OF DOCUMENT (160)	

AID 590-7 (10-79)

Paper No. 4
Second International Conference on
Rural Finance Research Issues
Calgary, Canada
August 29-31, 1979

FUNGIBILITY AND THE DESIGN AND EVALUATION OF AGRICULTURAL CREDIT PROJECTS

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Abstract

The traditional view of agricultural credit projects is based on the proposition that the activity at the farm level for which project funds are disbursed constitutes the primary unit of analysis for project design and evaluation. This paper argues that this view is inconsistent with the nature of credit, and that the inconsistency arises because of fungibility. A financial view of agricultural credit projects is applied in three examples at the farm, credit agency and national levels to demonstrate that the impact of an agricultural credit project is extremely illusive. Based on the observation that project finance is fungible, recommendations are offered for realistic credit project design and evaluation and for measures which would help to ensure that the overall objectives of credit projects are realized.

Second International Conference on Rural Finance Research Issues

Calgary, Alberta

August 29 - September 1, 1979

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Agricultural credit is an important element in development efforts in most low income countries. Brazil and Thailand have gone so far as to assign credit the lead role in rural development programs, and India recently launched a billion dollar farm credit project. The World Bank, the Inter-American Development Bank, and the Agency for International Development have aggressively promoted agricultural credit, committing in excess of $5 billion through hundreds of these projects. The popularity of credit is due in part to the notions that loans are necessary to accelerate technological change in farming and that formal credit is required to release peasants from dependence on moneylenders. In certain situations the relative ease with which credit projects can be initiated and carried out adds to their appeal.

Most credit projects are aimed at stimulating the production of commodities such as rice or dairy products, augmenting the use of an input like fertilizer or improved breeding stock, encouraging investment in machinery and irrigation, or providing more financial services to target groups such as the rural poor, cooperative members or corn producers. Agricultural banks,

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The authors would like to thank V.V. Bhatt, Cristina David, Jack Kordik, Millard Long, U Tun Wai and Robert Vogel for their comments on earlier versions of this paper.

cooperative banks, credit unions and supervised credit agencies have been created under some of these projects. Other projects have augmented loanable funds flowing through existing parts of rural financial markets (RFMs).

A number of credit projects have been formally evaluated.1/ Most assessments by donor agencies emphasize disbursement of project funds and recovery rates on loans to farmers as measures of performance. As a second step in the process, most evaluations attempt to measure the impact of loans on farm activities. Impact is usually expressed in terms of increases in crop area or yields financed by the project and by the quantity of animals, fertilizer or tractors bought with loans. Numbers, amounts and kinds of loans made, and farm income and net worth are also used as performance measures. These evaluations typically include little analysis in depth of the credit institutions handling project funds.

While project evaluations may show slow loan disbursement or loan repayment problems, they usually indicate that production, input use, investment and target group participation goals were generally met. Credit projects appear to be achiev'ng many of their objectives. Despite this, a number of observers are increasingly concerned about the quality and quantity of services provided in low income countries by rural credit institutions and by the RFMs of which they are a part. Critics charge that although donor funding for agricultural credit has increased substantially, the real value of total agricultural loans has decreased in many countries, that concessionary loans

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1/ Only a few of these evaluations are available in published form (e.g., 1,3). Some overview publications, however, do give a flavor of project results (2,4,5,7,9,12,13).

often end up in the hands of the well to do, that loans for agricultural purposes are diverted to non-agricultural uses, that policies in many RFMs encourage consumption and discourage savings, that the term structure of agricultural loans often contracts or fails to expand, and that RFMs are adopting few cost decreasing technologies in the provision of financial services. It is puzzling why rural financial markets do poorly while credit projects within these markets are judged to be doing reasonably well. An attempt is made in the following discussion to resolve this paradox by showing how design and evaluation procedures which ignore fungibility lead to faulty conclusions about agricultural credit project results.2/

Fungibility, Additionality, Substitution and Diversion

Fungibility is a prime characteristic of any standardized currency. Standardization, or interchangeability, enables modern money to serve as a numeraire and medium of exchange, and makes monetized transactions more efficient than barter. Fungibility underlies the role of money in efficient resource allocation in Classical economic models and in increasing monopoly accumulation in Marxist models. This important quality of finance may cause difficulties when it is not understood, when efforts are made to limit exchange by the imposition of controls, and when channels through which funds are directed prove too small to accommodate the desired flow. Agricultural credit project design and evaluation often encounter these types of problems.

2/ fungible - "of such a kind or nature that one specimen or part may be used in place of another specimen or equal part....; interchangeable." Webster's New Collegiate Dictionary. Springfield, Massachusetts, 1973.

Fungibility makes credit activities slippery and hard to evaluate. Its effects appear at the national level, the credit agency level, and the farm level. Reasons given to justify a loan at any of these levels may or may not be related to the activities stimulated at the margin by the additional liquidity a loan provides. At the farm level, for example, many credit projects treat loans as if they were production inputs, ignoring the fact that a unit of borrowed money is identical to other units of money held by the borrower. Even if a loan is given in kind, such as 10 bags of fertilizer, the goods provided can often be sold and converted into cash if the borrower desires. For all practical purposes loans in cash or kind can be used to buy any good or service available to the borrower in the market.

Additionality, substitution and diversion are terms which clarify the problems which fungibility poses for credit projects. Additionality is jargon for the changes created by a project: it is the difference between the with and without project situations. It is generally assumed, for example, that a donor-funded credit project should induce the borrowing country to increase credit to farmers by an amount at least equal to the donor's loan. At the RFM level credit for target purposes should expand by an amount at least equal to the project funds provided. Likewise, it is expected that farmers will increase their input purchases and investment by amounts comparable to the loans they receive, and augment production of goods promoted by the project.

Measuring additionality is difficult because it is impossible to know exactly what governments, lenders and farmer borrowers would have done in the absence of a credit project. To what extent would the government have allocated more funds to agricultural credit without project assistance? Would credit institutions have channelled funds away from other activities to serve project objectives in the absence of a project? Would borrowers have used cash from

their own reserves or informal sources, or reduced their consumption, to fund an activity without a project? In other words, to what degree do project funds simply substitute for other resources which would have been used for project purposes in any event?

Substitution typically reduces additionality at all levels of credit project participation. A government may substitute the local currency proceeds of an international loan, issued to fund agricultural credit, for its normal budgetary allocations for this purpose. Likewise, a credit institution may use project funds earmarked for specific kinds of lending to replace its own resources already being used for the desired purpose. Borrowers can substitute funds obtained under a credit project for their own funds or for loans from other sources.

Diversion is a more extreme form of substitution. Diversion occurs when a farmer obtains a cattle loan but does not buy any cattle and uses the funds for a purpose not authorized by his loan contract. It is usually difficult for lenders, governments, and project personnel to divert credit project funds unless donors are lax in supervising projects, or unless the administration and accounting systems used by project agencies are faulty. However, close supervision of thousands of rural borrowers can be a costly task, and it is reasonable to assume that diversion would occur even under optimal levels of well administered surveillance and support.

Changes in the purchasing power of money further complicate analysis of additionality. While nominal amounts of loans and farmer expenditures may expand in the desired direction their real value may remain constant or decline as inflation erodes the purchasing power of financial instruments.

The three synthetic case studies which follow illustrate the difficulties of measuring the impact of credit projects. The case studies illustrate analytical problems arising at the three different levels from fungibility,

additionality, substitution and diversion.3/ Following the case studies, some suggestions are presented for improving the design and evaluation of credit projects.

A Farm-Household in Africa

Mrs. Kariuki is an African farmer who recently received a loan for the purchase of three milk cows and other materials needed to establish a dairy operation. The amount of the loan was $1,200, divided as follows on the loan contract: 3 milk cows - $800, fencing - $200, a water tank - $100, and a milking shed - $100.4/ She went into debt because of the easy terms offered (80% financing, five years to repay, interest at 10%) and the range of attractive investment opportunities available in her locality. Many of her neighbors are expanding their dairy and tea enterprises, and several have entered the transport business. Land prices are increasing, and many families are improving their dwellings or constructing new homes.

Mrs. Kariuki is an attractive credit risk because her family's farm is productive and well maintained. In addition to the 10 acre farm owned by her husband, she owns an urban lot which she used as loan collateral. She has $600 in her Post Office savings account, which was not disclosed on her loan application, in conformity with local traditions.

Mrs. Kariuki used the funds borrowed to obtain the goods specified in her loan agreement. Her loan was disbursed by the lender, out of funds supplied by a donor agency, against invoices submitted directly by the suppliers

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3/ The examples in this paper are designed to present clearly the problems discussed. Each of the examples is simple and reasonable, but not necessarily representative. The degree to which fungibility frustrates project objectives is dealt with in a later section.

4/ For consistency, all values in these cases are expressed in a common currency.

from whom Mrs. Kariuki obtained the improved dairy cows and materials. In addition to the loan proceeds, Mrs. Kariuki invested $300 of her funds in the dairy project to help purchase the cattle, to buy other investment goods, to pay for labor to install the fencing and water tank, and to transport loan-financed items to the farm.

Mrs. Kariuki's first investment priority was to establish a dairy enterprise because of its expected profitability and steady labor demands, and the family's preference for fresh milk. Just before the loan was approved, she sold her entire herd of five inferior dairy animals for $800 in cash. She obtained credit for the purchase of new stock and materials even though she could have financed most of the project out of the sale of the five cows and the $600 in her savings account.

Her other priorities include planting more tea, which requires hired labor; acquisition of more land; and joining her husband and some friends in purchasing a taxi so that their community would be linked more dependably with a market town 12 miles away. Reflecting these priorities, Mrs. Kariuki planted $250 worth of tea and spent $300 to purchase a half acre from an elderly neighbor after receiving the dairy loan. In addition, Mrs. Kariuki's family decided to increase consumption expenditures by $100. Part of this went to buy a new coat for her husband and two new school uniforms for her children, while the remainder financed a visit to relatives. Of her $1,400 in cash and in the post office savings bank, $450 remained after these expenditures. Since she wanted to keep $200 on hand for a rainy day, this left $250 for investment in a share of a taxi. Table 1 gives a financial summary of these activities.

Not reflected in Table 1 is the fact that $100 worth of iron sheets and lumber for the milking shed were not used to build a shed, which in the local community would be considered ostentatious. Rather, they were used to extend and reroof the family's house.

Table 1: Sources and Uses of Mrs. Kariuki's Funds

Sources of Funds	
Bank loan received for dairy enterprise	$1,200
Proceeds from sale of inferior dairy cattle	800
Post office savings account opening balance	600
Total funds available	$2,600
Uses of Funds	
Purchase of three improved dairy animals	$1,500
Investment in tea planting	250
Land purchase	300
Investment in taxi business	250
Additional consumption*	100
Post office savings account closing balance	200
Total funds used	$2,600

* Expenditures for new school uniforms for two children, a new coat for Mr. Kariuki, and visiting relatives in a distant city.

The conventional project interpretation assumes that Mrs. Kariuki's loan financed the establishment of a dairy enterprise. Therefore, the impact of the loan is assumed equal to changes in Mrs. Kariuki's dairy enterprise. This approach ignores changes in consumption and adjustments in all other uses and sources of household liquidity associated with the loan. It overlooks the fact that Mrs. Kariuki substituted fungible loan funds for a part of the investment in dairying which she would have undertaken in any event, since dairying was her highest priority. It also fails to take into account that Mrs. Kariuki diverted iron sheets and timber to house improvement rather than using these materials for a milking shed.

In constrast to the conventional project evaluation approach, a financial view of Mrs. Kariuki's activities takes the broader perspective that the loan gave her liquidity - an increase in her general command over resources. Since liquidity is fungible, a financial view does not attempt to relate the loan to just one use of liquidity. The impact of the loan can be found only in the marginal changes in all sources and uses of household funds which resulted from additional liquidity provided by the loan. Obviously, the type of information needed to document these liquidity flows for a representative sample of farm households is very time consuming and costly to collect.

A Credit Agency in Asia

The effects of fungibility are also found at the level of agencies lending to farmers. The institutions involved in the following hypothetical example from an Asian country are a diversified local lender called the Farmers Small Enterprise Bank (FSEB), a centralized rediscounting agency (CRA) which uses donor and government funds to make loans to lenders like FSEB, and a

donor agency which helped design the project. The main objective of the project is to increase the volume of loans to small farmers.

The mechanics of the credit project are as follows: the target group consists of farmers with less than two hectares of land. CRA advances $0.80 for every $1.00 which lenders extend to the target group. The interest rate on CRA loans to lenders is 4%, while the lenders charge farmer borrowers 10% per annum. CRA in turn, claims from the donor agency 75% of its advances under the project, and obtains the other 25% from the national treasury. The project supports an important national credit priority which is also reflected in Central Bank regulations favoring agriculture. One of these is that at least 20% of the outstanding loans of each bank must consist of agricultural loans. In addition, banks like FSEB which are located in farming communities must devote 40% of their loan portfolios to agricultural activities.

The effect of the project on lender behavior is illustrated by FSEB's plans and actions before and after the project. Before the project in 1978, FSEB directors developed a sources and uses of funds budget for 1979. As noted in Table 2, the major source in the original 1979 budget was loan repayments received from borrowers, which provide funds for further lending. The allocation of new loans was budgeted to ensure compliance with the requirement that 40% of total loan balances on the books are to farmers, and the FSEB directors expect that new loans of $750,000 to these borrowers will meet this target. The directors also expect an increase in deposits at their bank because of a recent increase in interest rates paid on savings from 5% to 6% per annum. The directors allocated a portion of the expected deposit increase to non-interest bearing statutory reserves held with the Central Bank, and to liquidity reserves in the form of government bonds and cash required to support the expanded level of deposits.

Shortly after FSEB directors approved the 1979 budget the general manager was visited by representatives of the donor and CRA who informed him that the FSEB could participate in the small farmer credit project. The general manager later presented to his board a revised budget assuming FSEB participation in the project (Table 2). In presenting the revised budget, the manager noted that about $300,000 of the $750,000 in loans to farmers in the original budget meet the credit project's lending criteria. FSEB could discount with CRA 80% of the $300,000 and gain $240,000 in loanable funds. The manager proposed to his board that $15,000 of these additional funds be used to buy more high yielding government securities (9% per annum), that $150,000 be used in loans to large farmers and businessmen in the area who could offer substantial collateral for their loans, and that $100,000 be used to substitute for private deposits. He proposed that FSEB roll back its interest rates paid on savings from 6% to 5% in order to reduce projected increases in deposit liabilities from $300,000 to $200,000 in 1979. Because the revised budget would increase FSEB net profits by 10% it was approved by the board. Late in 1979 the manager reported to the board that budget targets were substantially achieved.

The net result of FSEB participation in the new loan program was a decrease in local deposit mobilization, lower rates of return to all depositors, an increase in government securities held by the bank and an increase in the amount of money loaned to borrowers other than the project's target group. The project resulted in only a small amount of additional lending to the target group. Substitution washed out almost all of the intended effects of the project in this particular lenier's activities.

Table 2: Projected Sources and Uses of Funds by the Farmers Small Enterprise Bank (FSEB) in 1979

(In Thousands)

I. ORIGINAL BUDGET

Sources of Funds		Uses of Funds	
Loan Repayment from Borrowers	$1,500	Increase in Statutory Reserves (25% of increase in deposits)	$ 75
Increase in Deposit Liabilities	300	Increase in Cash and Government Securities held	25
Net Profit	50	New Loans Made:	
		Farmers	750
		Others	1,000
Total	$1,850	Total	$1,850

II. REVISED BUDGET

Sources of Funds		Uses of Funds	
Loan Repayment from Borrowers	$1,500	Increase in Statutory Reserves (25% of increase in deposits)	$ 50
CRA Rediscount of Project Loans	240	Increase in Cash and Government Securities Held	40
Increase in Deposit Liabilities	200	New Loans Made:	
		Farmers	755
Net Profit	55	Others	1,150
Total	$1,995		$1,995

A Latin American Country

From 1960 to 1978 a Latin American country received $80 million in 10 loans or grants from donor agencies for agricultural credit projects. These credit projects incorporated four objectives. First, four projects created new institutions to serve rural areas: a supervised credit program, an agricultural cooperative bank, rediscount facilities for agricultural loans at the Central Bank, and private finance agencies (financieras) to provide risk capital for agricultural enterprises. Second, all 10 projects provided funds to expand agricultural credit supply. Third, seven of the projects aimed at expanding the amount and number of loans to the rural poor. Fourth, three projects sought to provide more medium and long term loans to farmers.

All 10 projects have been evaluated. Several of the projects had loan recovery problems which undermined at least one of the new institutions. Analysis of loan applications and interviews with loan officers and borrowers indicate that objectives regarding type of borrower, enterprise, inputs and loan term structure were largely met. Overall, these evaluations suggest the projects did a surprisingly good job of achieving their goals. One donor was sufficiently satisfied with its projects to give the country an additional loan of $15 million to expand medium and long term lending to small farmers. During 1979 the loan was disbursed for the purposes intended, and an evaluation gave a glowing report of the results.

Despite these projects, farmers and especialy small farmers continued to complain about the shortage of loans. As a result, one of the donors formed a team of specialists to prepare another sizable agricultural credit loan proposal. A financial analyst on the team was asked to assess the recent

Table 3: Imports and Government Budget Allocation before and after an Agricultural Credit Loan to a Latin American Country

	1978	1979	1979 (In 1978* Prices)
	Current Prices		
IMPORTS			
Agricultural Investment Goods	$ 200	215	195
Non-Agricultural Investment Goods	300	360	327
Intermediate Goods	100	110	100
Consumption Goods	100	110	100
Government & Defense Goods	300	350	318
Other	100	110	100
Total	$1,100	$1,255	$1,140
GOVERNMENT BUDGET ALLOCATION			
Defense	1,000	1,200	1,091
Health, Education, Welfare	1,000	1,100	1,000
Agricultural Development	250	265	241
Non-Agricultural Development	300	350	318
General Government Expenses	300	340	309
Other	100	110	100
Total	$2,950	$3,365	$3,059

* Reflects adjustment for an inflation rate of 10% during calendar year 1979.

performance of the country's financial markets. He did not take a conventional project focus in his analysis, but instead examined imports, government budget allocation, and overall performance of RFMs. He reasoned that changes in activities associated with the most recent loan would be the best indication of what might be expected from the next loan.

The analyst began by collecting information on imports and the 1979 government budget, as presented in Table 3. Agricultural investment goods imports increased by $15 million in 1979. Because of inflation in world prices of agricultural machinery, however, the real value of these imports in 1978 prices declined from $200 million in 1978 to $195 million in 1979. At the same time the real value of imports of non-agricultural investment goods and government and defense goods increased. Military hardware and supplies to furnish new tourist hotels accounted for most of the real increases in imports. From these figures the analyst concluded that the 1979 agricultural loan relaxed the country's foreign exchange constraint and that arms for the military and bathtubs for new hotels were plausibly the main result.

The analyst then reviewed the 1979 government budget. What he found is also shown in Table 3. The government increased the nominal amount allocated for agricultural programs from $250 million in 1978 to $265 million in 1979. The government met the conditions of the agricultural loan agreement by adding the $15 million generated by sales of goods imported under the loan to the Agricultural Bank's loan portfolio. But because of domestic inflation the real amount allocated to agriculture decreased from $250 million in 1978 to $241 million in 1979, despite the donor's loan. Real increases in the 1979 budget for defense, non-agricultural development, and general expenses reflected major government priorities. From these data the analyst concluded that the government budget was not influenced in the desired direction by the agricultural credit project.

The analyst next turned his attention to activities in formal rural financial markets in the country. The information he collected is presented in Table 4. The nominal amount of new agricultural loans made each year increased from $50 to $144 million between 1960 and 1980. In real terms, however, the amount of purchasing power represented by the formal agricultural loan portfolio peaked in 1975 and declined by about 5% through 1980. The $94 million increase in the nominal amount of new agricultural loans made annually from 1960 to 1980 can be largely explained by the $95 million in foreign grants and loans for agricultural credit, given the average term structure of approximately one year. The analyst concluded that foreign funds substituted for at least some local funds which would have been allocated to agricultural credit in the absence of external assistance.

The analyst was disappointed to see that ratios of agricultural credit to total credit and agricultural credit to GNP from agriculture declined after 1970. In spite of heavy emphasis by donors on expanding agricultural credit during the 1970s in the country, it appears they were unable to effect structural changes in credit allocation in favor of agriculture. Furthermore, the decline in the deposit to loan ratio after 1970 suggests that some portions of RFMs were becoming more, rather than less, dependent on outside resources.

Table 4 further shows that there was no increase after 1970 in the proportion of farmers who received credit: over the 20 year period levels of access were not significantly altered. Most of the increase in agricultural credit apparently went into large loans for experienced borrowers. Because agricultural lenders' records did not include details on borrowers' economic characteristics, the analyst could not document loan allocation by economic class: small loans do not necessarily go to low income borrowers, and a wealthy borrower may have multiple loans. He did find, however, that those agencies

Table 4: Measures of Rural Financial Market Performance in a Latin American Country 1960-1980

Year	Total Value of New Loans Made to Agric. Current Value	Total Value of New Loans Made to Agric. In 1960 Prices	Ratio of Ag. Credit / Total Credit	Ratio of Ag. Credit / Ag. GNP	Ratio of Deposits to Loans in RFM*	Percent of Farmers Receiving Formal Loans	Avg. Term Structure of Ag. Loans
	$1,000					%	Months
1960	50	50	.09	.21	.14	15	10
1965	70	69	.10	.24	.16	16	12
1970	90	88	.12	.27	.18	17	15
1975	110	104	.11	.26	.17	15	14
1978	115	100	.10	.24	.17	14	13
1979	130	99	.09	.23	.16	13	12
1980	144	99	.08	.21	.16	12	11

* Excludes commercial banks

mainly serving the rural poor had very modest real increases in their loan portfolios from 1970 to 1980, while agencies mainly lending to high income borrowers expanded more rapidly.

Finally, the analyst concluded that the credit projects of the 1970's were associated with a trend towards shorter average agricultural loan term structures. While in 1970 the average loan outstanding matured in 15 months, in 1980 the corresponding term was only 11 months. Between 1978 and 1979 the average declined from 13 to 11 months, despite the loans of 2 to 5 years' duration under the $15 million 1979 project. Funds from medium and long term loans which matured outside that project were apparently reloaned at shorter maturities.

In his report the financial analyst demonstrated that fungibility and substitution had substantially diluted the intended impact of the 11 credit projects, especially the 1979 project. While the 1979 loan did relax the foreign exchange constraint, it was associated with additional imports of military and tourist hotel hardware. It was not accompanied by a net increase in real imports of agricultural investment goods. It also did not reverse the trend towards shorter average term structures of formal agricultural loans. Because of inflation and concessionary interest rates to farmers, the flow of external resources for agricultural credit failed to maintain, let alone increase, the purchasing power of the formal agriculture portfolio. There is little evidence that the rural poor received much additional funding despite the emphasis in various credit projects on expanding financial services for this target group. It also appeared that donor funds accounted for virtually the entire nominal increase in agricultural credit.

Recommendations

The extent to which fungibility and its companions, diversion and substitution, frustrate credit project objectives will vary from case to case. At the national level fungibility is likely to present the greatest difficulty for credit project design and evaluation when inflation is significant, exchange rates distorted and the country faces balance of payments problems. At the credit agency and farmer borrower levels the impact of fungibility tends to vary directly with the level of real interest rates in RFMs. If these rates are close to zero or negative, fungibility will generally result in few of a project's objectives being realized and will create numerous unintended effects. Further, because of the geographic dispersion and large number of participants involved in rural financial markets it is difficult to restrict fungibility with administrative fiats and other non-market rationing devices. The traditional project approach assumes fragmented RFMs and often contributes to fragmentation by the institutional arrangements used to implement projects. Fragmented RFMs and fungibility are at worst incompatible, at best uneasy partners. The conflict they pose erodes and frustrates the intent of controls.

Many countries have distorted exchange rates, balance of payments problems, rigid formal sector interest rates, substantial inflation and negative real rates of interest in portions of their RFMs. These create an ideal environment for substitution and diversion to flourish, making it virtually impossible to determine additionality and hence results of credit projects at the farm level using conventional project evaluation techniques. We feel that it is necessary to alter the traditional design of credit projects and also to modify substantially the way they are evaluated. At least three different approaches may be taken to intervention in RFMs to diminish the

extent to which performance departs from objectives. These approaches may be used singly or in combination at the project, sector and national levels.

At the project level it would be helpful to view loans as additional liquidity rather than as farm inputs. This would encourage project designers to be sensitive to the alternatives available to those with access to additional liquidity. For example, if a credit project were designed to stimulate cotton production in Northern Colombia, designers ought to know something about the tremendously attractive returns available in the area to production of marijuana. Likewise, credit for "productive" purposes will be used for consumption below a certain threshold income level, and investment in food crops may take precedence over cash crops. Only after it can be shown that target enterprises are among the more profitable or satisfying uses of additional liquidity can it be concluded that a major part of the liquidity provided by the loan will be used as projected. 5/

Specific additionality requirements stated in real terms might be written into a project. However, any such targets should apply to the entire RFM. For example, if a project objective is to lend to 5,000 new small borrowers through a new supervised credit program, the 4,000 transferred to the supervised credit agency from the agricultural bank should not count

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5/ It appears that fungibility is understood in the design of food distribution programs for the poor in nutrition projects. Reutlinger and Selowsky, for example, indicate that "An analysis of such programs would cover whether they contribute more or less than an equivalent cash transfer to the family; whether they simply replace normal purchased consumtion; or whether food intended for children is diverted to others in the family. The analysis should begin with the proposition that consumers receiving any transfer in kind will attempt to convert the transfer into income. This re-establishes the control of the consumer on the composition of his expenditure." (emphasis added) See "The Economic Dimensions of Malnutrition in Young Children," Finance and Development, June 1979.

toward this requirement. Progress towards additionality targets can be measured at the national and credit agency levels, although such requirements could raise problems of data reliability.

It would also be useful to include in project design and evaluation some measures of changes in the performance of institutions participating in the project. Projects which undermine the vitality and financial integrity of a credit agency should not be termed successes.

Because of fungibility, project design and evaluation should consider rural financial market performance in general. For example, if an agricultural credit project is aimed at providing more medium and long term credit, project design should include an assessment of why RFMs do not provide sufficient amounts of this type of financial service. Once this deficiency is adequately explained, the designers of the project should show how the project will alter this performance. How will the project induce RFMs to provide a service which they are presently unable or unwilling to provide? This approach could well lead to sector lending rather than project lending.

Sector lending emphasizes institutional performance by agencies supported by the donor, and is one step removed from the primary emphasis on farm level activities found in the traditional project approach. Sector lending strategy is based on the assumption that target groups are most effectively benefitted when institutions serving them are efficient, strong and independent. This approach is perhaps more consistent with concerns for local participation and control than the project approach, since the institutions concerned have to relate to local circumstances in order to be successful. The project approach finds justification in terms of tons of grain or increases in farm incomes without necessarily having to come to grips with the state of intermediaries in RFMs.

Sector lending may provide a framework for dealing with the complexity of the rural economy which is superior to the narrower project approach. The sector perspective would be conducive to treating RFMs as a system, and examining the interaction of parts of the system. For example, the trade-off would be apparent between institution building based on satisfactory returns to intermediary net worth, and the expansion of credit and other financial services to progressively less creditworthy borrowers and other high cost customers. Interest in the interaction of rural savings and rural credit would easily arise from the logic of goal specification at the sector level. In this process, objectives for all aspects of RFM performance would be specified, and intervention designed to achieve specific targets of additionality, service mix, array of financial claims available in the market, lender profitability, savings mobilization and term structure, for example.

At the national level fungibility affects intervention in RFMs. Approaches based on the assumption that more government involvement in RFMs is to be encouraged have been suggested in the context of project and sector activities. Other alternatives are based on the observation that finance is difficult to control because of fungibility, and that direct attempts to gain control are often costly, easily fail to achieve their objectives, and generally embody secondary effects which are unexpected -- the worst possible development for planners -- and perhaps deleterious to the rural economy (6,7,8,10,11). From this perspective, the best intervention may be indirect. Rather than trying to tackle problems at the project level or through sector institutions, for example, it may be more beneficial to use the price system to encourage priority activities and to discourage less useful ones. Experiences from the application of this approach suggest that

many of the problems associated with RFMs respond favorably to policies oriented towards realistic and flexible interest rates supplemented by other measures designed to increase competition in finance. Fungibility offers tremendous potential for resource agility by enabling financial markets to function efficiently.

In sum, we feel less emphasis should be given to evaluating the impact of credit use at the farm level, and more emphasis placed on how intervention in project and other forms affects lender behavior, lender vitality, and the overall operation of RFMs. Less time should be spent measuring what is virtually impossible to measure. More attention should be accorded those things which can be documented. We should learn to live with, rather than attempt to finesse, the fungibility issue.

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