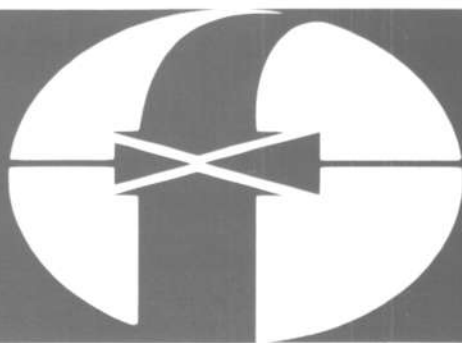


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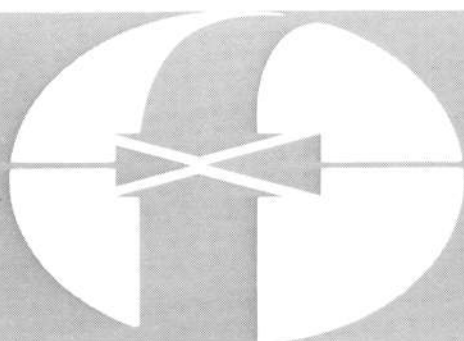
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AGRICULTURAL CREDIT IN TANZANIA: THE POLICY AND OPERATIONAL PROBLEMS OF THE COOPERATIVE AND RURAL DEVELOPMENT BANK

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1. Introduction

In a number of agricultural based Low Income Countries (LICs) including Tanzania, external financing of smallholder agriculture has been seen as one of the major means of effecting agricultural transformation. Therefore in the past three to four decades several of these countries (with the support of the international community) established specialized or formal credit institutions for the purpose of supplying production credit to smallholder farmers and also for provision of longer term credit for rural development projects that commercial banks were generally not prepared to finance.

The basic assumption in providing credit to rural farmers (mostly at subsidized rates) has been that most rural farmers are poor and that they have low levels of personal income and savings which inhibits their ability to make any effective investments in agriculture. External finance has also been regarded as an effective means through which the rural farmers would be influenced to adopt the use of improved technology and farm inputs for effecting agricultural modernization. In addition, it has also been argued that small farmers lack access to the relatively expensive financial services provided by the commercial banking sector because of the small size of their collateral and assets¹. Von Pischke (1981), provides a detailed account of the assumptions surrounding the establishment of formal credit institutions in agricultural based LICs. The validity of some of the assumptions has been challenged by a number of authors including Adams (1984), Adams and Douglas (1984) and Mauri (1985).

The organisational form of formal credit institutions across Sub-Saharan Africa and other agricultural based LICs, has depended on the dominant economic philosophy of the country, the nature of the formal financial system, and the interests of international donors at the time (Adams and Vogel, 1986). As a result, a large variety of rural financial intermediaries is found across these countries and they have been known by various titles such as Rural Development Bank and Agricultural Finance Corporation². The major

¹ In Africa, commercial banks have generally been loath to offer credit to agriculture to any appreciable degree. The notable exception being Malawi where the agricultural sector's share of credit in the total loan portfolio between 1973-1984 was 40.5%, and the credit extended to agriculture grew at a compound average annual rate of 33.9% between that period, Belshaw (1988).

² Such as: Agricultural Finance Corporation (in Kenya, Zimbabwe and Zambia); Cooperative and Rural Development Bank or CRDB (in Tanzania), Agricultural and Industrial Development Bank (in Ethiopia and Nigeria), and Agricultural Development Bank (in Ghana).

common characteristics which cut across most of the specialized credit institutions, are that: (i) they were established to service particular rural needs or target groups such as the small farmers and (ii) they have been generally guided by development rather than the profit objective in their operations. Because of being highly selective in the type of financial services they provide, most of the agricultural credit institutions have been in effect operating only on one side of the rural financial market. They have therefore been financial intermediaries in the very restricted sense in that they extend credit but rarely mobilize savings (Belshaw, 1988).

A survey of literature on the performance of agricultural credit institutions in the LICs reveals that in general they have had a dismal performance in their lending operations. Several of the institutions lack viability because of poor loan recovery, operational losses, and the decline in the real value of their loanable funds as a consequence of high inflation and low lending rates (Adams and Vogel, 1986; Belshaw, 1988; Braverman and Guasch, 1986).

The purpose of this paper is to review the operational performance of Tanzania's main agricultural credit institution, the Cooperative and Rural Development Bank³ (CRDB), in financing agriculture and rural development.

Assessment of CRDB's operational performance is based on: (i) the allocation of credit and rationing criteria, (ii) operational costs and revenues from lending, (iii) rates of loan repayment and delinquency, and (iv) degree of mobilisation of rural savings.

The paper also presents in brief the evolution of agricultural credit institutions in Tanzania, the present credit system, and the underlying credit policies.

2. Data Sources

Data on loan allocations, repayments etc. were compiled from the Credit Institution's *Annual Reports and Accounts* covering the period from 1971 to 1989. Additional information was collected from the Institution's head office in Dar-es-Salaam, the Rural Finance Department of the Bank of Tanzania (BoT), and from published and research reports.

This paper also uses cross-sectional data and information collected from borrowers in

3 In the context of this paper, the term "bank" is not used in its strict sense and it is interchangeably used with "Credit Institutions".

Iringa and Morogoro regions in 1985/86 in identifying factors which have a strong influence on credit repayment and default.

3. Evolution of Credit institutions in Tanzania

The history of rural credit in Tanzania⁴ dates back to 1947 when the first agricultural credit agency, The Land Bank of Tanganyika (LBT) was established. LBT was replaced after independence in 1961 by the Agricultural Credit Agency (ACA), because of a number of problems including inadequate capital funds, stringent security on loans for smallholders and difficulties in loan recovery.

In spite of high expectations on ACA to spear head the development of the agricultural sector, it was itself beset by a number of problems including further losses in deposit liabilities inherited from the LBT and high lending costs arising from the administration of thousands of small individual loans.

Cognisance of the role of the cooperative movement in serving as a channel for farmer credit, and in an attempt to reduce lending costs, the government replaced the ACA in October 1964 with a banking group, the National Cooperative and Development Bank (NDCB). NDCB had two subsidiaries namely; the National Cooperative Bank (NCB) and National Development Credit Agency (NDCA) which dealt with commercial and development banking respectively.

NCB was later transformed into the National Bank of Commerce in 1967, incorporating the nationalised commercial banks, after the advent of the Arusha Declaration. The NDCA continued to finance the agricultural sector until 1971 when it was replaced by a new bank, the Tanzania Rural Development Bank (TRDB), because of a number of operational problems similar to those which afflicted its predecessor credit institutions including a deteriorating capital base and poor loan recoveries.

The TRDB Act (1971), enabled the new bank to start up its activities with a stronger capital base from paid-up capital and government grants. In addition TRDB received on yearly basis, increasing amounts of government grants and loans from foreign governments and international agencies through which the bank managed to expand its lending into a number of rural activities.

TRDB was subsequently transformed into the Cooperative and Rural Development Bank (CRDB) in 1984 after the return of the cooperative unions in the country which were originally abo-

4 Tanganyika and Zanzibar united in 1964 to form the United Republic of Tanzania.

lished in 1976. CRDB is jointly owned by the Government of Tanzania (51%) and the cooperative unions (49%) through their apex organisation: The Cooperative Union of Tanzania (CUT). Presently, CRDB with its head office in Dar es Salaam, has regional branches in all the twenty regions of Tanzania mainland. In some of the regions, particularly in areas where the bank has relatively large lending operations, it has also established district offices. Details on the evolution of credit institutions in Tanzania can be found in Caselli (1975), BoT (1979), Mmari (1985), Kashuliza (1986) and Luwemba (1988).

Apart from an emphasis on resource mobilisation and lending through the cooperatives, the transformation of TRDB into CRDB in 1984 did not result in any significant shift in the objectives or pattern of operations of the credit institution (as stated in the TRDB Act of 1971). Therefore, in the context of this paper the new name — The Cooperative and Rural Development Bank (CRDB) is also used to represent the TRDB period between 1971-1984. Only where specificity is deemed necessary is the old name used.

4. Agricultural Credit System and Policies

Tanzania's central bank, the Bank of Tanzania (BoT), uses direct and indirect instruments to regulate the functioning of banks and financial institutions in the country, in order to direct the economy in the desired direction. The instruments are specified in BoT (1979; 1988). They include: interest rate ceilings on loans and deposits and the control of the total volume of credit given by banks and financial institutions, and the allocation of credit amongst different sectors and the terms and conditions on which it is given.

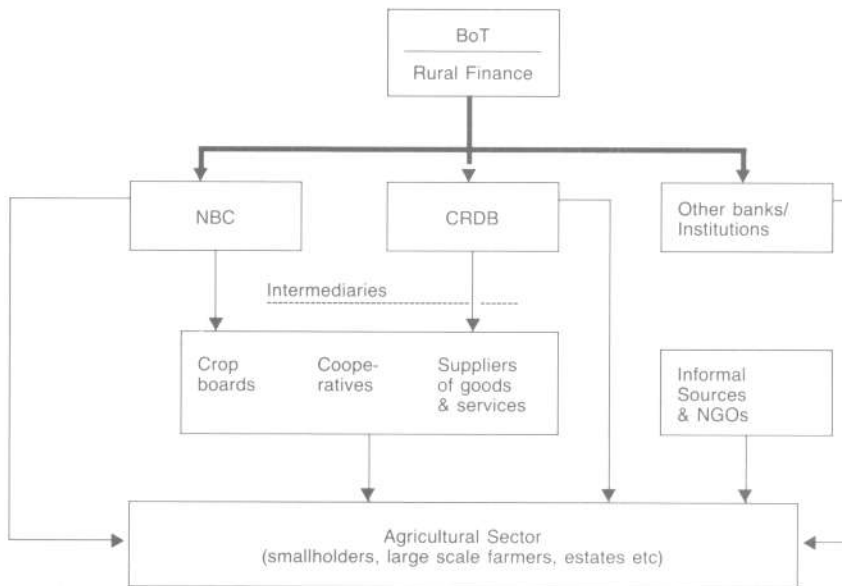
In addition to the above role, the Bank of Tanzania has established a department of Rural Finance to provide for refinancing facilities for banks and institutions involved with rural credit in the country, e.g. to enable such banks to convert short-term agricultural loans into medium-term loans in circumstances arising from natural effects and calamities such as floods and droughts which are out of control of borrower farmers⁵. This department also subscribes to the share capital of institutions handling agricultural credit in the country. Thus BoT together with CRDB and the National Bank of Commerce (NBC)⁶, have a

5 So that the capital base of financing institutions is not unnecessarily eroded and to enable the affected farmers to access further credit inputs for fresh cultivation.

6 Until recently NBC was not actively involved with smallholder production credit but the issuing of finances for crop purchase to crop parastatals and financing of large scale farmers and estates. NBC has a much more extensive branch network in the country than CRDB and could easily be a good channel for credit to smallholders because of its closer contact with them.

tripartite responsibility in the provision of credit for agriculture and rural development in the country⁷. Figure 1 indicates the flow of credit to the agricultural sector in Tanzania.

Figure 1: The Flow of Credit to Agriculture



Key: BoT Bank of Tanzania
 NBC National Bank of Commerce
 CRDB Cooperative and Rural Development Bank
 NGOs Non Governmental Organisations
 → Credit flow
 → Policy, grants, refinancing etc.

7 Besides the Bank of Tanzania, CRDB and NBC, Tanzania's financial system is comprised of the following: the Peoples Bank of Zanzibar (PBZ), the Tanzania Investment Bank (TIB), the Tanzania Housing Bank (THB), the National Provident Fund (NPF), the National Insurance Corporation (NIC), the Post Office Savings Bank, and the Tanganyika Development Finance Company Ltd. (TDFL). Details on the overall development of Tanzania's financial system can be found in Caselli (1975) and Kimei (1987).

In the lending process, CRDB makes short-term or seasonal input loans for periods of up to 12 months, medium-term loans of up to 5 years, and long term loans of up to 15 years or more. CRDB secures its medium and long term loans by first mortgage on immovable property and/or chattel mortgage in movable property.

In the case of livestock development and fishpond culture projects, the breeding stock may be mortgaged. The bank's loans are ordinarily limited to 75% of the value of the property mortgaged. In general short-term or seasonal input loans have been issued against the security of the standing crops.

CRDB loan disbursements have been made largely in kind in the form of either goods and services or direct payment to suppliers of goods and services, who then deliver the borrowed goods directly to borrowers or indirectly through agents and intermediaries.

Up to the end of 1980, interest charged on seasonal input loans was 8.5% per annum. Interest on all other loans was 7.5%. From 1981, revised rates of interest linked to the borrower were adopted. These were 7.5% for village borrowers, 9.0% for parastatals and government corporations and 10.0% for other borrowers.

Since 1986 lending rates have been periodically revised and adjusted upwards⁸. The nominal differential rates were by 1990 between 22% and 29% and approaching positive real values. Further details on CRDB loan policy and procedure can be found in Mmari (1985), Kashuliza (1986), and BoT (1988).

The main borrowers of CRDB loans over the period of 1971 to 1989 are indicated in Table 1. Until their dissolution in May 1976, cooperative unions and societies were the main borrowers of CRDB loans. It was through these channels that villages and farmers obtained the required credit. Between 1976/77 and 1983/84 registered villages obtained credit directly from CRDB, and accounted for over 50% of all the CRDB loan sanctions. After the re-establishment of cooperatives in the 1984/85 crop season, the majority of villages (or primary cooperative societies in the villages) once again had to access credit inputs through their regional cooperative unions⁹. Substantial amounts of credit

8 Tanzania started implementing the IMF and World Bank supported Economic Recovery Programme (ERP) in 1986. The implementation of ERP policies has cut across all the major sectors of the economy including the product, factor and financial markets. Some of the key ERP policy features have been the regular adjustments in lending and exchange rates. Consequently the Tanzanian Shilling (Tsh) depreciated by over 300 per cent from about Tshs 50 to the US dollar in 1986 to Tshs 200 by the end of 1989.

9 However these changes did not immediately take effect in all the regions in the country. In some of the regions villages or primary societies continued to access credit directly from CRDB until the 1986/87 season.

inputs have also been delivered to the villages through the export crop parastatals (or marketing boards) eg in the case of tobacco, cotton and tea.

Table 1

PERCENTAGE DISTRIBUTION OF CRDB LOANS BY BORROWER CATEGORY, 1971/72-1988/89

Borrowers	1971/72 to 1975/76	1976/77 to 1980/81	1981/82 to 1985/86	1986/87	1987/88	1988/89
Villages (small farmers)	—	55.2	25.0	1.4	1.3	0.8
Individuals (large farmers)	0.4	3.1	10.0	12.7	15.3	10.2
Parastatals and Private companies	19.0	20.4	10.4	9.7	5.1	0.8
Associations and Partnerships	10.1	18.1	4.6	0.9	a	a
District Development Corporations	9.0	1.3	—	—	b	b
Ujamaa Cooperative Societies	25.9	—	—	—	—	—
Cooperative Societies	20.6	1.9	3.5	—	c	c
Cooperative Unions	15.0	—	46.5	74.2	78.3	88.2
Total (percentage)	100.0	100.0	100.0	100.0	100.0	100.0
(million Tshs)	607.5	821.7	2314.1	2010.6	2203.1	3046.0

— Implies no loan taken

a Data for 1987/88 - 1988/89 combines individual farmers, private companies and partnerships

b Data for 1987/88 - 1988/89 combines parastatals and public companies

c Data for 1987/88 - 1988/89 combines villages and cooperative societies

Source: Computed from CRDB (TRDB) Annual Reports and Accounts, 1971-1989.

While a small part of the credit inputs obtained by villages through these channels has been used for group or village projects, the major part of the credit has been channelled to individual farmer borrowers.

A summary of sectoral distribution of CRDB loans between 1971-1989 is presented in Table 2. It is obvious from Table 2 that most of the loans issued by CRDB have been the short term or seasonal input loans, which have gone mostly to smallholder borrowers (ie villages and farmers).

Table 2

PERCENTAGE SECTORAL DISTRIBUTION OF APPROVED CRDB 1971/72-1988/89

Sector	1971/72 to 1975/76	1976/77 to 1980/81	1981/82 to 1985/86	1986/87	1987/88	1988/89
Seasonal Inputs	57.4	67.7	67.9	63.3	82.0	78.0
Farm machinery	1.5	2.9	8.3	5.8	2.0	2.2
Small scale industries	1.1	4.6	3.3	1.4	1.7	1.1
Rural transport	10.3	3.3	13.8	26.3	8.7	13.9
Livestock	21.3	12.8	4.2	1.2	4.0	3.1
Fisheries	0.5	3.2	1.0	0.6	0.6	0.9
Storage facilities	1.5	0.8	0.5	—	—	0.4
Farm development	6.3	4.6	1.1	1.4	0.8	0.4
Commercial enterprises	—	*	—	*	0.3	*
Total (percentage)	100.0	100.0	100.0	100.0	100.0	100.0
(million Tshs)	607.5	821.7	2314.1	2010.6	2203.1	3046.0

— Implies no loan taken, * Implies amount negligible

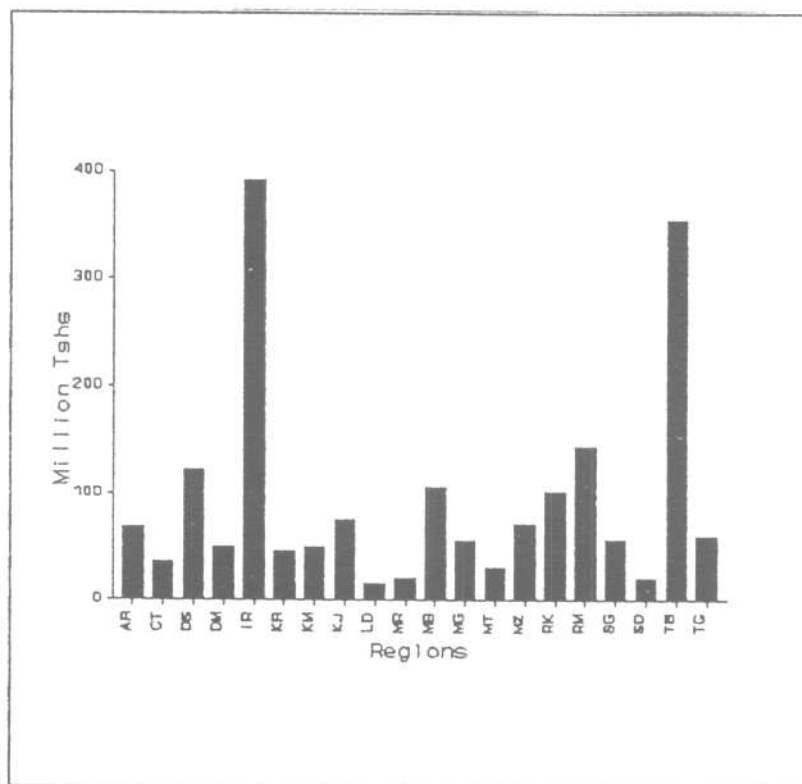
Source: Computed from CRDB (TRDB) Annual Reports and Accounts, 1971-1989

5. CRDB's Operational Performance

5.1 Credit Allocation

Credit rationing has been practised by CRDB in allocating agricultural loans. This is more obvious at the regional level than at the farmer level. CRDB has concentrated its loans only in few regions of Tanzania mainland. Tabora and Iringa regions for example, have been allocated more than 40% of the total CRDB loans which went to the 20 mainland regions of Tanzania since its inception in 1971. This is because of these regions' involvement in tobacco production (a cash crop which earns foreign exchange for the macro-economy). Figure 2 indicates the allocation of the credit institution's loans across the Tanzania mainland regions between 1972 and 1985.

Figure 2: Distribution of CRDB (TRDB) Loans by Region 1972-1985



Source: CRDB Annual Reports and Accounts.

Regions are: Arusha (AR), Coast (CT), Daressalaam (DS), Dodoma (DM), Iringa (IR), Kagera (KR), Kigoma (KM), Kilimanjaro (KJ), Lindi (LD), Mara (MR), Mbeya (MB), Morogoro (MG), Mtwara (MT), Mwanza (MZ), Rukwa (RK), Ruvuma (RM), Shinyanga (SG), Singida (SD), Tabora (TB) and Tanga (TG).

The trend in credit concentration in only a few regions of the country has continued into the early 1990s. The pattern in credit allocation reflects the importance which has been attached by the bank (and policy planners) on the financing of cash crop production, in particular tobacco, as opposed to staple food crops such as maize and rice or storage facilities and other needs of the farmer.

Therefore the rationing criteria for seasonal loans has been a cash (export) crop grown and tobacco growing regions have benefited the most. There is also emerging evidence that a substantial proportion of the credit received in the villages (and designated to have been used by smallholders), has actually been allocated to the relatively well-off and larger farmers in comparison with the typical smallholders (Kashuliza, 1991; CRDB, 1988). Thus CRDB credit may have played a role in enhancing individual income inequalities in some smallholder farming systems in the country.

5.2 Operational Costs and Revenues

On the average the lending costs for CRDB loans have been rising every year mainly due to the effect of yearly increasing administrative costs. They include costs of procurement and distribution of inputs to borrowers, supervision and monitoring of loan use, collection of repayments and to some extent the provision of loans for risk of default. The total lending costs between the period of 1974 to 1984 are estimated at 44.5 million Tanzanian shillings (Tshs) or 8.2% of the total loan portfolio (Kashuliza, 1986). In the above study the administrative costs made up about 49% of the total lending costs or 4% of the total loan portfolio every year. A combination of high lending costs, low interest rates, and poor loan recovery has resulted in big losses from the lending process for CRDB. Available figures suggest that CRDB has survived bankruptcy and insolvency only through use of government and donor funds. The profit and loss account for CRDB between 1984 to 1989 (Table 3) indicates that CRDB continued to incur losses from the lending process after 1986 in spite of the substantial upward adjustments in the lending rates over this period.

Because of relatively high inflation rates (in comparison with lending rates) in the economy in the late 1970s and early 1980s of between 20 and 40 percent per annum, CRDB was in effect lending at negative real rates. The increase in lending rates between 1986 and 1990 and the relative fall in inflation (estimated to have gone down to about 25 percent by the end of 1990), imply that CRDB has an opportunity to make positive real incomes from the lending process, provided of course that these changes are accompanied by efforts to improve loan repayment and the implementation of other necessary policy and structural reforms.

Table 3

CRDB PROFIT AND LOSS ACCOUNTS FOR YEARS ENDING 30TH JUNE, 1984/85-1988/89. (in million tshs)

Income and Expenses	1984/85	1985/86	1986/87	1987/88	1988/89
Interest Income	98.2	162.5	364.6	1209.8	2054.7
Less: Cost of Funds ^a	19.2	45.0	151.7	781.8	1447.4
Net Interest Margin	79.0	117.5	212.9	428.0	607.3
Less: Provision for doubtful loans ^b	14.4	6.6	25.7	158.7	109.8
Adjusted Interest Margin	64.6	110.9	187.2	269.3	497.5
Less operating expenses ^c :					
Personnel expenses	30.4	52.9	73.5	102.2	206.7
Administrative expenses	47.7	74.1	115.1	212.0	358.0
Net operating profit (loss)	-13.5	-16.1	-1.4	-44.9	-67.2
Add other income ^d	20.1	19.4	40.6	140.3	188.7
Net profit	6.6	3.3	39.2	95.4	121.5

a, b & c make up the total lending costs

d Refers to incomes from the government and external donors eg in 1987/88 CRDB received grants from the Treasury, Australian Government, DANIDA, USAID, EEC and some other sources.

Source: Computed from CRDB Annual Reports and Accounts, 1984-1989.

5.3 Loan Repayment and Default

CRDB has been plagued by serious loan repayment problems almost since its inception in 1971. The repayment or collection rate i.e. the ratio of loan collections on current and past loans for a given year to loans matured and collectable at the end of the year, has been declining over time. Whereas it was 70% and 80% respectively for the first two years of the bank, it declined to about 50% per year between the mid 1970s and 1980s. Recent figures suggest that the repayment rate fell below 10% in 1988/89 (Table 4).

Table 4

CRDB LOAN REPAYMENTS AND ARREARS, 1985/1989^a

Year	Amount in million Tshs			Repayment rate (%)
	Due	Collected	Arrears	(Due/Coll.) * 100
1985/86	570.0	225.5	344.4	39.4
1986/87	1244.7	613.6	631.1	49.3
1987/88	2245.9	674.2	1571.7	30.0
1988/89	1271.4	87.2	1184.2	6.9

a. The loan repayment rate for CRDB (TRDB) loans averages about 49.4 percent between 1971/72 to 1984/85.

Source: Computed from CRDB Annual Reports and Accounts, and various other bank reports.

On the other hand, this means the delinquency rate i.e. the amount of loans not collected on current and past due loans for the year, has been rising overtime¹⁰. The implication of the 1988/89 figures is that over 90% of the loans due were not collected.

This state of loan repayment has put both the CRDB and borrowers in financial difficulties. It affects the liquidity of the credit institution and its capacity to issue more loans to borrowers who would like to take advantage of the credit leverage¹¹. At the same time it has resulted in an adversary relationship between repeater borrowers and the credit institution as expressed by embargoes on new loans for borrowers who have not repaid at least 75% of their previous loan, confiscation or auctioning of durable assets obtained through credit (this applies mainly to term loans for tractors, milling machines, transport vehicles etc.), and even threat of court action. However, there are todate no documented cases of non-repayment which have been pursued through the courts.

10 Delinquency denotes the failure to pay back in time either through inability or unwillingness to do so. But there is still a possibility of such loans being paid at a future date (with additional interest charges). On the other hand default specifically denotes the total failure to repay. However, the technical usage of default (when indicating the breach of loan contract), incorporates delinquency, diversion (use of loan in purposes not specified in the contract), and deceit (which arises if borrowers have an incentive to circumvent the lenders rules on repayment eg through political influence).

11 Borrower's gains from use of the loans fall into three main categories: normal gains from use of leverage, income transfers through the negative real rates and additional benefits that go to those who default repayment.

Given the loan repayment situation, CRDB has been withholding substantial amounts of loanable funds (from government and external donors) for provision of bad and doubtful loans (technically speaking, denying it to borrowers). Such provisions have been increasing overtime in response to the rise in default rates. While they amounted to only about Tshs 1.5 million in 1973, they rose to about Tshs 39 million in 1977 and they are estimated at Tshs 158.7 million in 1988/89 (Table 3).

5.4 Factors Contributing to the Loan Repayment Situation

The state of loan repayment for CRDB loans is a consequence of a number of problems or factors at various levels in Tanzania's financial and political systems. In this section we discuss in brief the key problems at four levels of the credit delivery system: the government or political level, the credit institution level, the intermediary level and the borrower or farmer level.

5.4.1 Government and Political Interventions

Government interventions in the functioning of the intermediaries (ie parastatal and cooperative systems) which are often not very well planned but swift, are among the major reasons which have exacerbated the loan default situation for the CRDB loans. The dissolution of cooperatives in 1976 and later the liquidation of some parastatals and transport companies (eg. the National Road Haulage Company in 1977) contributed significantly to the level of debt arrears due for repayment to the bank and hence in increasing the delinquency ratio. The bank's loans from institutions in liquidation amounted to Tshs 58.1 million in 1978. Of this amount, Tshs 51.9 was due from cooperatives and primary societies dissolved in 1975/76 (BoT, 1981; 1988). CRDB was later compensated for only a small proportion of the debt arrears and the rest had to be written off as bad debt, in spite of a number of "liquidator's proceedings" between CRDB and the government on the liabilities of the terminated institutions.

In general while the government and politicians have been at the forefront in promoting the issuing of credit to villages and farmers they have not acted with similar vigour in the recovery of loans (this being politically unattractive). Luwemba (1988), observes that politics has invaded the operational levels of the credit delivery system, sometimes spilling over into the choice of individual loan recipients and the degree to which sanctions against defaulters can be enforced.

5.4.2 Credit Institution Factors

At the credit institution level, factors which have contributed to poor loan recovery (where the bank is directly responsible for collection of the loan arrears), include: limited facilities such as vehicles and motor cycles to follow up borrowers at frequent intervals, inadequately trained staff in credit delivery and loan collection, and shortages of staff in relation to loans which have to be supervised or monitored. A deficient data base on which the credit delivery and repayment systems have been based is one of the factors which have contributed to the prevailing state of loan default. For instance, while CRDB loan policy states that loans would be given depending on the cost of the project, the actual needs of each borrower, repaying capacity and credit worthiness of the borrower (BoT, 1988), in practice these criteria have hardly been employed in assessing loan requirements or have only been considered in passing while granting loans to villages (or primary cooperative societies) and individual farmers (especially when working under political pressure). Instead the bank has relied much more heavily on (rough) farm area estimates and input requirements thereof, by village officials and resident extension agents in granting the required loans.

5.4.3 Intermediary Level Factors

At the intermediary level, cooperative unions which have a greater contact with villages and farmers than the banks (through their village based primary cooperative societies), have handled the distribution of the major part of seasonal input credit to farmers and loan repayments from them. The majority of these cooperatives do not however keep good records on loans and borrowers and lack competent staff to follow up loan arrears.

Since the re-establishment of the cooperative in 1984, only a proportion of the repayments made by borrowers through the cooperatives have reached the CRDB. Instead such funds have been diverted to other cooperative union activities such as crop marketing, farming, retail trade and hotel management. Therefore the link in loan repayment between CRDB and the cooperative unions has been generally weak. As a consequence of seasonal input loan arrears and interest charges arising from outstanding overdrafts for crop purchase, debts of most cooperative unions to CRDB and NBC rose at an alarming rate in the last half of the 1980¹². By June 1990, cooperative unions and

12 Because of problems of poor management of cooperative activities and a number of rigidities in the economy, usually cooperative unions remain with large stocks of unsold crops (to marketing boards and the general public), which would otherwise be used to settle some of the CRDB claims. For a detailed discussion on the organisation and problems of cooperatives in Tanzania see Moshi and Afro-Aid (1990), and Kashuliza and Ngailo (1992).

marketing boards were indebted to CRDB and NBC to the tune of Tshs 53, 677.7 million (BoT, 1990). Out of these, Tshs 3,563.8 million related to cooperative unions' debts to CRDB.

Partly because of the cooperative's mounting arrears and partly because of the reform process already taking place in the financial system, CRDB began to withhold loans for procurement of inputs to some cooperative unions in the country (eg in Iringa and Mbeya regions) from the 1989/90 crop season, and instead the bank has tried in such regions to lend directly to some "viable" villages or primary cooperatives through which individual farmers access the inputs¹³.

Export crop marketing boards have done relatively better in deducting loan dues from farmers' crop sales and remitting these to the bank than has been the case with the cooperatives. Crop marketing boards have been appraised by some observers as the most effective channel through which CRDB has received any reasonable repayments to its loans (Luwemba, 1988). This relative success, can be attributed to the single channels through which export crops have to be sold (as opposed to food crops which could easily be sold through the informal markets)¹⁴, and better management in the collection of repayments and remittance of these to the bank by the export crop marketing boards.

5.4.4 Borrower Level Factors

Information in this section is largely based on cross-sectional studies conducted by the author in Iringa and Morogoro regions and reported in Kashuliza (1986). The study involved formal interviews of 50 farmers in 12 villages, and various informal interviews of key informants in those villages (such as village leaders and extension agents). All the 12 villages and farmers selected for the study had received CRDB seasonal input

13 However we do not think it is feasible for CRDB to take over the input distribution activity in the medium to long-term, in view of the bank's limited facilities/resources and curtailed contact with rural farmers. It is therefore important in this context for the government to carefully reform and restructure the cooperative unions, so that they are able to perform the input distribution and other activities efficiently and as businesses. This point is discussed in detail in Kashuliza and Ngailo (op. cit.).

14 The informal market for food crops (usually with better prices), provides an opportunity to wilful defaulters to circumvent the method of repaying back seasonal credit through deductions at the time of crop sales to formal channels such as the cooperatives. The real challenge for CRDB and the relevant intermediaries is to design methods for loan recovery which have to take into account the flexibility of farmers to sell into markets of their choice.

credit in one or more years between 1980 and 1985. They were therefore purposively chosen from CRDB borrower lists for the study¹⁵.

Factors which emerged from the above surveys which could account for the loan repayment (or default) situation of the smallholder borrower farmers include:

(i) *Production environment;*

The majority of farmers with delinquent loans singled out unfavourable weather conditions such as drought and crop pest attacks as major factors resulting in poor harvests and curtailed capacity to pay back the loans;

(ii) *Borrower's attitude or willingness to repay;*

Some borrowers in the surveyed areas had in earlier years used government grants or "soft loans". Because of this "hang over", they did not seem enthusiastic about repaying CRDB credit. They interpreted CRDB credit as another form of government assistance or subsidy, "msaada". A few of these farmers showed scepticism on the ability of CRDB or the cooperatives to follow up loan arrears, and were hoping that such loan arrears would eventually be cancelled as bad debt as "was the case with some earlier loans to some villages and farmers" in these regions. A somewhat rational response based on previous experience.

(iii) *Late input deliveries;*

Eight out of the twelve villages surveyed and about 65% of the farmers interviewed indicated that inputs were almost always delivered late, that is, after the beginning of the planting season. The late input deliveries resulted in borrowers failing to undertake the farm operations timely and eventually defaulted credit repayments due to low returns, non-use of the credit inputs or both.

(iv) *Low farm gate prices;*

The majority of the village leaders interviewed and over 90% of the interviewed farmers indicated dissatisfaction with the official crop prices *vis-a-vis* the production costs. Failure to pay back by some farmers was therefore associated with the small margins they receive for crops purchased through the official marketing system. Although producer prices have substantially been increased over the implementation of the ERP period, the increase in input prices has been even higher (especially on account of the removal

15. The villages surveyed were: Mgudeni, Makuyu, Langali Dumila and Magole in Morogoro region, and Kitowo, Nyabula, Ukumbi, Magubike, Mangalali and Nzihi and Lulanzi in Iringa region. Details on the selection of these villages and methodology of the study appear in Kashuliza (1986).

of input subsidy, and the liberalization of the factor and product markets).

(v) *Farm characteristics*

Quantitative data collected from the interviewed farmers in the above study were analyzed through the multiple linear regression technique¹⁶. Results of the analysis revealed a strong association between the use of tractor and oxen drawn implements in farming with the ensuing loan repayment rates. The tractor/oxen variable (which was significant at 1% level), explained more than 69% of the observed variation in repayment rates among the final selected variables. These results could be explained by the fact that farmers who hire tractors or those who use oxen drawn implements in farming complete the labour demanding task of land preparation much more timely. This enables them to use credit inputs more effectively in farming in comparison with farmers who still depend on the hand hoe, which in turn translates into high yields and better incomes and repayments.

The hypothesis which presupposes that higher income capacity would positively relate to loan repayment, was also validated in the analysis of the above data. The surplus or net farm income variable explained part of the observed variation in repayment and showed a positive significant effect at the 10% level¹⁷. The rest of the selected variables for the analysis depicted a weak association with loan repayment rates. Summary of results for the above analysis is presented in Table 5. Further details on the model, variables and results appear in Kashuliza (op. cit.).

5.5 *Mobilisation of Savings*

As is generally the case with formal credit institutions in the agricultural based LICs, CRDB did not give due priority to savings mobilisation from the general public and rural savers until in very recent years, in spite of this sources' potential in reducing dependence of the institution on the government treasury and external donors for lending funds¹⁸.

16 The multiple linear regression model and selection of variables for this analysis are explained in Appendix 1.

17 In an earlier study in Iringa region by Due (1978), the value of total farm production was the single most influential variable and explained 80% of the variation in repayment for the village loans in 1974. Total cash income and net returns explained 63% and 56% of the variation, respectively, in that year.

18 This has been the trend not only for CRDB but for the majority of formal agricultural credit institutions in Africa. For details see Mauri (1985) and Belshaw (1988).

Table 5

DETERMINANTS OF LOAN REPAYMENT RATES IN IRINGA AND MOROGORO REGIONS, 1985/86.

Variable	Coefficient	T-Ratio
Tractor/Oxen use, X_1	45.69	5.356***
Maize Yield, X_2	-0.02	-2.024
Surplus Income, X_3	0.01	2.478*
Maize hectares, X_4	12.54	2.188
Total hectares, X_5	10.9	1.790
Sample	50.00	
R ²	0.77	
Adjusted R ²	0.55	
Durbin-Watson (DW)	1.79	
Standard Error	25.05	
F-Value	13.09	(Prob. < F = 0.001)

*** significance at 1% level, ** significance at 5% level * significance at 10% level

Source: Kashuliza (1986).

Savings mobilisation was given emphasis and undertaken by CRDB only after its transformation in 1984. By the end of 1989 eleven regional CRDB branches (in urban areas) had established the necessary facilities for handling savings, current and fixed deposits from savers. Total customer deposit in these branches has grown tremendously and is estimated to have increased by 51% from Tshs 3,152.5 million in June 1987 to Tshs 4,764.6 million in June 1989¹⁹.

Among other problems, CRDB's mobilisation of deposits from rural savers has been made difficult by the bank's limited branch network which is concentrated in the urban regional centres. From the latter half of the 1980s, CRDB has been involved with provision of mobile bank services to selected Rural Savings and Credit Societies (RSCSs) in a pilot scheme meant to increase the bank's outreach in rural areas²⁰. Through this pilot scheme, village members are encouraged to form their RSCSs through paying a specified registration fee and thereafter to buy shares and make money deposits with

19 See CRDB Annual Report and Accounts, 1988/89.

20 The rural savings and credit scheme pilot project is run jointly by CRDB and the cooperative department of the Ministry of Agriculture, Livestock Development, Cooperatives and Marketing. By 1991 this pilot scheme was being implemented in Kilimanjaro, Arusha, Morogoro, Mtwara and Shinyanga regions. NBC is also involved with the provision of mobile banking services to RSCSs and the general public in some regions in the country.

the society. In turn, the society maintains about a third of the members' deposits within the village (to service urgent cash demands from members), and deposits the rest of the savings in a common CRDB bank account regularly serviced by the bank through their mobile units.

RSCSs deposits with the bank could act as security for loans from banks for their members. However, by 1990/91 the capital base of most of these societies was still weak and only a handful had managed to extend small loans to some of their members, let alone having adequate capital for security for direct bank credit. Nevertheless, judged by growth in deposits and membership of these societies in the pilot regions, the RSCSs seem to have a promising future. In some of the pilot villages the RSCSs are already being used by crop marketing parastatals (boards) as channels for paying farmers for purchased crops through a "passbook" system²¹.

In our study in Iringa region in villages with RSCS's (Kashuliza, 1991), a number of farmers who are not yet members of these savings societies, indicated a high degree of enthusiasm in joining the scheme (after raising the necessary fee etc). These results show that the RSCSs may have a potential for serving as appropriate channels for mobilising savings and serving as credit channels for an increasing number of rural people in Tanzania. CRDB and other relevant institutions should also consider the use of some innovative savings instruments such as stamps, bonds, clubs etc which have been found to be effective in promoting thrift behaviour among members and in mobilising rural savings in some peasant societies in other developing countries²². Such instruments would provide the rural people with additional opportunities to save and at the same time enable banks to mobilize more funds for lending.

6. Summary and Conclusions

CRDB has directed most of its credit resources to the rural sector for agriculture and

21 After collection of crops from the primary cooperative society (agent which buys from farmers), the marketing crop parastatal deposits a cheque in the account of the primary society with the CRDB or NBC. Subsequently farmer's payments are accredited to the RSCS account and individual farmer accounts (the latter operated at the village level through farmer pass-books). This method of paying farmers is believed to reduce cash thefts and losses which are quite common at the primary cooperative society level in the country, through dishonest employees and general corruption. However the method's weakness is on the relatively long period it takes for such payments to reach the farmers. For more details on the RSCSs see Kashuliza (1991).

22 Details on some of the documented cases on "innovative savings instruments", can be found in Bechtel (1988), Mauri (1985) and Jerome (1991).

small farmer development. Villages and small farmers have received credit mainly in kind in the form of short-term or seasonal input loans — which have accounted for over 60% of all the loans disbursed by the bank to the various borrowers between 1971-1989.

Following the observed loan allocation pattern in the country, it can be concluded that CRDB has rationed credit at the regional level based on the cash (export) crops produced. The main reason for credit rationing centres around the role of export crops in earning foreign exchange for the macro-economy. While this is a desirable national objective, there is a need to strike a balance between this and another important objective of maintaining national and household food security. The country continues to import substantial amounts of staple foods such as rice and maize. Such food imports could be reduced or eliminated by encouraging more of their production in the country through provision of credit and other necessary services.

A broader lending policy which puts equal emphasis on cash (export) and food crop production, trading operations, storage facilities and other requirements of the farmer needs to be instituted in the country. The challenge to CRDB in allocating its credit is to attempt and reduce the widening regional imbalances and concentration of credit in the hands of relatively well-off farmers.

CRDB lending rates have been low in nominal terms and negative in real terms after the mid-seventies. This situation has resulted in very low net incomes from the lending process for the credit institution and implies a continued dependence on external funds from the government and donors. Such dependency can be progressively reduced by an effective interest rate policy which takes into account the lending costs, the opportunity cost of capital and the inflationary situation in the economy. Therefore efforts of adjusting lending rates upwards which began in 1986 should be sustained so that CRDB and other lending institutions are able to make profits from their lending activities.

Against this background, there is a need for the government, credit institutions/banks, research organisations and NGOs to initiate comprehensive studies on the response of producers to interest rate changes so that these are not excessively adjusted to exceed a threshold beyond which borrowing and loan repayment are detrimentally affected.

The loan repayment problem has adversely affected CRDB's liquidity and solvency position. The delinquency (default) for CRDB loans issued between 1971 and 1989 has averaged over 50% per year. The dissolution of co-operatives in 1976 and later the liquidation of some parastatal companies contributed significantly to the level of debt arrears due for repayment to the bank. Proper arrangements and guidelines with respect

to the liability and asset issues, bank debts etc were not adequately made prior to the above changes.

The emerging lesson here is for the policy planners and the government to exercise caution with respect to the "too-frequent" changes in the cooperative and parastatal systems so that lending banks do not suffer in the process. If such changes are necessary then adequate preparations should be made prior to such dissolutions so that lending banks are rightly compensated for their loans to such institutions.

Factors identified at the base level as having a significant influence on the repayment situation of farmer borrowers include: (i) the production environment, (ii) the willingness or attitude of borrowers to pay back, (iii) late input deliveries by the credit institution or responsible intermediaries, (iv) low farm gate prices which fail to provide farmers with adequate margins from farming, (v) the use of tractors and oxen drawn implements which seem to improve crop yield, incomes and repayment, and (vi) the farmer's income capacity as judged by net farm incomes, value of total production etc.

In addition to undertaking the necessary institutional policy reforms, an understanding of the impacts of these factors on credit use and repayment in different rural settings would enable CRDB and other lending institutions to correctly assess borrowers and improve on their operational performance.

There is a need for CRDB and other lending institutions in the country to build a data base on rural borrowers through comprehensive studies and constant monitoring of the rural system changes and farmer characteristics, and use of computers. In so doing, lending institutions will be able to judge credit worthiness, project viability, income capacity and other characteristics of borrowers more realistically than has been the case.

The bank should put more emphasis on the mobilisation of public savings through the extension of the necessary facilities to regional and where possible district branches where such services are still lacking. It is through mobilisation of savings that the bank can significantly sustain its lending activities and viability in the long-term. Indeed, the relatively high interest rates instituted under the ERP seem to be encouraging more savers to put their savings in banks. CRDB should not miss out on this opportunity.

The growth of the RSCSs should be strongly supported by CRDB and other relevant institutions in the country. They seem to have great potential in mobilising savings from rural borrowers and in serving as credit channels from the banks. At the same time

CRDB and related institutions in the country should attempt the role of innovative savings instruments to promote thrift and provide the rural people with more opportunities to save.

The government should endeavour to strengthen the effectiveness of the intermediaries in the delivery of credit and collection of repayments from borrowers. In particular, the government should implement the necessary reforms and restructuring of cooperative unions so that these function as businesses and become more accountable for their activities. Excessive political interference in the functioning of credit institutions or the intermediaries should be discouraged to allow the credit system to grow and serve the rural people much better. In addition to the institutional reforms, an effective credit system will require more government investments in research, extension and marketing infrastructure, and a concerted review of producer pricing policies so that crop prices are made adequately remunerative to farmers.

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Appendix 1

Determinants of Loan Repayment

(i) The Model

The linear regression technique estimated through the ordinary least squares method (OLS), was adopted in identifying factors with a significant effect on loan repayment²³. This form of function was chosen because past studies have found this formulation adequate in explaining the relationships sought in this study (Due, 1980; 1979). The general model is specified below:

$$Y_i = B_1 + B_2X_{i2} + B_3X_{i3} + \dots + B_kX_{ik} + e_i$$

Where:

Y_i is the i th observed value of the dependent variable

X_2 to X_k are the independent variables

B_1 is the population parameter for Y_i intercept (constant)

B_2 to B_k are the independent variable coefficients

e_i is a random error term having a normal distribution

i = implies 1, 2, ... N. Where N is the sample size.

(ii) Selection of Variables

Selection of variables for this investigation was guided by: (i) outcomes of previous studies eg see Due (1979; 1980), and (ii) the hypothesis which seeks to establish a positive relationship between the farm income capacity and loan repayment.

The basic dependent variables selected for this study were:

X_1 , a dummy variable associated with tractor/oxen use in farming;

X_2 , maize yield per hectare;

X_3 , household surplus or net income from farming;

X_4 , maize hectares cultivated by the household; and

²³ The stepwise linear regression technique was executed through the SPSS (Statistical Package for the Social Sciences).

X_5 , total farm hectares cultivated by the household²⁴.

The dependent variable was

Y_1 , the loan repayment rate (a ratio or percentage) which is reflective of the loan repaid to the amount due for repayment in that year.

Results of the analysis are summarized in Table 5. Further details appear in Kashuliza (op. cit.).

Abstract

This paper reviews the performance of the Cooperative and Rural Development Bank (CRDB), an agricultural credit institution in Tanzania, in financing smallholder agricultural production and other rural development activities.

Assessment is largely based on available institutional information between 1971 and 1989. Criteria employed in assessing the performance of the credit institution include: credit allocation methods, operational costs and revenues from lending, loan repayment rates, and the degree of mobilisation of savings. Data and information collected from selected rural settings in two regions of the country are used as identifying factors which account for timely loan repayments or defaults among smallholder borrowers.

Conclusions and policy implications emanating from the study relate to the effectiveness of the credit institution and intermediaries in the delivery of credit, interest rate reforms, the role of government, mobilisation of savings, and factors to be taken into account for improving the loan repayment situation.

²⁴ A number of other factors were dropped from the analysis either because of high correlation with the above factors or due to lack of meaningful association with the dependent variable. They include the family labour input, level of education, household expenditure and value of total farm production. Details of this analysis appear in Kashuliza (1986).