

CREDIT POLICIES AND RURAL FINANCIAL MARKETS IN BOLIVIA

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1. Introduction (*)

As stressed in the early works of Patrick, Gurley and Shaw and more recently McKinnon and Shaw financial markets play an important role in influencing the extent and pattern of economic development. Adams and Gonzales Vega were early authors to build upon this approach to examine the specific role of rural financial markets (RFMs) in mobilizing savings and delivering credit to farmers in less-developed countries (LDCs).

The fundamental function of RFMs is to serve as an intermediary between savers and borrowers. At any point in time there are those who hold wealth, some in the form of financial assets, and those who lack such assets and need to borrow to finance production or consumption activities. Thus conventionally there are three major separate but interdependent roles that RFMs are expected to perform: (1) mobilize rural savings; (2) allocate credit among productive activities in agriculture and (3) integrate the RFM's with the capital markets of the rest of the economy and the world.

In a neo-classical economic world price signals generated by the smooth functioning of financial markets would serve to stimulate saving and borrowing in such a way that the economy would be moving towards a state of general equilibrium. Here the rates of interest and the marginal rates of return for both savers and borrowers would tend to become equalized throughout the system making allowances, of course, for transactions costs and different degrees of risk and uncertainty. Most would admit, however, that financial markets are less than perfect and as a result savings are not mobilized nor credit extended in the neo-classical fashion. Moreover, even if the market did operate in a nearly perfect fashion, many would add that some of society's goals, such as those of income distribution or stability in the balance of payments, might not be met. To meet these goals it often is deemed justifiable to create new institutional structures and/or introduce policy measures to correct the system. This is the rationale that was used for the establishment of the plethora of monetary and credit policies as well as the specific institutional structures that are ubiquitous in the agricultural sectors throughout the world.

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Recent studies have questioned the validity of a number of the assumptions underlying the institutional structures and policy measures that have been widely employed in RFMs in less-developed countries (Adams and Tommy, Donald, Gonzales Vega, Ladman and Adams, Johnson). Given the urgency in LDC's of not only increasing agricultural output but also in improving rural income distribution, huge sums from both domestic and international aid organizations have been and are continuing to be directed to agricultural credit programs¹. In light of the recent thinking and evidence about RFMs it is imperative that additional research be oriented towards creating a better understanding of the structure and performance of LDC RFMs in order that more appropriate policy measures might be developed.

It is in this spirit that the central purposes of this paper are to describe the formal Bolivian RFM structure over the 1966-1975 period and to examine how Bolivian credit policy has affected the performance of that country's RFM. The study demonstrates the difficulties of working with incomplete and poor quality data often found in LDCs. The analysis does permit, however, the drawing of some tentative conclusions about the Bolivian case, the formulation of preliminary policy prescriptions, and the identification of recommendations for further research. Moreover, the lesson learned in Bolivia should provide additional information on the performance of rural financial markets that will be of use to policy makers in other LDCs.

2. Overview of Bolivian Agriculture

In many ways Bolivia is an archetype of an underdeveloped country and is considered to be one of the most traditional and poorest countries in Latin America. Historically it has specialized in mining, practiced traditional agriculture and experienced considerable political instability. In the mid-1970's per capita gross domestic product was estimated at 271 dollars, 70 percent of the population lived in rural areas, 65 percent of the work force was in agriculture (IDB, pp. 157-160) and approximately 50 percent of the population was considered pure Indian (Zondag, p. 16). A major turning point in the country's history was the Revolution

1. For the case of Latin America see Adams (p. 170).

of 1952 which, with the overthrow of the wealthy mine owners and landlords, set the stage for Bolivia to enter a period of a slowly evolving modernization.

The country is readily divided into three main geographical and agricultural regions². The Altiplano (high plains) at an elevation of 11,000 to 14,000 feet contains about 55 percent of the country's population and 16 percent of the landscape. Agricultural technology is very primitive. The main products are potatoes, wheat, barley, quinoa and wool. The mountain valley region accounts for 14 percent of the landscape, contains about 30 percent of the country's population and is at an elevation of about 5,000 to 12,000 feet. The main agricultural activities are wheat, corn, vegetables, fruits and livestock. Traditional technology is widely applied although there are areas where some off-farm inputs and mechanization are utilized. Both of these areas were subject to the extensive land reform which followed the 1952 Revolution and thus the average farm size is quite small in both.

In sharp contrast the Oriente (Eastern lowlands) region has undergone rapid development in the last twenty years, is very commercially oriented, and was not subject to land reform. This region varies from 500 to 2,300 feet elevation and contains 80 percent of the landscape and 15 percent of the population. The population and agricultural activities are concentrated in the Santa Cruz area. Most farms are medium or large size, and there are several large colonization projects. The major agricultural activities are cotton (for export), rice, sugar cane, oil seeds, and beef cattle.

During the 1966-1975 period the government has implicitly had four basic goals for Bolivian agriculture: (1) to become more self-sufficient in basic foodstuffs; (2) to take advantage of favorable world markets to develop agricultural export capabilities; (3) to create more favorable opportunities for the campesinos, the beneficiaries of land reform and; (4) implicit in each of the above, to raise the levels of farm incomes.

In order to accomplish these goals the government followed a policy of improving the marketing infrastructure and increasing the amount of agricultural credit. To a much lesser extent improvements were made in transportation, exten-

2 The most recent census for which data are available is 1950. (The 1976 Census tabulations are not completed yet.) The data in this section come from the estimates for the mid 1960's as they appear in *Zondag* (pp. 12-14, 142).

sion services and research. Foreign assistance was important; in 1971-1973 it accounted for 30 percent of the federal agricultural budget (Wennegren and Whittaker, pp. 236-237). Heavy emphasis was placed upon redistributing the rural populations through colonization in the Oriente and in developing this region for export and import-substitution crops and livestock activities. Consequently a large portion of the credit, government services and infrastructural development was directed to this region, particularly in the Santa Cruz area.

3. The Structure of Bolivian RFMs and the Policies Affecting Them

The Bolivian RFM is readily divisible into two major parts: the formal and informal sub-markets. The informal sub-market is considered to be extensive but little concrete information exists about either its size or function. It involves informally organized institutions for lending and savings mobilization and includes money lenders, friends and relatives, landlords, and distributors of farm supplies and others. For lack of information this paper does not address that sub-market. Rather it treats only the formal sub-market which operates through legally established institutions which mobilize savings and/or extend credit in the agricultural sector. There are four main agricultural credit institutions in Bolivia: The Agricultural Development Bank of Bolivia (ADB), which is the single government agricultural bank; the State Bank of Bolivia, a government-owned, commercial bank; the Central Bank of Bolivia; and a system of nineteen private commercial banks, most of which operate almost exclusively in urban areas. In addition there is a fifth category of largely private institutions which is comprised of cooperatives, credit unions, and other such organizations. Historically, they have been relatively unimportant lenders to agriculture, although their participation is slowly increasing. The ADB has been the most important agricultural lender. In 1966 it accounted for almost 90 percent of all agricultural credit. By 1975, however, only 53.7 percent of the formal market's portfolio was held by that institution; 28.4 and 17.9 percent were held by the State Bank and the private banks respectively.

All of these institutions, with the exception of the Central Bank, lend directly to farmers. They also receive savings in rural areas except the ADB and Central Bank. Foreign loans are typically administered by the Central Bank or are made directly to ADB.

In pursuance of the goals for agricultural development outlined previously, the Bolivian government has developed policies which directly impact on RFMs. These include the establishment of financial institutions and operating procedures within these institutions and monetary and credit policies. In addition the government has indirectly impacted on the functioning of RFMs through land reform, colonization, marketing, infrastructural and extension policies³.

Table 1

INTEREST RATE STRUCTURE,
COMMERCIAL BANKS AND BANCO AGRICOLA DE BOLIVIA 1966-1975

Interest rates	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Commercial Banks										
(Regular Credit Lines)										
<i>Commercial Loans</i>										
(Effective rate)	27	27	27	27	27	27	25	25	25	25
Nominal rate	18	18	18	15	15	15	13	13	15	15
Loan fee	6	6	6							
Bank employees fund	3	3	3	3	3	3	3	3	3	3
Federal tax				9	9	9	9	9	7	7
<i>Production Loans</i>										
(Effective rate)	18	18	18	18	18	18	16	19	19	19
Nominal rate	12	12	12	15	15	15	13	13	15	15
Loan fee	3	3	3							
Bank employees fund	3	3	3	3	3	3	3	3	3	3
Federal tax				6	6	6	5	3	1	1
<i>Savings Accounts</i>	free	free	free	10	10	10	10	10	10	10
				(min)	(min)	(min)	(min)	(max)	(max)	(min)
Banco Agrícola de Bolivia										
Internal funds	12	12	12	12	12	12	10	10	13	13
External funds	10	10	10	10	10	10	10	10	12	12

Source: Departamento de Estudios Económicos, Banco Central de Bolivia

3 Undoubtedly the infrastructure of transportation, marketing, research, education and land tenure will influence the effectiveness of credit use. For example, an article by *Lipton* reviews the influence of land tenure and the local power structure on rural credit use and concludes that radical structural reform is probably necessary in most cases for improved incentives and markets.

Foreign assistance has played a major role in RFM policy formulation. Bolivia has borrowed extensively from the U.S. Agency for International Development, The World Bank, The Inter-American Development Bank and the Banco do Brazil for agricultural credit programs. In many cases the foreign donor, as a condition for making the loan, has required that certain policies be established or institutional structures be modified.

The 1966-1975 period is characterized by a policy of modifying existing institutions and their operational procedures in order that, in combination with monetary policy, the existing institutions might deliver more credit more effectively and improve loan collections. This change is typified by the reorganizations of the ADB in 1963 and 1974 and the separation of State Bank from the Central Bank in 1970. As noted previously there were deliberate policies to force the State Bank and other commercial banks to substantially increase agricultural lending. In particular the government tried to utilize the State Bank as a major institution for delivering such finance to agriculture.

Existing non-banking institutions also began, in a small way, to make agricultural loans. The National Federation of Savings and Loan Cooperatives began an agricultural credit program in 1967 which grew such that in 1975 it accounted for 10 percent of their total annual credit flows⁴. The Center for Social and Economic Development is a private organization, run for and by campesinos in the Cochabamba area. They began agricultural credit in 1965 from their own funds. By 1973 they had obtained some financing from commercial banks⁵.

Over the 1966-1975 period the Central Bank has employed five basic monetary policy instruments to influence the composition and flow of credit and savings in the economy and which thus affect the flows in agriculture. The instruments are: cash reserve requirements, rediscount rates, maximum interest rates, requirements for composition of bank loan portfolios, and rediscounts from special lines of credit. We confine our remarks to the last three since they have impacted most directly on the RFMs.

4 The Federation is primarily composed of credit unions. For further information see *Royden*.

5 A new credit program is now being initiated under AID funding by the National Community Development Service (SNDC) which is an autonomous government agency responsible for developing rural cooperatives in Bolivia. The credit activities were begun in 1976 so little information is available about credit use. However, the program does appear to be reaching very small farmers-the average plot size financed the first production cycle was 1.2 hectares (*Thornton* 1977).

Maximum loan rates have been employed to influence both the amount of credit demanded and supplied and minimum and maximum deposit rates to influence savings. The interest rate structure over the 1966-1975 period is presented in Table 1. It is noteworthy that the levels and structure of interest rates has not varied substantially over the period.

The structure, however, has favored production-oriented loans. In the commercial banks a person borrowing for production purposes paid a rate of 6 to 9 points less than the person borrowing for commercial purposes. From the lender's perspective, however, the net return to the bank has been the same for each type of loan since 1969. Customers of ADB receive even more concessional rates. The interest charged on loans by this institution has been 6 to 9 points below that charged by commercial banks for similar loans. Since 1969 the interest limits on time deposits have typically been minimum (10 percent) but this limit was established as a maximum in 1972 and 1973.

Beginning in 1967 the Central Bank established requirements for the composition of the commercial banking system's loan portfolio in order to selectively direct credit to priority production-oriented activities. Prior to that time more than one-half of the commercial banking system's credit was for non-productive purposes. The ultimate objective was to have 70 percent of the portfolio in production loans by the end of 1971; intermediate steps of 50 and 60 percent were established for 1969 and 1970. In August of 1975 the requirements were increased to 75 percent.

To facilitate the implementation of these requirements a Special Fund for Economic Development was established in 1967 with assistance from the United States Agency for International Development. These monies were to be rediscounted in the banking system for production loans. Since that time other special credit lines, many with foreign assistance, have been established for rediscounting agricultural loans. They have been major sources for the banking system to finance agricultural production and to meet their portfolio composition requirements. Between 1967 and 1975 a total loan volume of more than 139 million dollars was rediscounted ⁶.

6 Unpublished data of the Banco Central de Bolivia.

Table 2

GROSS DOMESTIC AGRICULTURAL PRODUCT AND AGRICULTURAL CREDIT
(Millions 1966 pesos)

Year	Gross Domestic Agricultural Product	Total Agricultural Credit in Banking System (annual flow)	Agricultural Credit as % of Total Credit in Banking System	Ratio Agriculture GDP to Total Agricultural Credit
1966	1746	127	21.1	13.8
1967	1570	42	7.3	37.6
1968	1638	46	7.1	36.0
1969	1602	80	11.4	19.0
1970	1540	74	10.4	20.8
1971	1581	122	15.0	12.9
1972	1590	178	18.2	19.1
1973	1747	280	18.4	6.2
1974	1986	208	16.9	9.6
1975	2262	192	16.2	11.8

Source: Banco Central de Bolivia, Gerencia Técnica, Estudios Económicos y Estadística, *Boletín Estadístico*, No. 220, Marzo, 1976, La Paz, Bolivia and USAID/BOLIVIA, *Estadísticas Económicas*, No. 14, 1973.

4. The Performance of RFMs with Respect to the Goals Assigned to the Agricultural Sector

How did Bolivian RFMs perform over the 1966-1975 period? To address this question two sets of criteria need to be applied. First, the performance of RFMs needs to be analyzed in terms of the goals for the agricultural sector over the period. As indicated previously these goals were to increase agricultural production in order that Bolivia would become more self-sufficient in basic food crops and livestock products, develop capabilities for exporting agricultural products and, to a lesser extent, to improve the lot of the campesino. Second, RFM performance needs to be analyzed in terms of how the RFM is accomplishing the roles that a RFM should play. As indicated in the introduction these include the

mobilization of savings; the efficient allocation of resources among regions, agricultural activities and farmers and the linkage with other financial markets. Particular attention will be paid to the effects of inflation and high loan delinquency rates on the RFM.

In the following sections the performance of Bolivian RFMs are judged against these goals and evaluation criteria. In several instances, the problems in working with incomplete data severely limit the analysis and clearly serve to point up the nature of research problems in working with RFMs in less-developed countries.

1. Increasing Agricultural Output

As shown in Table 2 real GDP in agriculture grew very little from 1966 through 1972. Beginning in 1973, however, considerable progress was made when sharp

Table 3
ANNUAL CREDIT FLOWS TO AGRICULTURAL PRIVATE SECTOR
IN BOLIVIAN BANKING SYSTEM 1966-1975 (Millions of 1960 pesos)

Year	Agricultural Credit		Percent of Total	Agricultural Credit		Agric. Credit as % of Total
	Banco Agrícola de Bolivia	Banco del Estado & Private Comm. Banks		Banco Agrícola de Bolivia	Banco del Estado & Private Comm. Banks	
1966	36.2	90.4	28.6	71.4		1.6
1967	37.5	4.1	90.1	9.9		0.8
1968	33.7	11.8	74.0	26.0		1.9
1969	66.0	13.7	82.8	17.2		2.2
1970	55.1	19.0	74.3	25.7		2.9
1971	53.7	68.7	43.9	56.1		9.0
1972	108.8	69.6	61.0	39.0		5.6
1973	177.8	102.5	63.4	36.6		7.6
1974	137.4	70.2	66.2	33.8		6.4
1975	110.2	82.0	57.3	42.7		7.6

Source: Banco Central de Bolivia, Gerencia Técnica, Estudios Económicos y Estadística, *Boletín Estadístico*, No. 220, Marzo, 1976, La Paz Bolivia and Banco Agrícola de Bolivia, Departamento de Planeamiento

increases in GDP of 9.9, 13.6 and 13.8 percent occurred for 1973, 1974 and 1975 respectively. Agricultural credit in the banking system followed a different pattern. After 1967 the annual real flows of credit tended to increase rapidly up to 1973 and then declined thereafter⁷. The ratio of agricultural GDP to total agricultural credit has varied considerably but with a gradual tendency to decline (suggesting that the marginal and hence average productivity of credit is declining). How is the decline explained? Some of the decline in the ratio could be due to declining marginal productivity of the additional credit. However, much of the expansion of agricultural output has come from opening fertile new lands in the Oriente and through technological innovations which would suggest that the ratio should tend to increase due to the increasing marginal productivities of these investments. On the other hand, this positive influence on the ratio may be off-set by the relatively lesser participation of the informal market credit in total agricultural credit which, over time, could account for some decline in the ratio. Although estimates of the amount of informal credit are not available, it would be expected that the rate of increase from these sources was considerably less than that from formal sources. This would result in a gradual decrease in the ratio, other things remaining the same.

We submit that, however, the best explanation of the decline in the ratio is found in the inadequate performance of the RFM and the roles that interest rate and selective credit policy play. Recall that in 1967 the Central Bank required all commercial banks (including the State Bank) to increase the proportion of production loans in their loan portfolio. Simultaneously, special rediscount lines of credit for agricultural production also were established. The effect of these policies on the banking system is apparent in Table 3. After 1967 the volume of credit in the commercial banks followed a general trend of steady annual increases, the proportion of agricultural credit in the banks' loan portfolios rose, and the commercial banking system increased its relative financial participation in agriculture.

To be sure a substantial portion of the banking system's additional financing of agriculture was direct to agricultural production but it is also very likely that the credit figures are subject to « agricultural illusion » in that much credit was used for non-agricultural purposes although ostensibly it was listed on the banks'

7 The figure for 1966 suggests an abnormal year but the causes for the high volume have not been ascertained.

books as an agricultural loan. Credit is fungible and loans are easily utilized for other investment or consumption activities. Consumption spending particularly is encouraged when borrowers know that they will not be prosecuted for default. This is prevalent in Bolivia where many large farmers have sufficient political influence to avoid prosecution.

The government's policy of concessional interest rates for agricultural loans exacerbates the problem. The interest subsidy encourages farmers to borrow for agricultural purposes but actually use the funds for other purposes. Many have multiple occupations and thus it is easy for them to shift funds from one activity to another. Of course, it is very difficult to quantitatively verify such shifts. But, as an illustration, the total amount of credit identified for soybean production from 1972 to 1975 was greater than the availability of seed, land and other inputs for soybean production which strongly suggests the credit was used for other purposes.

Inflation is another factor which would encourage such farmer behavior and contribute to agricultural illusion. Since the nominal rate of interest is predetermined in a contractual arrangement, the borrower who anticipates inflation would expect the real rate of interest to be considerably lower. Should the real rate be negative he would actually receive an income transfer. As shown in Table 4, Bolivia has not suffered serious inflation by LDC standards, with the exception of 1973 and 1974. In those two years, there was a tremendous increase in agricultural credit flows. This was also the period when a new and major special line of credit was introduced — the U.S. Agency for International Development FRA-1 program. The inflationary situation undoubtedly encouraged heavy borrowing from this program. The very poor loan collection record in these years may be indicative that many of the loans were siphoned off for other purposes.

In summary, since 1973 Bolivia made considerable gains in increasing agricultural output. A declining GDP to credit ratio was observed, however. This decrease could be due to declining marginal productivity in agriculture but there is little evidence to support that view. If the credit were gradually going to less productive farmers then the ratio of GDP to credit would decline. It appears, however, the more likely reason is the increased demand for credit as a result of concessional rates of interest. Cheap credit was quickly accepted by farmers but was used for other than agricultural production. The more this occurs, the greater the apparent decline in the ratio of agricultural GDP to credit.

Table 4

GENERAL CONSUMER PRICE INDEX - LA PAZ (1966 = 100)

Year	Index	Annual Percent Change
1966	100.00	
1967	111.18	11.2
1968	117.28	5.5
1969	119.88	2.2
1970	124.53	3.8
1971	129.11	3.7
1972	137.51	6.5
1973	180.83	31.5
1974	294.43	62.8
1975	317.92	7.9

Source: Banco Central de Bolivia, Gerencia Técnica, Estudios Económicos y Estadística, *Boletín Estadístico*, No. 220, Marzo, 1976, La Paz - Bolivia

Table 5

AMOUNTS OF FOREIGN AID FOR AGRICULTURAL CREDIT BY DONOR 1966-1976

Donor	Amount (thousands US dollar)	Percent of Total
USAID	38,189	41.4
World Bank	21,076	22.8
Inter-American Development Bank	8,800	9.5
Banco do Brazil	18,000	19.5
Other	6,282	6.8
TOTAL	92,347	100.0

Source: Private communications from the respective donors, Banco Agrícola de Bolivia and Banco Central de Bolivia.

II. *Exportation and Import Substitution*

In order to better satisfy the growing domestic demand for foodstuffs and to alleviate pressures on the balance of payments the Bolivian government directed credit to import-substitution and export crop activities. Although considerable strides were made in these directions the country had still not become self-sufficient in foodstuffs by 1975. In that year Bolivia imported about 30 million dollars of food staples (IDB, p. 160).

Historically Bolivian agricultural credit has been directed to finance products for domestic consumption. Such production was insufficient to meet local demand, however, and the country has typically been an importer of food items. Beginning in the 1960's, under the stimuli of a number of foreign aid loans, considerably more credit was channeled to activities such as wheat, corn, rice and meat. In Table 5 data are presented on the amounts of foreign assistance authorized for agricultural credit over the 1966-1976 period. Approximately 90 percent was designated for domestic consumption.

Cotton, which is grown exclusively in the Santa Cruz area, has been the only major agricultural export. Beginning in 1972 both ADB and the Central Bank, through special credit lines, began major programs to finance the production of this crop. Over the 1972-1975 period 40 percent of the credit extended by ADB was for cotton.

It can be concluded that the RFM functioned relatively well in directing credit to designated activities to meet the major sector goals. This is not surprising since government policy forced the lending in this direction through special credit programs for financing certain crops. The role of foreign donors was especially important. It would be expected, however, given the interest rate policy, that considerable agricultural illusion prevailed.

Further, the existing distribution of credit has resulted in considerable inequity among regions and groups of farmers. Whereas improving the lot of the campesinos has been a sector goal, the discussion of this problem is combined with that on distribution in the following section.

5. **The Performance of Bolivian RFMs with respect to the Roles a RFM Should Play**

I. *Savings Mobilization*

Savings data in Bolivia are especially sketchy. No centralized data collection sy-

stem on urban or rural savings exists in the country and only fragmentary information is available on volumes and trends — especially for the rural areas. Total annual savings deposits for most formal market institutions are shown in Table 6. The State Bank and private banks are the most important sources of savings; however, those held by the national social security system and for urban housing made up a significant portion of the total in recent years. In the last three years, savings held by government or quasi-government institutions accounted for roughly 60 percent of the total recorded by the Central Bank. Private banks were the most significant among financial institutions who held savings in the rural areas. The ADB has not received savings deposits. Credit unions appear to have accounted for less than 1 percent of total savings deposits although, due to incomplete data, their role could be more significant.

Table 6

SAVINGS DEPOSITS BY FINANCIAL INSTITUTION 1964-1975
(Millions of Bolivian Pesos)

Year	Others ^a	Total Savings Deposits			Savings As % of Total Credit Flows
		State Bank	Private Banks	Total	
1964		9.1	14.8	23.9	—
1965		12.7	18.7	31.4	—
1966		22.3	44.6	66.9	11.1
1967		39.6	65.1	104.7	16.6
1968		77.4	101.3	178.7	23.7
1969		118.3	132.8	251.1	30.0
1970		165.7	168.7	334.4	37.7
1971		211.9	220.3	432.2	41.1
1972		266.9	285.9	552.8	29.8
1973	175.0 ^a	329.5	308.8	813.3	29.5
1974	288.5	460.6	452.5	1,201.6	33.3
1975	437.7	602.5	711.1	1,751.3	46.4

^a Includes social security, housing and other specialized non-bank savings institutions and credit unions. Data are not readily available for earlier years.

Source: Central Bank of Bolivia, *Sistema Financiero de Bolivia, Fuentes y Usos de Fondos 1973-75*, Novembre de 1976.

Table 6 demonstrates that Bolivians clearly have been increasing their cash savings in nominal terms. However, much of the savings is involuntary where deductions are made from salaries for social security and housing programs or from the purchase and sale of products and loans through the credit unions. Nominal deposit rates have been established at 10 percent by the Central Bank with almost no variation over the past 7 years ⁸.

Again referring to Table 6, total savings deposits as a percent of total annual flows of credit increased from 11.1 percent in 1966 to 41.1 percent by 1971 which suggests the system was steadily mobilizing savings relative to annual credit flows. Some of that strength was lost, however, during the early 1970's. This was probably due to the large difference between the deposit rate of 10 percent and the high rates of inflation during the period. Assuming that the quantity of credit demanded increases and savings supplied declines as the real rate of interest falls, it would be expected that during times of inflation and with relatively fixed nominal interest rates that the ratio would decline as it did in Bolivia. The upswing in the ratio after the inflationary period also demonstrates this phenomena.

For lack of data the extent of savings mobilization in the rural areas is not yet known. It is probable, based on evidence from other countries, that farmers practice saving in kind in the form of food stocks, livestock, and jewelry. Such savings don't enter the formal financial markets until an appropriate institution exists for mobilizing and protecting the farmer's savings (Donald, pp. 159-177). Few such outlets now exist in rural Bolivia. The exceptions include some branches of the State Bank and the rural credit unions and cooperatives.

The National Federation of Credit Unions (FENACRE) is now making an attempt to directly mobilize rural savings, although historically it has operated in the urban areas. Credit unions in the rural areas have been just as successful in mobilizing savings and in obtaining loan repayment from their members as have the urban groups. For both areas the volume of savings exceeded the value of loans outstanding for 1975. However, savings are mandatory and no interest is paid on such deposits. Nevertheless, the experience of FENACRE in the rural areas does suggest considerable potential exists for mobilizing savings provided appropriate financial institutions exist.

⁸ It should be noted that in two years, 1973 and 1974, the 10 percent rate was considered as a maximum rate.

II. *Resource Allocation and Credit Distribution*

A major role of RFMs is to effectively allocate credit to those uses which bring about the greatest benefit to society. Thus, one would expect a well-functioning market to extend credit to those regions and producers which were relatively capital short, and in all probability, the returns were relatively high.

The Bolivian government in its efforts to raise agricultural production and thus reduce imports and expand exports made the conscious decision to channel financial resources to the Oriente region, particularly the Santa Cruz area. No doubt they reasoned this was the most rapid and least-cost way of obtaining additional output. This policy is reflected in the regional distribution of credit. Under the FRA-1 program Santa Cruz received 70 percent of the loan volume, 42 percent of the total number of loans and accounted for 80 percent of the hectareage financed between 1972 and 1975. Emphasis was placed on financing soybeans, wheat, corn and rice. Likewise ADB concentrated its financing in the Santa Cruz area which received 76.5 percent of the total bank credit over the 1964-1974 period. The Mountain Valley region received the second largest amount while the Altiplano region was a distant third (Ladman, Tinnermeier and Torrico, pp. 74, 117).

If the RFM were functioning correctly this would mean resource productivities were higher in the Santa Cruz area compared with other regions. However, most LDCs, including Bolivia, do not have data on resource productivities in agriculture. Thus, without further and rather extensive research, we cannot conclude much about the marginal productivities of this particular credit distribution. As shown in a previous section, however, the ratio of GDP from agriculture to credit has been declining over time suggesting declining marginal and average productivities of credit use. But many variables other than productivity affect that ratio so what is actually taking place is unclear.

Nevertheless, it does appear that existing governmental policy has created some inequities in the system thereby affecting the marginal value productivities of individual borrowers. Certainly concessional rates of interest, especially during the years of high inflation, have biased credit towards more capital-intensive investment leading to on-farm misallocation of resources. Furthermore, lower interest rates in agriculture encourage additional borrowing for what are said to be agricultural purposes but which in fact are non agricultural activities which leads to intersectoral misallocations. There is suspicion in Bolivia that some of the

heavy borrowing for cotton and soybeans in the early 1970's never was used for that purpose. Without doubt, the large jump in credit flows during the high inflationary period of 1972-1974 suggests borrowers were not only meeting the increasing costs of production but also were taking advantage of negative real rates of interest. Of course, the farmers in the Oriente benefited most from these policies.

Although the data for distribution of credit by farm size are very incomplete, it appears few of the farmers in the Oriente are small size. A number of proxies were utilized to determine the class of farmer typically served by the formal market. All demonstrate that the FRA-1 and ADB loans and loan volumes were concentrated in the Oriente, where medium and large-scale farms dominate, and little went to the Altiplano and Mountain Valleys where small farmers are located (Ladman, Tinnermeier and Torrico).

Since the 1952 Revolution the government has made at least token efforts to finance campesinos-beneficiaries of the land reform program. Continued emphasis has been placed on using cooperatives as financial intermediaries. Most of these groups have been financed by ADB but have been characterized by high delinquency and, as a consequence, the bank has looked to other group lending schemes as well as loans to individual farmers in an attempt to solve the problem. In 1974 the government developed programs specifically aimed at small farmers with U.S. Agency for International Development funding support. One of these loans, Fra-2, was for a special line of credit to be rediscounted to the commercial banks for loans to small farmers. The second was a small farmer loan administered by the ADB. More recently, the development of credit cooperatives has been funded by AID. It is too early to judge the experiences from these programs as few loans had been made by the end of 1975.

Large regional distortions in resource allocation are evident in Bolivia. The informal credit market is the major source of funding for the small farmers in the Altiplano and Mountain Valley regions. Interest charges are thought to be considerably higher than in the formal market. The formal, or institutional credit market primarily services the medium and large farmers of the Oriente, and to some extent the Mountain Valleys, with concessional rates of interest. These two, almost completely separate, fragmented markets encourage heavy capital investment in the Oriente and labor-intensive production in the small-farm areas. If labor were very immobile, such resource allocation might be justified since labor

is relatively abundant in the highlands and scarce in the lowlands. But labor is mobile over time (as evidenced by considerable internal migration to the Oriente) and such market fragmentation results in very serious misallocation of resources among the regions and does not appear in the best interest of society.

The import-substitution and export policies also exacerbate this misallocation among regions since the activities supported by these two public policies include sugar cane, cotton, soybeans, and, to some extent cattle, all of which are grown in the Oriente. Thus, not only do concessional interest rate policy and inflation lead to favoring one region but other policies further re-enforce that distortion in resource use. This is probably one of the most surprising findings to researchers of Bolivian agriculture. Extensive land reform was implemented in the 1950's which should have led to more equity among farmers and regions in resource allocation but this obviously has not happened. This points out the importance of many other public policies beside land tenure, one of which is credit policy.

Finally, a study of loan portfolios suggests the term structure of agricultural lending has been gradually shortening. This raises the question of resource allocation over time. Ideally, resources must be allocated over time so that their discounted marginal value productivities are equal. That is, society's preference for present versus future consumption is taken into account. A shortening term structure implies the marginal productivity of short-term investments is increasing relative to longer term investments. This conclusion conflicts with the observation that very little capital accumulation has place taken in Bolivian agriculture and, therefore, longer-term investments should produce very high returns. Again, the concessionary interest rate policy and inflationary forces may explain this paradox. Lending institutions tend to shorten loan terms if the permitted loan rates set by the Central Bank or monetary authority do not cover administrative and other costs. Shortening the term structure provides greater flexibility to the lending costs.

III. *Financial Market Linkages*

Bolivian data do not permit a quantitative analysis of inter-market flows of funds. It is clear, however, that over the 1966-1975 period the financial markets have not

functioned very well in providing linkages between RFMs and other financial markets in the Bolivian economy without policy mechanisms which have forced the linkages.

Historically funds did not flow to agriculture through the commercial banking system until the Central Bank imposed requirements for production loans in the commercial banking system's portfolio and established the complementary special lines of credit. Much of this funding came from foreign aid. As shown in Table 3 these policies forced more credit to agriculture through the commercial banking system. Also, ADB's growth in lending capacity has essentially come about through infusions of new capital from foreign aid programs and special credit lines. Unfortunately none of these programs have provisions for directly channeling funds to non-banking institutions such as cooperatives and credit unions.

Interest rate policy may explain why funds did not flow to agriculture without policy stimuli. As shown in Table 1, although there were concessional rates offered for agricultural loans in the commercial banking system, the banks received no interest incentive to lend to agriculture since their net return was the same for all loans. This policy did not recognize that the banks might have wanted a higher net return from agricultural loans to compensate them for the high degree of risk normally associated with agricultural production. Had the banks been able to charge higher interest rates then they might have channeled more credit to agriculture. From 1966 through 1972 the average productivity of credit in non-agricultural activities was considerably lower than in agriculture. This suggests more money should have flowed to agriculture but it did not; this implies that bankers did not perceive their return high enough to compensate them for the risk.

The savings data suggest that few savings are being mobilized among the large masses of farmers and thus the agricultural surplus is not being effectively utilized to finance agricultural production or to flow through the system to finance non-agricultural production. Again as shown previously, interest rate policy along with an inadequate institutional structure appear to be the major culprits. Interest rate policy also works to the disadvantage of the ADB. This institution resists borrowing in financial markets, except those where concessional rates are charged, such as foreign aid, because it is restricted to charging a relatively low rate of interest to its clients. The low loan rate plus high administrative costs

and delinquency rates put considerable pressure on the institution and keep it from actively borrowing money at market interest rates.

6. Loan Delinquency

The functioning of Bolivian RFMs is severely handicapped by serious loan collection problems in all banking institutions. Between 1972 and 1975 the ADB experienced an average annual delinquency rate of 44.5 percent. If a number of previously delinquent loans had not been refinanced the rate would have been even higher ⁹. In the same time period the public and private commercial banks often experienced delinquency rates of 30 to 50 percent ¹⁰. A loan collection problem of this magnitude quickly erodes the banking system's loanable funds and requires heavy infusions of fresh capital to allow the system to maintain its present level of agricultural lending much less increase the volume of such loans. With a low level of savings mobilization in agriculture considerable pressure is placed on the rest of the economy and foreign donors as sources of loanable funds for the sector. Moreover such a record easily discourages bankers from lending to agriculture. For example, in 1976 the State Bank withdrew from agricultural lending due to the serious collection problems they encountered under the FRA-1 program.

The causes of delinquency are many. The roles of a concessional interest rate policy and inflation have already been discussed. Politics has also played an important role. Numerous loans were made on a political basis, others were not collected for political reasons. These practices are a carry over from earlier times when Bolivia had not begun to reach its present level of economic activity. The government and bankers have continued to follow these practices to their own favor.

Another reason is the lack of absorptive capacity on the part of both banks and farmers to handle large volumes of new credit. For example, the FRA-1 revolving

9 Private communication, Banco Agrícola de Bolivia. Delinquency rates are computed as percentage of outstanding loan portfolio at the end of the year.

10 For example over the 1972-1975 period the percentage of loans repaid under the FRA-1 program were 20, 35, and 43 percent for the ADB, State Bank and the private commercial banks respectively.

trust fund was established in 1972 but by 1975 was virtually exhausted for lack of repayment of earlier loans. One reason would appear to be that the banks did not have the personnel and expertise to wisely disburse this credit. Many farmers could not use it effectively or chose not to use it for the purpose intended. The high delinquency figures for the non-traditional crops compared to cereals and vegetables such as cotton and soybeans suggest this is the case. Market conditions, weather, and disease also contribute to delinquency. The Altiplano and Mountain Valley regions are very subject to frost. Cotton production in the Oriente represents a case of mixed political and natural problems. Bad growing conditions severely damaged the 1972 crop. In 1973 when world prices rose sharply the cotton growers (with the support of the government) refused to honor previous forward contracts fixed at considerably lower prices; as a result the cotton went unsold and was left to rot. In 1974 natural causes again intervened. Thus in all three years there were factors giving rise to delinquency. Since all banking institutions carried large volumes of cotton loans all were severely impacted.

Conventional wisdom in Bolivia is that the repayment rate among small farmers is much higher than for larger farmers. Recent pilot studies among well-managed cooperatives and credit unions support this position. Bankers also agree. Some reasons may be that this class of farmers has little political influence and realizing its dependence on credit does not want to jeopardize its future access by defaulting.

7. Summary and Conclusions

This paper examines the structure and performance of Bolivian formal RFMs over the 1966-1975 period and the role of public policy in influencing their performance. Prior to 1967 the structure of RFMs was simple and there was little formal structure for mobilizing savings nor providing linkages with other financial markets. Although there was rhetoric about lending to campesinos most credit went to larger farmers and loan collection was a major problem. Government emphasis on developing the Oriente caused the bulk of credit to flow to that area. In summary RFMs were not fulfilling their expected roles.

In the mid-1960's the government developed broad goals to increase the degree of self sufficiency in basic food stuffs and to develop agricultural exports. Conti-

nued emphasis was placed on developing the Oriente region not only as a means to redistribute the population via colonization projects but also as the most rapid way to increase output. Policy measures were established to selectively and quantitatively direct more credit to agriculture. The large bulk of the credit went to the Oriente. ADB increasingly received loans from foreign donors for specific projects. The Central Bank established high percentage requirements for production loans in the commercial banks portfolios and expanded its special credit lines for rediscounting loans to ADB and the commercial banks. The results were that the real value of annual agricultural credit flows increased substantially up to 1973 for all institutions and that the commercial banks' proportion of the formal market's annual loans to agriculture increased from virtually nothing in 1967 to 43 percent in 1975. Agricultural output expanded considerably, considerable cotton was exported and substantial progress was made in increasing the domestic production of staples such as rice, wheat and meat. Most of the gains were obtained in the Oriente region. It can thus be concluded that the RFMs functioned fairly well in accomplishing these objectives but the analysis of the sketchy data suggests that they were not very successful in performing the roles of mobilizing savings, linking with other financial markets, reducing loan collection problems, nor in equitably distributing credit among farmer classes and among regions within the country. The reasons are found in the institutional structure and policies employed.

The institutional structure has not provided the framework nor the operational means for a concerted effort to mobilize savings on a broad scale within the existing institutions except among credit unions and some cooperatives. This has severely limited the ability of the agricultural sector to capture part of the agricultural surplus in the form of savings and in turn to transfer the savings to borrowers via intermediation to other financial markets or within RFMs themselves.

The structure has evidenced a limited absorptive capacity to effectively utilize and process large amounts of new infusions of credit in the system. Undoubtedly much can be attributed to the general lack of solid training of bank personnel in bank and farm management. The government's attempt to utilize policy measures to rapidly make the State Bank a major agricultural lending institution is an example.

As noted previously, this institution's proportion of total bank credit to agricul-

ture went from almost zero in 1967 to more than 28 percent in 1975. Yet, the high delinquency rate of these loans caused this institution to withdraw from lending to agriculture in 1976.

The lack of absorptive capacity is exacerbated by the heavy importance of politics in agricultural lending. Often loans are made on the basis of political influence rather than economic considerations. Unfortunately these same borrowers also have enough influence to avoid paying off the loan. Historically this phenomenon has plagued the ADB but has also affected the commercial banks as they became more involved in agricultural lending. The record is much better with credit unions and the Center for Social and Economic Development Program where the administrative capacity of the institutional structure is stronger relative to its loan volume and the clientele are less politically influential.

Credit policy has been designed to counteract the deficiencies of the market to force the banking system to direct more credit to agriculture and to selectively channel this credit to the production of priority items. This has been a means to direct more domestic savings to agriculture as well as to utilize foreign economic assistance for agricultural production. As was observed previously, the policy forced too much credit on the system relative to its absorptive capacity which resulted in the inefficient use of credit and consequent collection problems.

Another policy instrument, the structure of interest rates, contributed seriously to the set of problems. The real rate of return on savings was not adequate to encourage savings relative to alternate opportunities. This in combination with an inadequate institutional structure discouraged savings in rural areas. The real rate of interest return to bank loans was not adequate to encourage their extensive lending to agriculture. If the Central Bank had not employed portfolio composition and rediscount policies to force credit to agriculture it is doubtful that the banks would have had much incentive to lend to that sector. The problem is worsened in the case of the ADB because of the concessional rates at which they lend. They, more than the commercial banks, are under a cost-price squeeze which is exacerbated by their relatively high costs of administration and credit delivery.

The concessional rates for agricultural loans impact importantly on credit use, distribution and repayment. From the banker's view the low real rates of return encourage lending to larger farmers in order to economize on administrative and delivery costs thus there is a built-in bias against lending to the campesinos and

to risk-prone activities. On the demand side the concessional rate encourages borrowing. The relatively inexpensive cost of borrowing will cause farmers to use credit where the expected rate of return is less than the opportunity cost of the funds elsewhere in the economy. Since credit is readily fungible the funds may be subject to « agricultural illusion » where the funds are borrowed for agricultural purposes but actually used for other purposes. The problem is exacerbated when high rates of inflation exist such as occurred in 1973 and 1974. In those years the real rate of interest was negative and thus borrowers actually received an income subsidy. When the funds are channeled into non-agricultural pursuits the problem of loan collection will be worsened particularly if they go to consumption or activities which do not provide a sufficient income to repay the principal and interest in the required time. This in combination with inadequate loan selection, procedures, supervision and the non-repayment mentality observed in Bolivia work against loan repayment and undoubtedly explain the very poor loan collection record of the banking system.

There has been considerable rhetoric about credit for the campesinos but in practice lending has been concentrated with the larger farmer especially in the Oriente region. Until 1975 there were no credit policy measures which caused the system to emphasize small farmer credit; rather policies were designed to finance increases in overall output in order to accomodate the import substitution and export promotion goals. Moreover, contrary to expectations the concessional interest rate policy worked against lending to the campesino. Only in the case of the ADB and some selected cooperatives was any effort made to lend to the campesino but cost pressures did not encourage the ADB to work extensively with this group. Finally, under pressure from the World Bank and the United States Agency for International Development, programs for small farmer lending were put into effect beginning in 1975. Whether they will be successful remains to be seen.

Based upon this study several policy recommendations for Bolivia are obvious. Clearly, the interest rate structure needs to be revised. Concessional rates should be discontinued and perhaps the general structure raised to a level which more closely approximates the opportunity costs for borrowers as well as savers. Institutional changes need to be undertaken. A system for mobilizing rural savings should be established. The banking system needs to increase its absorptive capacity for credit through developing more effective and lower cost credit delivery

systems. More consideration should be given to organizations such as DESAC and credit unions as a means of reaching larger numbers of small farmers. Moreover, Bolivia needs to direct more resources towards infrastructural development in order to provide a setting which will indirectly facilitate credit use by lowering the costs and risks associated with input and product markets, the availability of production and market information and the introduction of new profitable technological inputs.

The strong, and obvious emphasis by the Government of Bolivia on agricultural production in the Oriente has led to major resource allocation and income distribution problems. While progress is evident towards the goals of import substitution, exports, and increasing agricultural output, policies to reach these goals tend to be in direct conflict with equity and farmer income goals. Thus, if the Government of Bolivia and the international donors wish to assist the larger mass of the rural poor, the majority of which are small farmers located in the Altiplano and Mountain Valleys, then significant changes in agricultural credit policies at the national level are likely to be required.

Bolivia has started from a position of very low per capita income, a high degree of wide-spread poverty among traditional farmers, a lack of experience in quality commercial agriculture, and a paucity of infrastructure of any kind in the countryside. Within such an environment it is difficult for a viable RFM to become established much less operate effectively. Yet as credit institutional structures and credit policy measures were established it was found, as in many other LDCs, that the RFMs still did not perform their expected roles and often gave results which were antithetical to present development goals. Thus the Bolivian case provides another example of the need for revising RFM structure and policy in the less-developed world in order to ensure that the agricultural sector can play its proper role in the course of economic development and that rural poverty can be alleviated.

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LA POLITIQUE DE CREDIT ET LES MARCHES FINANCIERS RURAUX EN BOLIVIE

RESUME

L'exposé examine la structure et le fonctionnement des marchés financiers ruraux formels boliviens dans la période 1966-1975 et le rôle de la politique gouvernementale.

Vers la moitié des années '60 le gouvernement se donna le but d'augmenter le niveau d'auto-suffisance alimentaire et de développer les exportations de produits agricoles. On accentuait l'exigence de développer la région Oriente non seulement en tant que moyen de redistribution de la population à travers la colonisation, mais aussi en tant que méthode rapide d'augmenter la production. On élaborait donc des politiques visant à canaliser plus de crédit vers l'agriculture sélectivement aussi bien que qualitativement. Une partie importante de ce crédit fut destinée à l'Orient. La Banque de Développement Agricole reçut de plus en plus des crédits de l'étranger pour des projets spécifiques. La Banque Centrale établit des standards de pourcentage élevés pour les crédits à la production dans le portefeuille des banques commerciales et étendit ses lignes de crédit spéciales pour l'escompte des prêts à la BDA et aux banques commerciales ce qui amena à une augmentation substantielle de la valeur réelle du flux de crédit agricole annuel. La production agricole augmenta considérablement de même que l'exportation de coton et la production de denrées telles que le riz, le blé et la viande.

Les augmentations les plus importantes ont été réalisées dans la région Oriente. On peut donc conclure que les MFR ont rempli de façon satisfaisante leur fonction dans la réalisation de ces buts, tandis qu'ils n'ont pas été aussi satisfaisants dans la mobilisation de l'épargne, les liens avec les autres marchés financiers, les problèmes concernant le remboursement des prêts et la distribution équitable du crédit parmi les classes d'agriculteurs et parmi les régions du pays. Cette défaillance dépendrait de leur structure institutionnelle et des politiques employées.

La structure institutionnelle n'a fourni ni le cadre ni le moyens pour mener une action concertée visant à la mobilisation de l'épargne sur une grande échelle dans les institutions existantes à l'exception des caisses populaires et de quelques coopératives. La structure a montré une capacité limitée d'absorber, d'utili-

ser efficacement et de traiter des nouvelles injections massives de crédit dans le système. Sans aucun doute, cela dépend en grande partie d'un manque général de formation solide dans les cadres bancaires et dans le personnel qui s'occupe de la gestion des fermes. Ce manque de capacité d'absorption est aggravé par la grande importance du facteur politique dans la distribution du crédit agricole. On octroie souvent du crédit sur la base de l'influence politique plutôt que des considérations économiques et malheureusement ces clients ont aussi assez d'influence pour éviter le remboursement du prêt. La situation est beaucoup plus satisfaisante dans les « credit unions » et dans le Centre pour le Programme de Développement Economique et Social.

La politique de crédit a été conçue de façon à compenser les faiblesses du marché et à forcer le système bancaire à canaliser plus de crédit vers l'agriculture et plus particulièrement vers la production des denrées prioritaires. Comme on a déjà dit, cette politique a transvasé trop de crédit dans le système par rapport à sa capacité d'absorption.

Un autre instrument de cette politique, la structure des taux d'intérêt, a contribué à aggraver ces ps. Le taux réel sur l'épargne n'était pas assez élevé pour encourager l'épargne plutôt que des investissements alternatifs. Ce fait et une structure institutionnelle inadéquate ont découragé l'épargne dans les zones rurales. Le taux réel d'intérêt actif pour les banques n'était pas assez élevé pour encourager un octroi de crédit très répandu dans le domaine agricole. Si la Banque Centrale n'avait pas utilisé la composition du portefeuille et des politiques de réescompte pour forcer le crédit à l'agriculture, sans doute les banques ne se seraient pas engagées dans ce secteur. Le problème est particulièrement difficile dans le cas de la BDA à cause des taux réduits qu'elle applique. Elle, encore plus que les banques commerciales, se trouve dans l'étau coûts-prix puisque les coûts de gestion et de distribution du crédit sont relativement élevés.

Les taux réduits pour les prêts à l'agriculture pèsent beaucoup sur l'emploi, la distribution et le remboursement du crédit. Du point de vue de la banque, les taux réels de rendement bas l'encouragent à octroyer le crédit aux grands fermiers à fin d'économiser sur les coûts administratifs et de distribution et il y a donc un préjugé implicite qui l'empêche d'octroyer des prêts aux campesinos ou bien pour des activités hasardeuses.

Du côté de la demande, le taux réduit encourage l'emprunt. Le coût relativement bas de l'emprunt encourage les agriculteurs à utiliser le crédit où le taux de

profit probable est inférieur au coût d'opportunité des fonds dans les autres secteurs de l'économie. Puisque le crédit est facilement fongible, les fonds peuvent être l'objet d'une « illusion agricole », soit on les emprunte pour l'agriculture, mais en réalité on les utilise pour autre chose. Le problème est encore plus grave si le taux d'inflation est élevé comme c'était le cas en 1973 et en 1974, quand le taux réel d'intérêt a été négatif et les emprunteurs recevaient ainsi un subside. Quand les fonds octroyés sont utilisés pour des buts différents le problème du remboursement devient plus grave surtout si les fonds ont été canalisés vers la consommation ou des activités qui ne produisent pas assez de revenu pour rembourser le capital et les intérêts en temps utile. Si on ajoute à cela des procédures de sélection et de supervision des prêts inadéquates et la mentalité de non-remboursement qu'on observe en Bolivie on comprend pourquoi les données indiquent un taux de remboursement si bas dans le système bancaire. On a beaucoup parlé de crédit aux campesinos, mais en pratique le crédit a été concentré sur les fermes de plus grande dimensions.

Sur la base de cette étude on peut tirer quelques recommandations de politique de crédit assez évidentes. Il est clair que la structure des taux d'intérêts doit être révisée et qu'il faut entreprendre des changements institutionnels. Le système bancaire doit augmenter sa capacité d'absorption de crédit en développant des systèmes de distribution du crédit plus efficaces et moins coûteux. On devrait prendre en plus grande considération des organisations telles que le DESAC ou les banques populaires coopératives comme moyen pour rejoindre un plus grand nombre de petits agriculteurs. Aussi doit-on affecter plus de ressources au développement des infrastructures afin de créer un milieu qui puisse indirectement favoriser l'utilisation du crédit en diminuant les risques associés aux marchés des inputs et des produits, la disponibilité d'information sur la production et le marché et l'introduction de nouveaux inputs technologiques.