

**UNCLASSIFIED**

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
Washington, D. C. 20523

**BOLIVIA**

**PROJECT PAPER**

**LOW COST SHELTER THROUGH THE PRIVATE SECTOR**

AID/LAC/P-150

Project Number: 511-0567  
Loan Number: 511-HG-007

**UNCLASSIFIED**



GUARANTY AUTHORIZATION

PROJECT 511-HG-007

PROVIDED FROM: Housing Guaranty Authority

FOR : The Government of Bolivia

Pursuant to the authority vested in the Assistant Administrator, Bureau for Latin America and the Caribbean, by the Foreign Assistance act of 1961, as amended (FAA), and the delegations of authority issued thereunder, I hereby authorize the issuance of guaranties pursuant to Section 222 of the FAA of not to exceed Fifteen Million Dollars (\$15,000,000) in face amount, assuring against losses (of not to exceed one hundred percent (100%) of loan investment and interest) with respect to loans by eligible U.S. investors (Investor) acceptable to A.I.D. made to finance housing projects in Bolivia.

These guaranties shall be subject to the following terms and conditions:

1. Term of Guaranty: The loans may extend for a period of up to thirty years (30) from the date of disbursement and may include such terms and conditions as shall be acceptable to A.I.D. The guaranties of the loans shall extend for a period beginning with disbursement of the loans and shall continue until such time as the Investor has been paid in full pursuant to the terms of the loans.
2. Interest Rates: The rate of interest payable to the Investor pursuant to the loans shall not exceed the allowable rate of interest prescribed pursuant to Section 223(f) of the FAA and shall be consistent with rates of interest generally available for similar types of loans made in long term U.S. capital markets.
3. Government of Bolivia Guaranty: The Government of Bolivia shall provide for a full faith and credit guaranty to indemnify A.I.D. against all losses arising by virtue of A.I.D.'s guaranties to the Investor or from non-payment of the guaranty fee.
4. Other Terms and Conditions: The guaranties shall be subject to such other terms and conditions as A.I.D. may deem necessary.



Marshall D. Brown

Acting Assistant Administrator  
Bureau for Latin America and the Caribbean

*LJ*

LAC/DR:POrr:rjw:5/26/83:#4629C

Clearances:

GC/LAC:GWinter *HC* Date 7/20/83

LAC/SA:PFarley *PF* Date 11/7/83

LAC/DP:CZuvekas *CZ* Date 11/7/83

GC/H:MWilliams (DRAFT) Date 6/8/83

PRE/H:JHowley (DRAFT) Date 6/8/83

PRE/H:PVitale (DRAFT) Date 6/8/83

PFE/H:FConway (DRAFT) Date 6/8/83

FM/LMD:HShropshire (DRAFT) Date 6/8/83

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UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY  
AGENCY FOR INTERNATIONAL DEVELOPMENT

WASHINGTON DC 20523

PROJECT AUTHORIZATION

Name of Country: Bolivia  
Name of Project: Low Cost Shelter Through  
the Private Sector  
Number of Project: 511-0567

1. Pursuant to Section 106 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Low Cost Shelter Through the Private Sector project for Bolivia involving planned obligations of not to exceed Five Hundred Thousand United States Dollars (\$500,000) in grant funds ("Grant") over a three-year period from date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project.
2. The project ("Project") consists of expanding the capacity of the private sector in Bolivia to address the shelter-related needs of low income families.
3. The Project Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such other terms and condition as A.I.D. may deem appropriate.

Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in Bolivia or in the United States, except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have Bolivia or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

*Carl H. Leonard (for)*

Marshall D. Brown

Acting Assistant Administrator  
Bureau for Latin America  
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July 25, 1983  
Date)

Clearances:

GC/LAC:RBMeighan LA/LL date 7/20

LAC/SA:PFarley LA/LL date 7/21

LAC/DR:DBJohnson LA/LL date 7/21/85

GC/LAC:GMWinters LA/LL ecm: 6/1/83: X632-9182

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## SUMMARY AND RECOMMENDATIONS

### A. SUMMARY PROJECT DESCRIPTION

This project will provide a Housing Guaranty (HG) loan for \$15 million to the Government of Bolivia. Acting through the Bolivian Central Bank (BCB) which will assume the foreign exchange risk, the GOB will lend an equivalent of \$15 million in Bolivian pesos at the official exchange rate to the Caja Central de Ahorro y Prestamo para la Vivienda (CACEN) for onlending to the twelve associations in the Savings and Loan System and La Merced, a private multipurpose cooperative in the Department of Santa Cruz. The S&L System and La Merced will use these HG resources to expand their lending to low-income families for shelter solutions.

The Mission has concluded that the housing finance needs of Bolivia's lower income families can be addressed most effectively through the private sector institutions than through public sector institutions. This conclusion is based on an assessment of the sector, the historical performance of La Merced and the System, and the experience gained by the S&L System with the recent HG 005 Program. Under HG 005, the S&L System provided more than 4,000 loans for home improvements and basic shelter, servicing families with incomes as low as the 5th percentile on the income scale.

La Merced is Bolivia's largest cooperative. It has over 26,000 members and administers a small-farmer loan service, savings and loan, and medical insurance programs. The Cooperative has managed an active housing program for more than ten years, with most of its portfolio consisting of low-cost home improvement loans to low-income families. La Merced has been included under this HG because it has proven to be effective in providing housing finance for lower income families in the rapidly growing Santa Cruz region, and it needs additional resources to expand its housing program.

The last year and one-half has been the most difficult period for the S&L System since its inception. After sixteen years of steady growth, the System has been forced to make rapid adjustments in its operating procedures in response to Bolivia's deteriorating economic situation. Following several years of maintaining a clearly overvalued peso, in 1982 the Government found itself no longer able to do so and began to devalue. The official exchange rate, which was \$b25 to the dollar in early 1982, now stands at \$b200 to the dollar. Since foreign exchange was freely available, the S&L System, and most of Bolivia's other private financial institutions, borrowed heavily overseas and tied their loan portfolios to the U.S. dollar. While it was possible for the S&L System to adjust outstanding mortgage balances to compensate partially for the 1972 devaluation from \$b12 to \$b20 to the dollar and fully for the 1979 devaluation from \$b20 to \$b25, it was clear last year that full conversions to a de-dollarized system with adjustment of mortgage balances according to the repayment capacity of borrowers would be necessary. Consequently in July 1982 (when the peso stood at about \$b140 to the dollar), it was agreed to de-dollarize all S&L savings accounts and loans and adjust their balances upward

by 76 percent. With the exchange rate now at 200, the S&L System will be absorbing 89 percent of the losses resulting from the devaluation. The System will thus need to expand its loan portfolio, increase its earnings on outstanding and new loans and significantly increase savings deposits (in addition to possible future adjustments of loan balances with further deterioration of the exchange rate), in order to maintain the cash flow necessary to repay its dollar debt, a large part of which is guaranteed by AID. The financial analysis included in this PP shows that in order to achieve these financial objectives and to begin to initiate the operational changes also recommended, the proposed \$15 million HG must be approved now. If it is not, the S&L System will be forced to severely constrict its lending operations, a move which would adversely affect the availability of financing for shelter solutions throughout Bolivia.

The HG 007 Program will strengthen the institutional and financial capacity of both the S&L System and La Merced in a number of ways. It will provide the financial and technical assistance support required to carry out several basic operational reforms designed to help these institutions overcome serious financial problems caused by the deterioration of the Bolivian economy. It will assist the S&L System and La Merced to reduce their dependency on foreign resources by increasing the mobilization of internal savings. The S&L System will also receive support to diversify its portfolio through shorter term lending for domestic household needs, and thus increase its impact on the target group. Emphasis will also be put on the most affordable type of shelter loans made under the HG 005 Program, the refinement of cost/design methodologies which rely on materials produced locally, and the utilization of self-help and mutual assistance in addressing housing needs.

The Mission's efforts in this Program will be geared to maintaining a continuing dialogue with the GOB concerning shelter policies and strategies. This dialogue will be facilitated by the intervention in the Program of key GOB institutions such as the Central Bank and the Ministry of Finance, which have responsibility for financial and economic policies directly and indirectly affecting the shelter sector, and by long-term and short-term technical assistance to be provided with grant funds.

Finally, the HG 007 Program will have a positive impact on improving Bolivia's overall economic outlook. It will support a rejuvenation of the informal construction sector by providing financing which will supply approximately 1,500 person-years of new employment, thereby creating a corresponding multiplier effect in the economy as a whole. Moreover, the foreign exchange which this HG loan will provide will help the GOB roll over a portion of its short-term external debt on longer, more convenient terms, and thus assist in addressing its balance-of-payments problems.

B. FINANCIAL PLAN (\$000)

	<u>AID HG Resources</u>	<u>S&amp;L System and La Merced Counterpart</u>	<u>AID Grant Resources</u>	<u>Counterpart</u>	<u>Total</u>
1983	4,500	-	50	4	4,554
1984	1,500	375	150	8	2,033
1985	2,800	700	150	8	3,658
1986	200	550	100	8	858
1987	2,000	1,000	50	8	3,058
1988	4,000	1,125	50	4	5,179
LOP	15,000	3,750	550	40	19,340

C. ISSUES

1. The Economic Outlook

The issue is whether the economic outlook for Bolivia is now clear enough to permit a reliable forecast of the operations of the S&L System and La Merced with the proposed HG resources. The key economic variables which affect the financial analysis included in this PP are the exchange rate, loan demand, and interest rates.

On November 6, the Siles Government took an initial set of economic measures which represented a significant step forward in putting Bolivia's economic house in order and in setting the state for an eventual agreement with the IMF. Previous military governments had made partial efforts to address Bolivia's serious economic problems but were unwilling, or politically unable, to adopt the measures necessary to start the economy on the road to recovery. When the Siles Government took power in October, the economy was in shambles, and the country's different interest group all had conflicting ideas on essential requirements for correcting the situation. However, in less than a month, the Siles Government acted decisively in taking a set of initial, far-reaching measures which, while implying an immediate deterioration in the purchasing power of the Government's main constituent groups (urban factory workers, miners and campesinos), at the same time offered hope for economic recovery over the medium term. The economic package was based in large part on guidelines formulated by the IMF. It was embodied in over 30 decrees which ranged from complete de-dollarization of domestic loans and savings accounts and establishment of a fixed exchange rate to major price hikes on a whole range of basic commodities; e.g., the price of flour was raised nearly 500 percent, and petroleum products more than tripled.

Faced with a debt repayment schedule which could not be met, and a potential debt service ratio over 80 percent, the GOB initiated efforts to renegotiate outstanding balances due to Argentina, Brazil and a consortium of international banks. Over \$342 million was renegotiated with Argentina and Brazil, and Argentina agreed to renegotiate an additional \$250 million. The GOB also

succeeded in obtaining an extension to October, 1983 of a moratorium on payments to the consortium of private banks, at which time it hopes to renegotiate \$400 million of the total outstanding. In addition, in order to prevent continued imposition of sanctions under Section 517 of the FAA (Brooke/Alexander Amendment), the GOB paid over \$9.2 million in arrearages due to the USG, thus providing evidence of its desire to normalize relations with the U.S.

In early May 1983, a joint IMF/World Bank team completed a one month visit to La Paz. Its purpose was to lay the groundwork for negotiation of an Extended Fund Facility (EFF) by discussing possible options the GOB could adopt to cut the forecasted 1983 budget deficit, increase interest rates, and adjust the exchange rate. Discussions focused on the fiscal deficit since this was the chief area not addressed by the GOB in November 1982. At the time of the team's arrival, the deficit was estimated at 172 billion pesos, or 16 percent of GDP. Initial agreement was reached with the GOB on where at least 70 billion pesos could be cut from the investment budget. As the Central Bank could finance 50 billion pesos of the projected deficit from anticipated 1983 external resource inflows, the remaining shortfall of 50 billion pesos would have to be covered from increased taxes or further budget cuts to meet IMF requirements. The GOB has also given preliminary agreement to a system for indexing commercial loans to various productive sectors, which when implemented will result in positive real rates of interest. The IMF has scheduled a return visit for the end of May or early June. In the interim, the GOB is expected to make final decisions with regard to the budget and other issues discussed which will enable the IMF team and the Government to negotiate the elements of an EFF agreement which may be put into effect in October or November. That agreement is expected to lead to a rescheduling of debt with the banking consortium. Although it would have been preferable for the GOB to have progressed this far with the IMF a few months ago, and difficult policy decisions remain to be finalized by the GOB in the next few weeks, there is room for optimism that negotiations with the IMF will move ahead on schedule.

Meanwhile there are preliminary signs of movement toward greater economic stability. Inflation, although still high, has fallen from an average of 20 percent per month just prior to the assumption of power by the Siles Government to 10 percent per month. The black market exchange rate, which had risen as high as \$b565 to the dollar a few months ago, has settled into the 350 to 360 range. GOB actions to cut the fiscal deficit and adjust interest rates to real levels appear likely. By October, the GOB should be in a position to renegotiate its debt with the private banking consortium. Donor support for the Siles Government was reaffirmed at the Round Table meeting held in late April. The World Bank plans to proceed with a \$75 million structural adjustment loan, assuming discussions with the IMF proceed on schedule, and the IDB has approved two credit loans totalling \$67 million for the mining and agriculture sectors.

The financial analyses of the S&L System and La Merced included in this PP are based on the best economic assumptions of the Mission, and IMF and World Bank experts, and a conservative forecast of Bolivian economic performance over the next several years. Specifically, the official exchange rate is projected to rise from an average of 250 in 1983 (this assumes a 50 percent devaluation by mid-year) to an average of 350 in 1984 (a further 33 percent devaluation) and to go up by 25 percent per year thereafter until 1986 after which the rate of

devaluation will decrease. High inflation is expected to continue in the near term, but decline as the IMF stabilization program proceeds. Despite the drop in real incomes and the tight financial situation of the S&L System and La Merced's housing program, demand for housing-related loans has not declined. In 1982, 4,157 housing loans were extended by the S&L System versus 4,376 in 1981. There has been a shift to more affordable home improvement loans, however, and this trend is expected to continue for the next two to three years. The annual number of housing-related loans is conservatively projected to remain between 4,000 and 5,000 through 1984, and then begin increasing at 20 percent per year. Interest rate assumptions are discussed below.

## 2. The Financial Viability of the Savings and Loan System and La Merced

The issue is whether the S&L System and La Merced will be able to absorb the loss in the value of their portfolio assets due to the conversion to a peso-denominated portfolio and continue to pay their dollar debt with the new HC resources and operational changes contemplated.

The financial analyses of the S&L System and La Merced have been done with more conservative assumptions than those included in the PP reviewed last September. Higher exchange rates and lower loan demand are projected. The financial assumptions used in the cash flow projections are the following:

A 13 percent interest rate from the investor to the BCB, 15 percent to CACEN and 17 percent from CACEN to the S&L associations and La Merced. (These rates could be lower depending on the rate negotiated by the BCB with the U.S. investor.) The BCB has already agreed to lend to CACEN at 2 percent above the rate at which it receives the dollar loan.

Interest rates on existing loans, which are now set at an average of 26 percent and on new loans, which are now set at 39 percent, will be raised to 41 and 50 percent respectively in 1984, 50 and 54 percent in 1985, to a common rate of 54 percent in 1986, and thereafter decline by 2 percent per year. Assumptions regarding interest rates under indexation are discussed below.

Grace periods will be 10 years for CACEN and one year for the associations and La Merced.

Savings are projected to increase by at least 40 percent p.a. (This compared with an historical average of 50 percent for the S&L System. La Merced just undertook a savings mobilization campaign and raised its deposits by over 50 percent.)

The interest rate on savings will be tied to lending rates and kept a few points below the rate paid by commercial banks on time deposits i.e., 25 percent in 1983, 27 percent during 1984-86 and 30 percent thereafter.

Outstanding "dollarized" debt from the associations to CACEN will be rescheduled to spread payments over 5 additional years, (the original maturities were 10 years), and 25 percent, or about the equivalent of \$1 million, of arrearages due to CACEN will be paid immediately.

Thirty percent of the new HG (\$4.5 million) will be advanced to CACEN and liquidated by the end of year 3 of the loan.

New types of shorter term lending will be increased according to the amount of funds available from prior loan reflows and savings. Rates very close to commercial bank rates will be charged, i.e., 43 percent in 1983, 51 percent in 1984, 55 percent in 1985-86, 52 percent in 1987 and lower rates thereafter.

Repayment periods on housing loans will average 6 years.

Excess assets (i.e. investments in land and buildings) will be sold at appropriate times to generate increased cash flows. For purposes of the cash flows, they have been priced at about one-half their market value.

Administrative costs for CACEN, the S&Ls and La Merced have been projected based on actual historical costs.

La Merced's other activities will generate net cash inflows at historical averages.

Using these assumptions (full list included in Section III.A.3), the financial analysis shows that whereas without new HG resources the S&L System would not be able to operate beyond 1983, with these resources it will be able to operate indefinitely. HG resources will provide the System with the financial flexibility to make the adjustments required (See section III.A.3) to respond to unforeseen economic circumstances. La Merced would also be able to make the adjustments necessary to make its housing program viable, whereas without the HG it would most likely discontinue lending for housing.

It appears that the GOB will adopt a system for indexing loans in response to current high inflation and as a means of ensuring that real rates of interest are charged. The details remain to be worked out for each sector, but preliminary agreement was reached with the recent IMF/World Bank team to tie adjustments of housing loans to increases in the minimum wage. Indexation would substantially help the S&L System to maintain its financial viability during the near term period of continued high inflation by allowing mortgage balances to be adjusted upwards at rates which would provide for repayment adjustments borrowers would be able to afford. The cash flows carried out under the assumption of indexation use constant nominal interest rates of 3 percent on savings, and 6 percent on loans with balances being adjusted according to increases in the minimum wage.

The financial analyses assuming adoption by the GOB of indexation show that the S&L associations would generate enough reflows to eventually become self-sufficient; i.e., CACEN's role would then be limited to regulatory functions, loan collection and promotion of new S&L associations. La Merced's housing program would also be much better off with an indexation system.

Under either scenario, the relatively conservative financial analyses included in this PP demonstrate that the S&L System and La Merced will be able to remain financially viable for the foreseeable future.

### 3. The Creditworthiness of the Borrower (GOB)

The issue is whether the GOB will be able to pay back a \$15 million dollar loan at 13 percent over 30 years, with a 10-year grace period.

Given the long-term repayment period of the HG, it is not feasible to project balance of payment statistics to forecast whether adequate foreign exchange will be available to repay the HG loan 10 to 30 years from now. The GOB's repayment capability will depend upon economic performance at that time. In the short to medium term, it is clear that the GOB must take the measures necessary to adjust to Bolivia's new economic circumstances and to stabilize the economy. The recent progress of the Government in initiating negotiation of stabilization measures with the IMF and in renegotiating outstanding debt represents a good start. It is expected that the GOB will continue addressing the economic problems it faces and support private sector generated growth policies. As such, the repayment risk inherent in the proposed HG loan is judged reasonable.

The DAEC PID guidance cable (See Annex E) requested that an analysis of the GOB's legal commitments be carried out with respect to the servicing of the S&L System's external debt. The DAEC was particularly concerned about the GOB's legal obligation to provide dollars to the S&L System at the official rate at that time of \$b44/dollar (instead of forcing the S&L System to purchase its dollars on the officially sanctioned parallel market), as well as its compliance with agreements to guarantee most of the S&L System's outstanding external debt.

The AID Regional Legal Advisor (RLA) reviewed all existing guaranty agreements and related legislation to respond to this concern. His analysis was forwarded to AID/W and is included as Annex E to this Project Paper. While the RLA's review concluded that the GOB has a legal debt servicing obligation in case of default by CACEN for nearly 80 percent of the S&L System's external obligations, the GOB has no additional debt servicing obligation. The remaining 20 percent corresponds to the outstanding balance of a \$6 million AID loan (511-L-048), for which the guaranty agreement included a clause committing the GOB to provide the S&L System with access to foreign exchange at as favorable a rate as that available to "public agencies."

The issue of whether the GOB has a legal obligation to provide foreign exchange to CACEN at a lower official rate has become moot since the GOB abolished the previous official parallel market for foreign exchange and established a new unified and fixed exchange rate of \$b200/dollar. The BCB is now the sole entity in Bolivia authorized to sell foreign exchange. The BCB has agreed to provide foreign exchange to CACEN and La Merced at the official rate existing at the time repayments on past housing loans are due, and has been selling dollars to CACEN at 200 during the past few months. In order to ensure that the BCB has a legal responsibility to continue doing so, a condition precedent will be included in the HG 007 Implementation Agreement which will require a written commitment by the GOB to provide CACEN and La Merced with foreign exchange on a preferential basis at the lowest official rate, and to assume any interest charges resulting from delays in payment when the BCB is at fault. It should also be noted that to demonstrate its firm support for the S&L

System, the GOB has agreed to advance the peso equivalent of \$1.5 million to CACEN, once the HG loan is authorized to enable the System and La Merced to increase lending immediately, and provide the necessary resources for them to continue meeting debt servicing commitments until HG disbursements commence.

D. RECOMMENDATION

The Project committee has determined that the proposed project is technically, financially, socially, and administratively feasible, and therefore recommends the approval of a \$15 million Housing Guaranty for the Bolivian Savings and Loan System and La Merced. In addition, approval of \$500,000 in Development Assistance grant funds over the life of the project (in addition to \$50,000 from the PRE/H IQC and regional contract) is recommended for technical assistance to help strengthen the Bolivian S&L System and La Merced and expand their capacity to provide shelter solutions to low income families.

E. PROJECT COMMITTEE

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## II. PROJECT DESCRIPTION

### A. BACKGROUND

#### 1. History

The Bolivian S&L System is the country's most important private sector housing finance institution. Although the System provides loans to urban middle and rural upper income groups, CACEN statistics indicate that about 70 percent of its total portfolio serves families with modest and low incomes (at or below the 65th percentile), with 30 percent of the System's cumulative lending volume benefiting families below the 40th percentile.

The System is composed of the Caja Central de Ahorro y Prestamo para la Vivienda (CACEN), which was established in 1966 to serve as its central bank and regulatory agency, and twelve member savings and loan associations with histories dating back to 1964. Since the early 1970s, the S&L System has been one of Bolivia's healthiest and most respected financial institutions, as demonstrated by its impressive growth record. In this regard, as of December 31, 1982, the S&L System had generated \$b1.7 billion in savings in more than 131,000 accounts, up from \$b22.2 million in 7,700 accounts in 1970. Likewise, the total number of active loans as of December 31, 1982 was 23,434 with a total value of nearly \$b2.5 billion up from 1,081 loans with a value of \$b58.8 million in 1970. Currently, the S&L System's savings generation represents 11 percent of the total savings held by the entire banking system. In addition, the number of housing solutions it finances represents over 60 percent of all such loans provided by public and private housing institutions combined. Finally, during its 17 years of existence CACEN has never defaulted on a loan, an enviable record given the unstable political and economic situation which has prevailed in Bolivia.

AID has provided assistance to the S&L System at various stages of its development, beginning initially with a seed capital loan in 1965 to help establish the first S&L in the country. Total AID assistance to date amounts to \$22 million, which has been used to expand the System both geographically (The 12 S&Ls are located throughout Bolivia's nine departments.) and in terms of clientele. In addition to the \$22 million provided by AID to the S&L System since its initiation in 1964, the System has also received financial assistance from the Inter-American Development Bank (IDB) and the Inter-American Savings and Loan Bank (BIAPE). In 1976, the IDB provided \$2.1 million in emergency shelter relief to victims of a particularly severe flood in the Department of Beni. As part of a regional HG program begun in 1978 and administered by BIAPE, \$3.0 million was channelled to CACEN for relending to member associations for low cost shelter solutions in Bolivia's urban areas.

The S&L System has undertaken a considerable redirection of services toward lower income populations during the last five years. The HG 005 Program for low-income families in rural areas added greatly to the momentum behind this shift to a commitment favoring Bolivia's lower income population. The Program financed nearly 3,000 shelter solutions ranging in cost from \$500 to \$4,500 for families whose incomes ranged from the 5th to the 35th percentile.

Under the HG 005 Program, the S&L System also was successful in creating a nation-wide outreach capability in rural areas, including the establishment of a new S&L in Guayaramerin, Department of Beni, as well as several branch offices throughout Bolivia. Additional staff was hired by all the System's associations in order to properly promote the program and attend to the increasing housing needs of their low-income clientele. Low-cost construction designs were developed to make shelter solutions more affordable to the target group, and locally produced materials and supplies were used to the extent possible.

La Merced is Bolivia's largest multipurpose cooperative with over 26,000 members in the Department of Santa Cruz. In addition to running a savings and loan program, a supermarket, a drug store, a small-farmer loan service, a medical insurance program and other activities, La Merced has also administered a housing program since 1971 which has constructed and financed over 600 housing units. Initially, it was directed, in large part, toward upper-middle class clientele for home construction, but La Merced has placed approximately 1,000 loans over the past five years for low cost (under \$1,000 per loan) home improvements and the purchase of lots, construction materials and finished housing units. Approximately 84 percent of all lending over the past three years under La Merced's savings and loan program for housing needs has been directed toward families earning less than the median income.

AID has assisted La Merced through an operational program grant (OPG 511-0533) to improve and expand the cooperative's supervised credit program for small farmer members. This successful program is just concluding, and, as a result, La Merced has significantly broadened the geographic scope of its services into rural areas. In addition, the Mission is currently developing a self-financing primary health care project in which La Merced will participate.

## 2. Current Problems

a. Lack of a GOB Shelter Sector Strategy and Inadequate Resources: GOB efforts to set up public sector housing mechanisms have floundered as a result of continuous changes in personnel and unrealistic financial policies and measures. The Ministry of Housing and Urban Affairs has been unable to develop a workable plan for the most efficient use of scarce resources in the sector, a situation which has been worsened by an almost total ignorance of housing finance issues within the Central Bank and the Ministries of Finance and Planning. As a result, the S&L system has had the opportunity and has taken the lead in providing low-income housing as well as in developing innovative solutions to the economic crisis, including variable rate mortgages, diversification of its portfolio and a shift to a full peso-denominated system.

Public sector financing for housing is inadequate and unlikely to be increased. In addition, other than the proposed HG, no new foreign assistance to the housing sector is being planned. The only significant ongoing, externally financed housing project is a \$17 million IBRD loan signed with the GOB in 1978 for infrastructure, sites and services, low-cost housing and employment generation in the La Paz metropolitan area. This program, which is administered by the municipality of La Paz with credit channelled through the National Housing Bank (BANVI), has encountered numerous difficulties which have retarded loan disbursement.

b. The Bolivian Economy: The expansion of the Bolivian S&L System and La Merced and their overall financial solvency have been placed in serious

jeopardy as a result of the extreme deterioration of the Bolivian economy. Similar problems have been confronted by S&Ls in other Latin American countries and the United States. While the S&L System and La Merced's financial structures have served them well in the past, they were never designed to adjust to, and survive in, an economy characterized by extremely high inflation and rapid devaluation of the local currency.

Historically, the base of the Bolivian economy has been the exploitation of non-renewable natural resources, primarily tin and hydrocarbons. During the late 1960s and early 1970s, as production levels of tin and petroleum increased, real GDP grew at an average annual rate of 5.6 percent. In the early 1970s, based on expectations of continued increases in production and exports, and as a result of the oil price hike and the sharp increases in world metal prices, the GOB expanded public sector spending significantly, further contributing to high growth rates through the mid 1970s. Bolivia's economic base was subsequently broadened through increases in the production and export of natural gas, accelerated industrialization of mineral resources, expansion of commercial agriculture, and the achievement of self-sufficiency in certain food products. This economic diversification, complemented by an expansion and improvement of Bolivia's primitive transportation network, propelled the growth of real GDP to an average annual rate of 6 percent during the 1973-1977 period.

The relatively strong expansion in the mid-1970s, however, was achieved at the expense of increasing internal and external imbalances. To this effect, when the expected high earnings and revenue growth from the export of minerals and oil and from projects for which the GOB had borrowed heavily ultimately failed to materialize, Bolivia found itself faced with excessive public sector deficits, mounting external debt servicing requirements, and a precariously low level of international reserves. The fact that the country still had access to the international money market, however, permitted the GOB to delay hard decisions aimed at controlling public spending, eliminating subsidies of domestic prices, and reducing the reliance on state capitalism as the country's principal engine of growth.

The economy continued to deteriorate from 1979 to 1982, particularly during the July 1980-September 1981 Garcia Meza military regime. The rate of growth of real GDP fell from a positive 4.2 percent in 1977 to a negative 9.2 percent in 1982. The decreasing rate of growth reflected a deterioration in all aspects of the economy. The rate of growth of agricultural output decelerated from 3 percent in 1978-1979 to minus 2.2 percent in 1981-1982. Manufacturing activity fell 15.2 percent in 1981-1982, and the construction sector registered declines of 7 percent in 1981 and 40 percent in 1982, resulting in large layoffs. In addition, the most important state enterprises (i.e. the oil company-YPFB, the mining corporation-COMIBOL, the development corporation-CBF) which have had a history of poor management, continued to experience financial difficulties.

Fixed capital formation fell from 17.2 percent of GNP in 1977 to 6.7 percent in 1982. The resource gap between domestic savings and investment was financed by the use of general purpose foreign loans and a drawdown of the Central Bank's net international reserves. The fiscal deficit was largely responsible for the deterioration in the balance-of-payments which led to the devaluation of the peso in 1979 from 20 to 25 pesos to the U.S. dollar, the deferment of payment of foreign loans in 1980, and the imposition of exchange controls in 1982. The official GOB budget deficit expanded from 2.5 percent to 15 percent of GDP between 1977 and 1982 owing to a combination of declining revenues and rising

current outlays and public investment. The balance of payments deficit rose from 3.5 percent of GNP (\$166 million) in 1980 to more than 5.5 percent of GNP (\$101 million) in 1982. Foreign debt service payments rose from 25.9 percent of export earnings in 1980 to 27 percent in 1982.

Faced with these enormous economic problems when it assumed power on October 10, 1982, the democratically elected Government of President Siles Zuazo quickly moved to begin to put Bolivia's economic house in order. The economic package announced last November was embodied in over 30 decrees which ranged from complete de-dollarization of domestic loans and savings accounts and establishment of a fixed exchange rate at \$b200 to the dollar to major price increases in a whole range of basic commodities. The Government also moved to reschedule \$590 million in debt owed to Argentina and Brazil on favorable terms and negotiated an extension of a moratorium on debt due a consortium of international banks. In April, a joint IMF/World Bank team worked with the government's chief economic policy decision makers defining options for cutting the 1983 budget deficit, raising interest rates and adjusting the exchange rate as a prelude to initiation of formal negotiations for an Extended Fund Facility (EFF). Initial agreements were reached, and the GOB is scheduled to make final decisions on the issues discussed in May. A second IMF visit is scheduled for late May or early June to negotiate the elements of an EFF to be put into effect in October or November.

A year ago, after the exchange rate had begun rising dramatically and before it was clear whether the GOB would be able to begin taking measures to stabilize the economy, the S&L System was the first financial institution in Bolivia to take steps to adjust to the new economic environment. The S&L System had operated both its savings and lending activities at a fully readjustable dollar equivalency, and had external dollar liabilities totalling about \$27 million. La Merced, which is still maintaining a dollar-denominated housing portfolio pending instructions from the BCB regarding its conversion to pesos, had external dollar liabilities totalling about \$900,000.

Until 1982, the S&L System, La Merced, and their member borrowers were jointly able to absorb losses due to declines in the value of the peso relative to the dollar. The 1982 devaluations of the peso, however, were of such a magnitude that they could not be fully passed on to the borrowers. Faced with the certain failure of the S&L system to absorb the entire exchange rate loss or pass it on to the mortgage borrowers, the managers of the S&L System determined that a major restructuring of operating procedures was necessary. In this regard, discussions with USAID/B led to the contracting of technical assistance during the months of March and May 1982 to analyze the various alternative courses of action open to the System. After reviewing resulting cash flow analyses, CACEN and member S&L associations realized that a conversion from the dollar-readjustable to a peso-denominated system was necessary. In addition, given the drop in the value of the peso and the System's large dollar liabilities, it was determined that a partial readjustment of both the assets and liabilities of the System's portfolio would be necessary, in accordance with borrowers' capacity to repay.

The Bolivian legislation which established the S&L System requires that it consult with the BCB before taking any major financial action. In conjunction with the technical assistance mentioned above, a Joint Commission was formed in May, 1982 with representatives from the BCB, MOF, CACEN and USAID/B to discuss how to adjust the System's portfolio and other measures that need to be taken to

maintain its viability. The cash flow analyses performed indicated that, even after making a partial portfolio readjustment (i.e. shifting to a peso-denominated system at the then official rate for GOB transactions of 44/1 and employing variable interest rates, which was judged to be the fairest way of distributing the adjustment burden at the time), the S&L System would not be able to survive beyond 1984. Thus, in addition to these measures, the Joint Commission recommended an injection of new capital together with the initiation of shorter term, family-related commercial lending and increased savings mobilization to enable the System to generate enough cash to remain solvent.

The Joint Commission's conclusions resulted in Supreme Decree 19027 dated June 30, 1982, which authorized the S&L System to make a partial readjustment of both its assets and liabilities before converting from a dollar-readjustable system to one based on the peso. The Decree also authorized the S&Ls to diversify their lending operations into short-term commercial credit for family and housing-related needs. Following issuance of this Decree, CACEN directed the individual S&Ls to readjust both their assets and liabilities by 76 percent before converting to a variable rate peso system. (The 76 percent adjustment was equivalent to the official devaluation of the peso from 25/1 to 44/1.) To facilitate this conversion and avoid overburdening the System's borrowers, CACEN agreed that interest rates on existing portfolios, which averaged 15.7 percent, would not be raised until January 1983. At present, the average interest rate on the existing portfolio is 26 percent, and new loans carry a rate of 39 percent. The S&L System realizes that these rates are too low and plans to raise them to 41 and 50 percent respectively in January 1984, if an indexation system is not decreed earlier. Thereafter, interest rates will be adjusted according to prevailing rates in the economy and borrowers' ability to pay.

The Mission conducted a financial review of La Merced's operations in October-November 1982 and again in May 1983 to determine the extent of its difficulties as a result of the economic crisis. La Merced has taken several steps to remain solvent. It has maintained the dollar readjustment clauses in its housing loans, pending instructions from the BCB, but has agreed to suspend repayments for the time being. There is a very good possibility that the BCB will allow La Merced to convert its outstanding housing loans to pesos at a higher rate than 44. Nevertheless, the financial analysis of La Merced assumes only a 76 percent adjustment of these loans, as in the case of the S&L System.

The November de-dollarization decree enabled La Merced to reduce its outstanding dollar-denominated liabilities, mostly with Banco Hipotecario, by over 30 percent. This loan is now being renegotiated. Similarly, La Merced is in the process of renegotiating its outstanding dollar liabilities with the Bank of Boston and has obtained BCB clearance to request dollars at 200 from the Exchange Control Commission to make necessary payments. Since both loans were subject to rulings from the BCB, the banks have agreed to short moratoriums on repayments until revised repayment schedules can be worked out. The financial analysis assumes payments will be made as previously scheduled on both loans.

La Merced has fixed assets of \$b20 million, upon which it is currently borrowing to cover financing requirements through the present adjustment period. It also has undertaken a major campaign to increase savings with great success, and has raised total deposits by 50 percent in just a few months. With other activities operating more or less as successfully as in the past (on an aggregate basis), La Merced is weathering the current economic crisis. With new HG

resources, this PF's financial analysis, based on the conservative assumptions noted above, shows that La Merced can continue operating profitably.

c. Institutional Constraints: For the S&L System to continue to provide long term financing to the target group, as well as to be able to respond to changing economic circumstances, CACEN and the individual S&Ls must strengthen their institutional capacity in specific areas.

In the area of financial planning, CACEN staff will require training in order to perform the continuous financial analysis and economic projections required to formulate financial policies. The S&L System will be required to study changing economic conditions constantly in order to fix appropriate lending and savings rates and adjust the composition of its portfolio.

The S&L System must also avoid over-reliance on long-term lending so as to ensure the flexibility required to adapt to changing economic conditions. Several associations already have begun lending for short term housing or family-related needs. While still a relatively minor portion of the S&Ls' overall portfolios, diversified lending will play an increasingly important role over the next few years. Due to their limited experience in this area, the S&Ls' loan officers will need to be trained to evaluate borrower payback capability and collateral requirements from an entirely different perspective. The System's directors and managers will also require appropriate training in portfolio management of this nature.

The previous section of the paper discussed the extent to which the S&L System's dollar debt was affecting its current viability as a result of the deteriorating economic situation. While the system's dollar liabilities represented only 50 percent of its outstanding portfolio as of December 31, 1981, today, due to the declining value of the peso, these dollar liabilities now are larger than the S&L System's loan portfolio. The long-run self-sufficiency of both the S&L System and La Merced will depend to a large degree on an expanded drive to mobilize savings to offset dependency on external sources of financing. In order for the System and La Merced to do so, the individual S&Ls and La Merced will have to increase their efforts and staff time devoted to promotion campaigns and educational drives to mobilize new savings, especially in communities where familiarity with financial institutions is not well established.

Another institutional constraint, which limits the ability of the S&L System and La Merced to determine appropriate lending rates, is the lack of reliable information on household incomes. The Instituto Nacional de Estadísticas (INE) has developed a nation-wide survey questionnaire on household incomes and has collected initial data. Such information will be critical to the S&L System and La Merced's ability to tailor the terms of their shelter solution loans to the payback capacity of the target group. The GOB has committed itself to providing the budget necessary to carrying out the surveys if the HG is approved, but TA will also be needed in this area.

### 3. Relation of Project to Country Development Strategy

U.S.-Bolivian relations have been undergoing a gradual normalization process since Gen. Celso Torrello assumed power in September 1981 and announced the GOB's intention to concentrate on addressing a series of issues which were primarily responsible for the suspension of AID assistance following the July

1980 coup. With Bolivia's return to democracy, it was decided to reactivate and increase the AID program in three phases in accordance with GOB action to improve the economy and control the illicit production and marketing of coca. The first phase of the reactivation, in recognition of the return to democracy, has been implemented in response to positive forward movement in these areas. The second phase, which will be implemented as progress continues, will begin with approval of the requested HG. A recent classified cable discusses the U.S. Mission's plans for this and other steps in the assistance reactivation strategy.

As a result of the decision to reactivate the AID program, USAID/B's short-term assistance strategy has been reformulated. In addition to Bolivia's channelling resources from existing and new projects to Bolivia's primary coca-production region, the Chapare, to diversify agricultural production and enhance prospects for development in conjunction with coca control efforts, the short-term, strategy will also support the democratic process and economic recovery by directing resources to the private sector from an augmented Agribusiness and Artisanry Project and the proposed HG loan, and help the GOB to formulate improved economic and sectoral policies, through the Policy Reform Project, which will provide the framework for stable economic growth and increased private sector development.

This project will help implement the Mission's short-term strategy in two ways. First, it will support the Mission's efforts to expand the participation of the private sector in the economy and enable one of Bolivia's most successful private sector financial institutions to continue to offer financing to lower income families. Secondly, the project will assist the GOB in carrying out certain policy and institutional reforms needed to address some of the economic constraints limiting Bolivia's longer term development process. Specifically, it will help establish the policies and institutional capability necessary to carry out the more complete rural savings mobilization program contemplated under the Mission's long-term strategy, and it will help the GOB to develop a rational housing sector strategy.

## B. DETAILED PROJECT DESCRIPTION

### 1. Goal and Purpose

The goal of the HG 007 Program is to improve the shelter condition of Bolivia's low income families. The Program's purpose is to expand the private sector's capacity to address the shelter-related needs of these families.

The Program will consist of a \$15 million HG loan to the GOB which will guarantee the loan and assume the full foreign exchange risk, and \$550,000 in technical assistance to CACEN. The loan will be channeled through the Bolivian Central Bank (BCB) which, in turn, will disburse an equivalent amount of local currency to CACEN for onlending to S&L associations and La Merced. An initial \$4.5 million advance will be made to the BCB with an equivalent amount of pesos advanced to CACEN. The remaining \$10.5 million will be disbursed to CACEN based on the placement of shelter loans to families with incomes below the national median.

The beneficiaries of the HG 007 Program will be families with incomes at or below the national urban median income. These families reside in towns and cities with populations greater than 2,000, although many of the areas are fully

rural in character. The target population for the project is located throughout the nation. Beneficiaries are employed in both formal and informal sector occupations, with a majority involved in small enterprises, commerce, transportation, handicrafts and farming. Urban beneficiaries will include a large percentage of salaried factory workers.

## 2. Outputs/End of Project Status

a. Financing will be made available for the shelter-related needs of approximately 23,000 below median income families: Despite the drop in real incomes because of high inflation, and the uncertain financial future the S&L System in the absence of the approval of additional HG resources, demand for housing loans has not decreased. The Ministry of Housing and Urban Affairs (MUV) estimates that current housing deficits nation-wide are over 160,000 units, with the demand for new housing units growing at a rate of 24,000 per year. Of the existing housing stock, MUV has estimated that 90 percent of all rural units and 60 percent of all urban units, representing more than 800,000 units throughout the country, should be replaced. This "qualitative deficit" is clearly overstated since most of these units can be upgraded instead of replaced. Thus, the major thrust of the new HG program will be directed at home improvement loans. Later, if conditions permit, loans for core units and new housing starts will also be made.

During the intensive review, seventeen different home improvement loan packages were developed which will be affordable by the target group. These packages emphasize cost-effective construction designs and methodologies, self-help techniques, and bulk purchases of certain materials. The success of the HG 005 Program in rural areas is one indicator of the high level of demand for home improvement loans. The results of that Program prove that much of the existing housing stock is essentially sound and can be converted into safe and comfortable dwellings. Based on past lending experience, the investment capacity of low-income groups has proven to be high, usually surpassing 25 percent of monthly incomes. In this regard, experience had demonstrated that many S&L system borrowers tend to repay their loans early, including HG 005 beneficiaries having the lowest payment capacity. Borrowers customarily pay off their loans in 60 percent of the time contracted, (e.g. 13-year loans are paid off in eight). The average payback period for core construction loans has been eight years, even though loan terms can be as long as twenty years.

b. The S&L System and La Merced will have strengthened their overall financial viability: The HG 007 Program will enable the S&L System and La Merced to remain financially viable for the foreseeable future by providing the resources necessary to expand their lending, the technical assistance necessary to improve their operations (e.g. portfolio diversification, savings mobilization, design of more affordable shelter solutions), and the time necessary to make additional financial adjustments (See examples in Section III A.3.) in response to changing economic conditions. With the HG, the S&L System will be able to recuperate the losses it has decided to absorb as a result of the recent severe devaluation. The HG Program will give special attention to the four weakest S&L associations (La Frontera, Manutata, Tarija and Potosí) so as to assure their full recuperation and self-sufficiency.

c. The GOB will have improved its capacity to formulate a comprehensive shelter sector strategy: The HG program will encourage greater cooperation and understanding between the S&L System and related GOB entities. The BCB will become more involved in housing finance through its role in disbursing the HG loan to CACEN. The Ministry of Finance (MOF) will have to review the S&L lending activities as part of its role in regulating the diversification of the System's portfolio. Also, INE's production of reliable national household income data will become critical for both the S&L System and the overall housing sector in determining appropriate interest rates and the affordability of shelter solutions for the target group.

In addition to the ongoing dialogue with these Government entities, the HG 007 Program will strengthen GOB shelter sector policy-making by providing technical assistance to help carry out a series of studies on the financial structure of the housing sector in Bolivia and the effectiveness of public and private institutions involved in shelter solutions.

d. The S&L System and La Merced will have generated increased domestic resources to permit the expansion of lending activities: As a condition precedent to selection of an investor, CACEN and La Merced will be required to submit to AID acceptable savings mobilization plans. These plans will assist the S&L System and La Merced to increase their total savings by at least 40 percent a year. In order to overcome the disadvantage of no longer offering dollar-readjustable savings accounts and the more competitive interest rates on passbook accounts offered by the commercial banks, the System must undertake an active promotion campaign emphasizing expanded services and affordable shelter solutions to attract new savers. The fact that the S&L branch offices in rural areas are often the only source of formal financing available (in urban areas, S&Ls are also much more accessible to the general public than are commercial banks), it is an important plus for the System as it competes for new savings. The HG 005 Program laid the groundwork for a more active savings campaign in rural areas, and the System's overall reputation and experience as a housing finance institution, vis-a-vis other private and public institutions, will continue to attract numerous customers in search of financing for shelter solutions.

La Merced recently undertook a very successful savings mobilization campaign. This effort will be expanded in order to meet the targeted annual increase in savings generation.

e. The S&L System will have successfully expanded the diversification of its portfolio into short-term commercial lending: It has become necessary for the Bolivian S&L System to consider the diversification of lending operations into short-term credit for many of the same reasons which have obliged U.S. and other Latin American S&L systems to adopt such an approach. To this effect, experience has shown that S&Ls in general require additional flexibility so that during periods of high inflation they can manage their portfolios more efficiently. The Bolivian S&L System's diversification into housing-related and family credit needs, as recently authorized by the GOB in Decree Law 19027, will provide the System with this added flexibility. Offering loans for furniture, appliances, schooling needs, health services in rural areas, as well as for family emergencies, will expand the range of services which the System can provide. This, in turn, will help attract new savers. Customers will readily notice the advantages of dealing with the S&Ls for many of their credit needs instead of

with the commercial banking system, which is often less interested in the small saver/borrower, and whose transaction costs are considerably higher. While several associations already have begun diversifying their portfolios with relative success, lending for the wider range of activities described is expected to play a much greater role over the next few years. The HG will provide specialized technical assistance to the S&L System to assist it in this endeavor.

- f. The S&L System will have strengthened its financial planning capability: CACEN and individual S&Ls will increase the capabilities of their staffs (and hire additional personnel where necessary) in the area of financial planning through training courses and technical assistance provided under the HG 007 Program. CACEN recently purchased an Apple II computer. The computer and greater staff capability in financial planning will permit the S&L System to react quickly to varying economic conditions and thus fortify its long-term viability.
- g. INE will have strengthened its capacity in the area of national household income data collection and analysis and will have begun publishing this data on a regular basis: INE has developed a questionnaire on household income and has collected initial data. However, budget constraints have inhibited the analysis and publication of the data. This project will provide technical assistance to refine the questionnaire, improve data collection techniques and perform the necessary data analysis. The GOB, as a part of its counterpart contribution, will furnish the necessary budget support to INE to carry out these tasks and publish the data on a regular basis. This information will assist the S&L System, La Merced and other housing institutions to develop appropriate interest rates and design shelter solutions affordable to the target group.

### 3. Inputs

- a. A \$15 million HG program loan will be lent to the BCB which in turn will lend pesos to CACEN for distribution among the individual S&L associations and La Merced. The GOB will guarantee the loan and assume the full foreign exchange risk.
- b. Individual S&Ls and La Merced will contribute 20 percent of the total amount of each subloan (totalling \$3.75 million) from internally generated resources.
- c. The GOB will provide \$40,000 in budget support to INE for data collection, analysis and publication of national household income survey results over the life of the project.
- d. The project will provide \$250,000 in grant funds for two years of long-term technical assistance to help coordinate project implementation, assist CACEN in the training of S&L and La Merced personnel, work with GOB entities to formulate a comprehensive shelter sector strategy and help identify short-term technical assistance requirements.
- e. The project will provide \$300,000 in grant funds (including PRE/HUD contract) for 20 person-months of short-term technical assistance in the following areas:

- 1) Shelter construction cost analysis and the related training to maximize use of low-cost materials and techniques and improve construction supervision - 3 person months;
- 2) family income and expenditure analysis to improve INE's capacity to develop reliable, national household survey data - 2 person months;
- 3) shelter policy and strategy studies to assist the GOB in formulating a coherent shelter sector strategy - 2 person months;
- 4) savings mobilization which will include promotion campaigns, personnel motivation and gearing savings/time deposit accounts to different target groups - 3 person months;
- 5) lending diversification and related training to improve S&L managerial and technical capabilities - 4 person months;
- 6) financial planning to enhance CACEN's capacity to forecast economic trends using automated data processing equipment and to review the possible effects of alternative measures on the System's future cash flow - 4 person months.
- 7) evaluations - 2 person months

#### 4. Financial Plan

Prior to the first disbursement of the HG, the following agreements will be signed: (1) AID, the GOB and CACEN will sign a Program Implementation Agreement; (2) AID and the GOB will sign a host country Guaranty Agreement; (3) AID and the investor will sign a Guarantee Contract; (4) the investor will sign a Loan Agreement with the BCB; and (5) the BCB and CACEN will sign a loan agreement.

The investor will make an initial advance disbursement of \$4.5 million to the BCB, which will make an equivalent disbursement in local currency to CACEN. The full advance to CACEN will remain outstanding for a maximum of three years. CACEN will submit eligible loans to liquidate the advance prior to the end of the third year according to a schedule to be included in the Master Program Implementation Plan. The \$15 million loan will be disbursed over 5 years, 1983-1988.

Regular disbursement will be made to the BCB and CACEN as eligible loans are approved by AID and according to the disbursement schedule contained in the Master Program Implementation Plan. The investor will disburse U.S. Dollars to the BCB. The BCB will disburse the amounts scheduled to CACEN in local currency at the prevailing official rate on the day of disbursement. CACEN in turn will effect the disbursement in local currency to the S&L associations and La Merced following the procedures described in the Implementation Agreement.

The criteria which CACEN will use to disburse funds to the participating associations will take into account: 1) total assets, 2) the rate of growth of savings deposits, 3) the growth of loan portfolios, and 4) debt repayment schedules. The actual distribution of the peso advance will be detailed in the Financial Strategy required prior to selection of an investor and the distribution of further disbursements will be detailed in updated Financial Strategies.

DISBURSEMENT SCHEDULE

(US\$ 000)

	1983		1984		1985		1986		1987		1988		<u>TOTAL</u>
	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	
<u>AID</u>													
<u>GRANT</u>													
1. Technical Assistance	50		150		150		100		50		50		550
<u>HG</u>													
1. Shelter Financing <sup>1/</sup>	4,500		1,500		2,800		200		2,000		4,000		15,000
<u>SYSTEM</u>													
1. Shelter Financing				375		700		550		1,000		1,125	3,750
<u>GOB</u>													
1. National Household Income Survey (INE)		4		8		8		8		8		4	40
	<u>4,550</u>	<u>4</u>	<u>1,650</u>	<u>383</u>	<u>2,950</u>	<u>708</u>	<u>300</u>	<u>558</u>	<u>2,050</u>	<u>1,008</u>	<u>4,050</u>	<u>1,129</u>	<u>19,340</u>

<sup>1/</sup> CACEN will finance housing loans according to following schedule (000):

- 1984 - 1,500
- 1985 - 2,800
- 1986 - 2,200 (2,000 advance, 200 regular disb.)
- 1987 - 4,000 (2,000 advance, 2000 reg. disb)
- 1988 - 4,500 ( 500 advance, 4500 reg. disb.)

SUMMARY COST ESTIMATE AND FINANCIAL PLAN

(US\$ 000)

	AID		GOB LC	SYSTEM LC	TOTAL
	GRANT FX	HG FX			
1. Shelter Financing	-	15,000 <u>1/</u>	-	3,750	18,750
2. Technical Assistance	550 <u>2/</u>	-	-	-	550
3. National Household Income Survey (INE)	-	-	40	-	40
	<hr/> 550	<hr/> 15,000	<hr/> 40	<hr/> 3,750	<hr/> 19,340 <hr/> <hr/>

1/ AID guarantee of private U.S. investors.

2/ \$50,000 from PRE/HUD contract obligated separately by Housing Office.

### III. PROJECT ANALYSES

#### A. ECONOMIC AND FINANCIAL ANALYSIS

##### 1. The Current Economic Outlook

The recent history of the Bolivian economy was reviewed in Section II.A.2. On November 6, the Siles Government took an initial set of economic measures which represented a significant step forward in putting Bolivia's economic house in order and in setting the stage for an eventual agreement with the IMF. Previous military governments had made partial efforts to address Bolivia's serious economic problems but were unwilling, or politically unable, to adopt the measures necessary to start the economy on the road to recovery. When the Siles Government took power in October, the economy was in shambles, and the country's different interest groups all had conflicting ideas on essential requirements for correcting the situation. In less than a month, the Siles Government acted decisively in taking a set of initial, far-reaching measures which, while implying an immediate deterioration in the purchasing power of the Government's main constituent groups (urban factory workers, miners and campesinos), at the same time offered hope for economic recovery over the medium term. The economic package was based in large part on guidelines formulated by the IMF. It was embodied in over 30 decrees which ranged from complete de-dollarization of domestic loans and savings accounts and establishment of a fixed exchange rate to major price hikes on a whole range of basic commodities; e.g., the price of flour was raised nearly 500 percent, and the price of petroleum products more than tripled.

Faced with a debt repayment schedule which could not be met (with the debt service ratio potentially over 80 percent), the GOB initiated efforts to renegotiate outstanding balances due to Argentina and Brazil and the consortium of private banks. \$342 million has been renegotiated so far, and Argentina has agreed to reschedule an additional \$250 million. The Consortium agreed to an extension to October 1983 of a moratorium on principal repayments, and the GOB hopes to renegotiate over \$400 million of the \$2 billion owed at that time. In addition, in order to prevent continued imposition of sanctions under Section 517 of the FAA (Brooke/Alexander Amendment), the GOB paid over \$9.2 million in arrearages due to the U.S. Government, thus providing evidence of its desire to normalize relations with the U.S.

Early this May, a joint IMF World Bank team completed a one-month visit to La Paz. Its purpose was to lay the groundwork for negotiation on an Extended Fund Facility (EFF) by discussing possible options the GOB could adopt to cut the forecasted 1983 budget deficit, increase interest rates, and adjust the exchange rate. Discussions focused on the fiscal deficit since this was the chief area not addressed by the GOB in November. Initial agreement was reached with members of the Siles Government's economic team on where at least 70 billion pesos could be cut from the budget, and on a system for indexing commercial bank loans which would provide for positive real rates for interest. The IMF has scheduled a return visit for the end of May or early June. In the interim, the GOB is expected to make final decisions with regard to the budget and other issues discussed which will enable the IMF team and the Government to negotiate the elements of an EFF agreement which would be put into effect in October or November. Although it would have been preferable for the GOB to have

progressed this far with the IMF a few months ago, and difficult policy decisions remain to be finalized by the GOB in the next few weeks, there is room for optimism that negotiations with the IMF will move ahead on schedule.

Meanwhile, there is some movement toward greater economic stability. Inflation, although still high, has fallen from an average of 20 percent per month just prior to the assumption of power by the Siles Government to 10 percent per month. The black market exchange rate, which has risen as high as \$b565 to the dollar a few months ago, has settled into the 350 to 360 range. GOB actions to cut the fiscal deficit and adjust interest rates closer to real levels appear likely. By October, the GOB should be in a position to discuss a renegotiation of its debt with its private banking consortium. Donor support for the Siles Government was reaffirmed at the Round Table meeting held in late April. The World Bank plans to proceed with a \$75 million structural adjustment loan, assuming discussions with the IMF proceed on schedule, and the IDB plans to begin disbursing two credit loans totalling \$67 million for the mining and agriculture sectors in the very near future.

The main economic variables affecting the financial viability of the S&L System and La Merced's housing program are the exchange rate, interest rates and demand for housing loans.

For the purpose of projections, pessimistic assumptions have been adopted regarding the exchange rate. It is anticipated that the current official exchange rate of 200 pesos to the dollar will decline an additional 50 percent in 1983 and that adjustments thereafter will be moderate relative to those in 1982 and 1983. The spectacular decline of the peso in 1982 was due to several unique factors which are not expected to persist. The GOB had maintained a significantly undervalued peso for several years. Once allowed to float, its value declined reflecting Bolivia's poor economic performance, the narrowness of the foreign exchange market in Bolivia, the lack of confidence in the GOB and uncertainty about the country's economic future which caused capital flight and dollar hoarding. When the parallel market became illegal, and with the difficulty of obtaining foreign exchange at the 200 rate through the Exchange Control Commission, the black market rate continued to climb; however, even that rate has settled down to the 350-360 range after going as high as 565.

With the Siles Government's economic program, the country's economic performance is expected to improve. An EFF agreement will help restore confidence in Government policies, and more foreign exchange will be available both from the IMF and from normal transactions as the economy stabilizes. The official exchange rate is projected to increase to 300 in 1983, 400 in 1984, 25 percent per year in 1985 and 1986 until it reaches 625, then 20 percent in 1987 and 5-10 percent per year thereafter. An indexation system for commercial loans may be adopted which would allow the S&L System and La Merced to adjust the balances of outstanding loans in accordance with repayment capabilities and keep nominal interest rates relatively low. If indexation is not adopted, the S&L System and La Merced will raise interest rates charged in the near term in accordance with the repayment capacity of its customers. The rates used in the financial analysis are given in Section III.A.3 below.

Although high inflation is expected to continue in the near term, it will decline as the Government's stabilization program takes hold. Despite the current drop in real incomes and the tight credit situation, the S&L System was able to place over 6,000 loans in 1982 (over 4,000 of which were for housing),

at higher, variable interest rates, versus a total of 4,376 in 1981. In addition, the demand analysis below (Section IIIA.4) points out that there is a very large housing deficit nation-wide and that the unmet demand for home improvement loans under the current tight financial conditions is very high. Given the S&L System's success in continuing to place housing loans during 1982, it is conservatively projected that with the HG, the System will maintain current shelter-related lending levels through 1984 and thereafter increase lending moderately. HG lending will be heavily concentrated in home improvements given the need for, and affordability of, such shelter solutions during periods of economic recovery.

## 2. GOB Creditworthiness

Given the long-term repayment period of the HG, it is not feasible to project balance of payment statistics to forecast whether adequate foreign exchange will be available to repay the HG loan 10 to 30 years from now. The GOB's repayment capability will depend upon economic performance at that time. In the short to medium term, it is clear that the GOB must take the measures necessary to adjust to Bolivia's new economic circumstances and to stabilize the economy. The recent progress of the Government in initiating negotiation of stabilization measures with the IMF and in renegotiating outstanding debt represents a good start. It is expected that the GOB will continue addressing the economic problems it faces and support private sector generated growth policies. As such, the repayment risk inherent in the proposed HG loan is judged reasonable.

## 3. Financial Analysis

At issue is whether the S&L System and La Merced will be able to absorb the loss in the value of their housing loan assets and continue paying dollar debt, with an injection of new resources and by changing certain operating procedures. The financial analysis summarized below considers the financial viability of the System and La Merced under conservative assumptions in order to measure the projected impact of the new HG resources. The results of this analysis point to the urgent need for the HG 007 Program to ensure that the S&L System and La Merced continue to expand and play a central role in addressing Bolivia's growing shelter deficit. In addition to assisting these institutions to mobilize more savings and initiate new types of shorter term lending, the proposed HG Program will provide a much needed infusion of new resources which can be used to expand lending and allow earnings on old and new loans to be increased, thus maintaining an adequate cash flow to pay existing dollar debts.

The following assumptions are used in this financial analysis:

<u>Exchange Rates (Average)</u>								
<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
250	350	438	547	685	790	865	930	975

A 13 percent interest rate from the investor to the BCB, 15 percent to CACEN and 17 percent from CACEN to the S&L associations and La Merced. (These rates could be lower depending on the rate negotiated by the BCB with the

U.S. investor.) The BCB has already agreed to lend to CACEN at 2 percent above the rate at which it receives the dollar loan.

Variable Interest Rate as follows:

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
Existing Loans (Av.)	26	41	50	54	51	49	47	45	43
New Housing Loans	39	50	54	54	51	49	47	45	43
New Diversified Loans	43	51	55	55	52	50	48	46	44
Savings	25	27	27	27	30	30	30	30	30

Grace periods will be 10 years for CACEN and one year for the associations and La Merced.

Savings are projected to increase by 40 percent p.a. (This compared with an historical average of 50 percent for the S&L System. La Merced just undertook a savings mobilization campaign and raised its deposits by over 50 percent.

Outstanding "dollarized" debt from the associations to CACEN will be rescheduled to spread payments over 5 additional years. (The original maturities were 10 years), and 25 percent (\$1 million) of the arrearages due to CACEN will be paid immediate.

Thirty percent of the new HG (\$4.5 million) will be advanced to CACEN and liquidated beginning in year 3 of the loan.

New types of shorter term lending will be increased according to the amount of funds available from prior loan reflows and savings.

Maximum repayment periods on housing loans will be ten years, but are expected to average six years.

Excess assets (i.e. investments in land and buildings) will be sold at appropriate times to generate increased cash flows. For purposes of the cash flows, these assets have been priced at one-half their market value and spread over 3 years.

Administrative costs for CACEN, the S&Ls and La Merced have been projected based on actual historical costs. La Merced's other operations will generate net cash inflows at historical averages.

Various cash flows for the S&L System and La Merced have been projected under four basic scenarios:

1. Variable interest rate structure without new HG.

2. Indexation without new HG.
3. Variable interest rate structure with new HG.
4. Indexation with new HG.

This was done because although indexation based on an increase in the minimum wage appears likely to be adopted, the S&L System and La Merced must be prepared to face either eventuality.

The indexation rate used in the cash flows under the indexation scenario were:

<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
100	80	64	49	25	15	10	5	5

A three percent spread between the nominal savings (3 percent) and lending (6 percent) rates is also assumed.

The following cash flows were developed and are summarized in the tables included in this section.

1. CACEN without HG, variable interest rates
- 2a. CACEN without HG, indexation
- 2b. S&L System (12 S&Ls as a group) without HG, indexation
3. CACEN with HG, variable interest rates
4. System with HG, variable interest rates
5. CACEN with HG, indexation
6. System with HG, indexation
7. La Merced with HG, variable interest rates

The cash flows without the HG indicate that the S&L System would experience negative cash flows in 1983. This would force most or all of the S&Ls to curtail lending activities drastically which, in turn, would lead to a rush by savers to withdraw their deposits. Liquidating assets would not be sufficient to meet the System's external debt requirements while simultaneously complying with savers' withdrawal demands. Accordingly, S&Ls would have no choice but to suspend operations. The cash flow for CACEN without the HG under indexation shows that institution operating beyond 1983, but assumes repayment of previous loans by the S&Ls and is, as a practical matter, meaningless.

No cash flows were performed on La Merced's portfolio assuming no new HG because, given the diversified nature of La Merced's operations and its holdings in land and buildings, it is likely that the Cooperative would survive without the HG; however, its successful housing program would have to be discontinued.

The cash flows assuming the new HG show that both the S&L System and La Merced will be able to expand their lending programs, survive the near-term financial crisis, and remain financially viable for the foreseeable future. Both institutions will be provided, through the HG, with an adequate "cushion" in the form of several additional years of operations to make whatever adjustments are necessary to respond to unforeseen economic circumstances. Among the

alternatives which will be available to the S&L System and La Merced during the years ahead to adjust to future economic changes, in addition to modifying interest rates on savings and lending, are the following:

- a. Further rescheduling of outstanding "dollarized" debt owed by the S&L associations to CACEN.
- b. Revision of the terms of new loans from CACEN to the associations and La Merced.
- c. Increased emphasis on shorter term lending and the revision of terms of such lending.
- d. Greater savings mobilization.
- e. Accelerated liquidation of investments in fixed assets.

The cash flows are summarized in Tables 1 to 5 below.

Sensitivity analyses of certain key variables in the principal cash flows were also run and are summarized in Annex G. The variables tested were exchange rates, interest rates, average repayment period, and percentage increases in savings deposits.

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4. Demand Analysis - Affordability

a. Housing Need and Production: The Ministry of Housing and Urban Affairs (MUV) calculated that the 1982 housing deficit nation-wide is over 160,000 units (55,000 in urban areas and 106,300 in rural areas). With new household formations estimated at 24,000 per year, annual production would have to approach 33,000 units each year through the end of the decade to meet the demand. However, annual construction rates in the recent past have been less than 20 percent of this level, and it is unlikely that the pace will be accelerated in the near future.

As illustrated in the following table, the growth of the S&L System's lending has been exceptional in the past five years.

Table A-3

<u>S&amp;L System</u>	
<u>No. of Housing Loans Per Year 1977 - 1982</u>	
1977	702
1978	1,752
1979	3,205
1980	2,748
1981	4,376
1982	4,157

Notwithstanding the fact that the System had initiated new types of credit lines, at least 70 percent of its loans in 1980 and 1981 were for new house construction or improvements. This level of lending represents an increase in the System's share from about 40 percent of the total public and private investment in housing in 1978 to over 60 percent in 1981. That level of investment was maintained in 1982 with over 4,000 loans placed, despite the total restructuring of the system to a peso-denominated portfolio and increases in lending rates. However, there was a shift to home improvement loans.

The housing deficits mentioned above and the limited production levels in formal construction have created a housing shortage which is being addressed by the informal sector. Marginal areas surround every major and medium sized city. Because families in these areas often use the materials at hand (e.g. adobe in the altiplano, cane and palm in the lower valleys and subtropics), many of the units are considered "below standard." Of the existing stock, the MUV estimates that 90 percent of all rural homes and 60 percent of all urban residences, representing more than 800,000 units throughout the country, should be replaced. This "qualitative deficit" clearly overstates the problem since most of these units can be upgraded instead of replaced.

The major thrust of the proposed project will be home improvements. The success of the HG 005 Program in rural towns is one indicator of the high level of demand for this kind of program. The results prove that a significant percentage of the existing stock is essentially sound and can be converted into safe and comfortable dwellings.

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The characteristics of the overall housing stock have not changed markedly since the 1976 Census because informal sector construction continues unabated. Data from the Census point out the areas in which home improvement loans will be in greatest demand. In La Paz, Cochabamba and Santa Cruz, only 42, 22 and 34 percent of these units had water sewerage and electricity connections, respectively. Information available on the materials used in house construction in La Paz, Cochabamba and Santa Cruz, indicate that partial upgrading could significantly improve the quality of the housing stock. The following illustrates the incidence of materials in the construction of floors, walls and roofs.

<u>City</u>	<u>La Paz</u>	<u>Cochabamba</u>	<u>Santa Cruz</u>
<u>No. of Units</u>	340,414	147,317	110,066
<u>Floor Material</u>			
Wood, cement, tile or brick	39.6%	34.4%	61.2%
Dirt	60.4%	65.6%	38.8%
<u>Wall Materials</u>			
Cane, palm, trunks	2.1%	4.2%	11.5%
Adobe	90.2%	83.0%	32.8%
Brick, cement or rock	6.9%	11.5%	47.0%
Wood	.8%	1.3%	8.7%
<u>Roof Materials</u>			
Zinc, tile or cement	70.4%	60.2%	74.7%
Cane, straw	29.6%	39.8%	25.3%

b. Estimating the Median Income: In the absence of current household data, planners rely on estimates in calculating incomes, defining the target population, and projecting demand and affordability. In 1978, when the HG 005 Program was in preparation, a base year median was established, using a methodology developed by AID and the UN which relies on national accounts and population statistics, to indirectly estimate average income and its distribution. This methodology was refined by the National Savings and Loan League and has been applied throughout Central America where similar data base problems exist. (See "Preliminary Methodology for Estimating Household Income", AID January 1980).

The equations have been applied to Bolivia to establish a new base year (1982) and a preliminary median income estimate for May 1983. The improved availability of household data is an important element in this process which will permit comparison of results. INE has developed a sample frame for 32 cities and plans to carry out periodic surveys (three to four times per year). The results of the first survey are expected by the end of 1983 and will permit an updating of the estimates on an annual or semi-annual basis.

The survey methodology for indirect estimates of income is sound, but relies on current national account figures and population projections. In the case of Bolivia, the accounts are well behind schedule (e.g. final figures for 1981 may be published by the end of CY 1983) and estimates of the total population and work-force vary considerably depending on the assumptions used regarding overall and regional growth rates, productivity in the agricultural sector, and

employment. Household data is the only way to verify the estimates and make the needed refinements. In this highly inflationary period, regular updates in lending and income guidelines must be made. Hence, the estimates provided below (Table A-4) are preliminary calculations and will be adjusted periodically.

Table A-4

ESTIMATED MONTHLY URBAN INCOME DISTRIBUTION 1980-19831/ (\$b)

<u>Percentile</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>May 1983</u>
10th	3,108	3,998	10,555	15,410
30th	5,445	7,004	18,492	26,998
50th	8,267	10,635	28,075	39,024
70th	12,618	16,232	42,852	59,564
90th	25,423	32,705	88,337	120,008
Average	12,432	15,993	42,218	59,570

Note: INE defines "urban" as population concentrations of 2,000 or more.  
 1/ Details on how this Table was derived are contained in Annex F, Exhibit 5.

During 1982 and the first five months of 1983, wages have been increased continually in an effort to keep up with inflation. During this period, wages of lower paid workers have tended to increase faster than wages of higher paid workers due to government regulations issued in February and November of 1982 and March of 1983 which established minimum increases for lower paid employees. The total wage increases for lower paid workers in 1982 and the first five months of 1983 have been approximately 105 and 46 percent respectively. Wages for higher paid workers have increased by approximately 70 and 59 percent over the same period.

As part of the HG 005 evaluation carried out in August 1982, a survey was conducted of public and private sector employers in the areas served by the participating S&Ls. The purpose of the questionnaire was to determine how wages have changed in response to the economic measures put into effect in February, 1982. Employers were asked to specify the wages of all employees by four categories (i.e. professional, technical, administrative, general worker) as of December, 1981 and as of July 1982. While the sample was small and provided only a general sounding, some interesting observations were obtained regarding the pattern of progressive wage adjustments. In the six month period in question, all but one employer provided substantial salary increases. (The exception was a public sector office where workers receive 18 salary payments.) The majority of the lowest paid workers received increases of between 50 and 120 percent. In contrast, the highest paid workers usually received raises of 20 percent or less. There was greater variation in the middle level workers' wage increases. In sum, the salary scale spread is being reduced.

c. Affordability of Shelter Solutions to be Financed: HG 007 will provide for the development of a variety of housing finance arrangements. With

1/ Details on how this Table was derived are contained in Annex F, Exhibit 5.

respect to the kinds of loans developed in rural areas, many of the same types of home improvements made under HG 005 are expected to be financed from the HG 007 Program. These include very low-cost housing finance arrangements, known as the "Type A"<sup>1/</sup> loan (average amount \$800 or \$b160,000) as well as the somewhat larger "Type B"<sup>2/</sup> home improvements loan (average amount \$1,700 or \$b340,000). Lending will be for a variety of home improvements as well as for the construction of new core units in rural areas. Home improvements will include:

- Repair/replacement of roofs
- Repair and weatherproofing of walls
- Upgrading of dirt floors
- Construction of potable water sources (wells)
- Construction of sanitary disposal facilities (latrine and septic systems)
- Connections to potable water systems
- Installation of bathing and sanitary facilities
- Addition of new rooms
- Installation of electric services
- Partition walls
- Home finishing loans
- Combinations of above improvements

An examination of the high construction costs relative to the affordability constraints of the target group in Bolivia as of May, 1983 suggests that few, if any, new housing units will be built under the project. Experience with the HG 005 Program demonstrates that considerable reductions in costs were achieved through the use of locally-available materials and self-help efforts. Thus, it is to be expected that there will be some modest new housing units financed by the HG 007 Program, especially in rural areas where low-cost materials are readily available and where patterns of work and free time are propitious for self-help activities.

The HG 007 Program will concentrate on urban areas, but will not exclude rural areas where lending programs are on-going. Home improvement loans will be emphasized. Improvements will be similar to those listed above, but that list is not exclusive. Recent speculative price increases have pushed the costs of even modest core houses to a level which is, at this time, out of reach of most families with incomes below the median. However, with alternative building materials, the increase in the price of construction materials is expected not to be as great in the future as it has been during the last six months. Therefore, over the life-of-project, some core unit construction may occur.

Anticipated costs for activities to be carried out under the HG 007 loan have been determined utilizing May, 1983 unit prices of the construction materials most frequently used in low-cost upgrading and construction. On the basis of these costs and drawing from the types of core units and housing improvements recently financed by the S&L System, seventeen typical improvement/core units have been costed out for Bolivia's four main geographic regions (i.e., La Paz, North, South, Valley). These seventeen alternatives and their respective supporting budgets comprise Exhibit 3 of Annex F of this paper. Information is also provided on the affordability of the housing alternatives by families in varying income percentiles, assuming payment of 25, 30 and 35 percent of family income for the amortization of the corresponding loans, which will be lent initially at a 39 percent interest rate with an eight-year repayment period. An illustrative chart of the data is provided in Table 6

<sup>1/</sup>"Type A" loans are for small home improvements directed toward families at or below the 20th income percentile.

<sup>2/</sup> "Type B" loans are for intermediate home improvements directed toward families at or below the 50th income percentile.

below, showing seven of the seventeen alternatives and presenting their affordability by geographic areas and income percentile range.

d. The Capacity of the Target Population to Pay: While it is generally believed that lower income families cannot pay proportionately higher amounts for housing without reducing other basic necessities, studies of AID and World Bank projects have shown that low income families pay higher proportions of income on housing than families in upper income categories. In general, statistics demonstrate that: 1) it is not uncommon for families below the median to pay up to 40 percent of their income on mortgages and housing related expenditures while wealthy families dedicate 10 percent or less to housing, and 2) families are willing and able to sacrifice when they are offered ownership rights and an opportunity to develop over time a more comfortable home. Unfortunately, specific studies have not been carried out in Bolivia. Although some information exists on rental prices for past years, it has never been correlated with income. Therefore, estimating housing expenditures for low income groups is not possible. However, based on discussions with representatives of the 12 S&Ls and La Merced, it is clear that the investment capacity of low-income groups is quite high and clearly surpasses 25 percent of monthly income in most cases.

Throughout the S&L System, borrowers tend to prepay their loans early, including HG 005 rural beneficiaries who have the least payment capacity. System-wide, borrowers pay off their loans in 60 percent of the time contracted (e.g. thirteen-year loans are paid off in eight). The average repayment period for the entire System is eight years, even though loan terms may be given for as long as 20 years. The standard repayment period for home improvement loans in La Merced is only two years. Prepayments are regular and are generally augmented when workers receive extra bonus salaries.

In another example, the World Bank has financed a series of upgrading projects in areas surrounding La Paz. The installation of infrastructure (water, sewerage, and roads) costs the beneficiaries about 10 percent of their incomes. Where this upgrading has been completed, the communities' housing stock has undergone an extraordinary transformation (i.e. in a period of less than two years through communal effort, 90 percent of the houses have been expanded and improved and sidewalks, retaining walls and stairs have been built). While regular payments are only 10 percent of income, the amount of additional investments by the families in this short time span clearly demonstrates a payment capacity well above the estimates of project designers.

Accordingly, the estimated payment capacity for most borrowers has been set at between 30 and 35 percent of monthly income. This guideline may still be conservative, but is clearly more realistic than the 25 percent used previously.

An illustrative breakdown of income, payments and loan amounts is provided below:

BORROWERS' MONTHLY PAYBACK CAPACITY BY INCOME PERCENTILE

<u>Percentile</u>	<u>Income Per Month</u>	<u>Monthly Payments*</u> (30-35%)	<u>Loan Amounts</u>
50th	\$b39,024	\$b11,707 - 13,658	\$b260,000-380,000
30th	\$b29,998	\$b 8,099 - 9,449 (25%)	\$b180,000-230,000
10th	\$b15,410	\$b 3,853	\$b110,000

\*By percent of monthly income used for housing finance. Estimates are based on loan terms of 8 years at 39 percent interest.

5. Savings Mobilization

A principal long-term financial objective for the S&L System and La Merced, is to achieve an increase in savings in order to provide a better balance between various funding sources.

While dollar liabilities as of December 31 1981 represented only 50 percent of the S&L system's outstanding portfolio, today, due to the declining value of the peso, these dollar liabilities are larger than the loan portfolio. the S&L System has traditionally registered impressive annual increase in savings generations, as can be seen in the table below:

HISTORICAL SAVINGS PERFORMANCE

S&L Association  
(000 pesos)

<u>Year</u>	<u>Absolute Total</u>	<u>Without Readjustment for Exchange Rate</u>	<u>% Change</u>
1971	\$b 16,891	\$b 16,891	
1972	23,563	23,563*	
1973	35,656	35,656	+ 51
1974	81,712	81,712	+ 129
1975	98,745	98,745	+ 21
1976	190,183	190,183	+ 93
1977	296,462	296,462	+ 56
1978	381,319	381,319	+ 29
1979	550,516	467,826	+ 23
1980	689,995	608,487	+ 30
1981	834,212	751,166	+ 23
1982	1,713,806	1,077,182	+ 43
			<u>49.8**</u>

\*No adjustment possible.  
\*\*Average increase per year.

TABLE A-6  
AFFORDABILITY BY AREAS AND INCOME RANGE

(Examples of Shelter Solutions)

Item to be Financed	LA PAZ			NORTH			SOUTH			VALLEY		
	Income Percentile			Income Percentile			Income Percentile			Income Percentile		
	0-10	10-30	30-50	0-10	10-30	30-50	0-10	10-30	30-50	0-10	10-30	30-50
1. Construction of Additional room of 12 m2.			Yes						Yes			
2. Home Improvement: Plastering, cement floor, doors, windows, paint.		Yes	Yes			Yes		Yes	Yes			Yes
3. New roof for 21 m2 unit		Yes	Yes									
4. Home Improvement: 28 m2 roof and 24 m2 wood floor			Yes			Yes			Yes			Yes
5. Home Improvement: Plaster for adobe walls	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes			Yes
6. Home Improvement: Installation of electric system	Yes	Yes	Yes									
7. Home Improvement: Installation of water system from street lines.	Yes	Yes	Yes									

- ASSUMPTIONS:
1. Term of loan 8 years
  2. Interest rate 39% per annum
  3. Loan finances 100 percent of improvement/construction (more costly undertakings are possible with a contribution by the borrower).
  4. Income percentiles per May 1983 projections.

The System's past success was significantly affected by the fact that dollar-adjustable savings accounts were offered. Now that the System's savings are fully denominated in pesos and commercial banks are also seeking savings more aggressively, competition for new savings will be more difficult. However, even though the System paid a lower rate than commercial banks in 1982 (22 vs. 30 percent) and despite the economic crisis, savings were increased by 29 percent.<sup>1/</sup> La Merced succeeded in increasing its savings by 50 percent.

The competitive edge which the commercial banks have with regard to interest rates does not seriously limit the System's capacity for generating significant new savings. Because the S&L System accounts for 60 percent of all shelter-related financing by public and private housing institutions, it will continue to attract savings depositors since it provides a financing mechanism for future shelter needs. Gaining access to the S&L System's new diversified lending program will also be a significant attraction to new savers.

Another factor to consider in analyzing the System's prospects for mobilizing savings is its clientele group. The System primarily services low and medium income groups, a population stratum in which the commercial banks have shown little interest. Accessibility and low transaction costs for its lending activities are important to the System's success. Accordingly, the System has expanded its operations into rural areas under the HG 005 program, opening branch offices in locations where no other formal financial institutions exist. This effort will generate increased savings for the majority of the member associations.

This being said, however, relative interest rates paid on savings will be important. The S&L System will continue to offer rates below those offered by commercial banks, but the more dynamic market for savings will be monitored more closely and the difference between the average bank rate and S&L rates will be kept much smaller. New savings instruments will also have to be developed.

In order for the S&L System to meet the minimum target of 40 percent annual increases in savings generations, each association must make concerted efforts to improve outreach mechanisms and promotion techniques. To assure that the System gives adequate attention to this matter, a condition precedent will require that CACEN submit to AID an acceptable savings mobilization plan which has been discussed and agreed upon by the individual member associations. Project evaluations will measure progress toward achieving the benchmarks established with regard to yearly increases in savings generation.

## B. SOCIAL ANALYSIS

### 1. Beneficiary Subgroups

In order to properly describe the wide diversity of characteristics (e.g. language, ethnicity, ecological niche, income level, etc), found among the families below the 50 percentile income bracket, it is useful to employ a typology that emphasizes degree of assimilation into the national and cultural mainstream. This typology permits a general level of analysis of different types of poor people and the design of strategies to overcome constraints faced by each subgroup of beneficiaries to assure successful project implementation. According to the "assimilation into the national mainstream criterion", the

<sup>1/</sup> From \$b 834.2 million to \$b 1,077,182 (amount without 67% adjustment).

beneficiaries of this project are divided into three subgroups: (a) urban poor; (b) rural market town poor; and (c) rural peasants.

a. Urban Poor: The urban poor are the beneficiary subgroup that is most assimilated in the national culture. They compose the lowest strata in the loosely defined class structure of large cities. Compared with the other beneficiary subgroups, they exhibit the highest incidence of formal training (rates of completion of primary school are high and some incidence of attendance in secondary school), as well as the use of Spanish as the principle language. The nuclear family is the typical household arrangement, although extended household are maintained by a reduced percentage of recent immigrants from rural areas. Income is derived principally from wage labor; not uncommonly several members of the household draw salaries.

Participation in "community type" social groupings occurs on the basis of particular interest which include: religious associations, unions, sports clubs, neighborhood councils and informal groupings of people who have immigrated from the same region of the country. With regard to housing, this urban poor subgroup tends to emulate middle class behavior and values (e.g. separate cooking, sleeping and entertaining areas; discrete sleeping quarters for parents and children of different sexes; and indoor plumbing).

b. Rural Town Poor: This beneficiary subgroup represents an intermediate point among the beneficiary types. In most cases, it represents the poor segment of rural towns at the province administrative Level.<sup>1/</sup> Such towns are characterized by 1) a population made up of multiple ethnic groups (mestizo, cholo, Indian) stratified into a defined class structure, 2) daily and/or weekly markets, 3) other services and institutions (health clinics, churches, nuclear schools, and transportation facilities) not found in more remote areas, and 4) a public administrative structure with officials appointed by the national government.

The lower class of these town is made up of cholos (mestizos) and Indian peasants who have recently immigrated from the surrounding countryside. Compared to their counterparts in urban areas they have less formal training. (Cholos may have completed primary school, but the schooling of Indian immigrants is extremely low.) The dominant language used by members of this subgroup is a direct function of the time spent in the town setting; those with longer tenure are more comfortable in Spanish, while more recent arrivals tend to rely more on a vernacular (e.g., Quechua or Aymara) tongue. Similar to language, the family structure of this subgroup reflects their state of transition from a rural to an urban lifestyle. Both nuclear and extended units are found; the determining factor in any particular case is again the length of time that the family has lived in the rural town setting.

The family, either nuclear or extended, is also the basic economic unit. Economic activity is generally a mixture of agriculture and commercial pursuits. A prevalent combination finds husbands and sons engaged in small-scale farming, while wives and daughters manage a small store or produce handicrafts. A second combination is one in which the husband works as an artisan (mason, carpenter) or is involved in the provision of services, while the rest of the family runs the commercial and/or agricultural enterprise. As a result, the family has multiple sources of relatively low income which are not as fixed nor as frequent as that of salaried employees with a periodic pay schedule.

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<sup>1/</sup> Administrative levels of rural Bolivia, in descending order, are Department, Province and Canton.

The housing characteristics of this subgroup tend to reflect the transitional state of its member. Depending on the location (altiplano, valleys, lowlands) local building materials (e.g. adobe, wood, thatch, tin) predominate. Structures are unsophisticated. While there is some division of living area for discrete purposes (i.e. cooking and sleeping), the separation of space does not approach that of middle or upper class households. The availability of electricity and in-house water connections is a function of the advance of development programs in the community. Finally, coinciding with the economic pattern of this beneficiary subgroup, housing tends to be multipurpose. It includes not only the living quarters but also space for the family's commercial endeavor (store or artisan workshop) and/or agricultural activities (storage areas for tools, harvested crops and barnyard animals).

c. Rural Village Poor: The rural village poor is the least assimilated into the Bolivian mainstream. It is made up of people living in peasant villages at a canton administrative level or in isolated homesteads. Normally, the residents of these villages belong to the same ethnic group (in most cases, Quechua or Aymara Indians); and the vernacular language predominates, although there is some facility with Spanish.

This subgroup is characterized by a number of cohesive elements at both the family and community levels which could serve to introduce and diffuse housing solutions. An extended household, composed of parents, children, spouses of children and grandchildren, is the basic social unit. (Exceptions are the lowland colonization areas where the nuclear arrangement predominates). Moreover, there are practices of work exchanges among related households during periods of peak activity, as well as loans of foods and other essentials (e.g. tools and seeds) when circumstances so dictate.

At the community level, obvious unifying factors are ethnicity and common language. In addition, there are communal work groups (in the highlands they are known as mingas) to which all households are expected to contribute manpower, and depending on local conditions, communal farm land and pasture, to which all households have user rights. The main element of community authority is either a traditional socio-politico cargo system according to which men pass through a ranked series of minor and major offices, or a union (sindicato) organization formed originally as a grassroots political cadre, but which in many areas have evolved into effective leadership bodies.

The extended family is also the primary economic unit. Farming on a small scale is the principle source of income. All family members who are physically able, play a role in carrying out agricultural tasks. Produce is directed primarily for meeting subsistence needs, and surpluses, if any, are marketed to generate cash. Off-farm casual day labor, usually performed by the adult males, is used to supplement income earned from farming.

Of the three beneficiary subgroups, the rural village poor has the most rudimentary housing stock. Like their rural town colleagues, housing structures are made of locally available materials and contain much less separation of space (typically, the house consists of one or, at best, two rooms), earthen floors, inadequate ventilation and, in rare cases, potable water and electrical facilities.

## 2. Social Feasibility

The social feasibility of this project depends on addressing the following constraints effectively: (1) cultural access of the beneficiaries to the program; and (2) structural flexibility of the program to address the particular housing needs of each beneficiary group.

a. Cultural Access: Shelter solutions, either construction of core units or home improvements, and the general functioning of a formal credit institution are very much a part of the "developed world's" way of doing things. Concepts, such as mortgage loans with fixed schedules for repayment, interest bearing savings accounts, and the workings of a bureaucratic office, are foreign to the normal activities of the poor. For a campesino, the very act of entering a bank can be a frightening experience. The degree to which lack of familiarity with a modern credit system increases as one moves from the most to the least assimilated subgroups (i.e. from urban to rural village poor), is a factor that could inhibit the participation of each type of beneficiary.

To counteract this potential problem, technicians/promoters will continue to take the program to the recipients. The technicians will not only expose people to the possibilities of upgrading their housing, but they will do so in a way that is congenial with the cultural peculiarities of each subgroup.

Accordingly, matters such as local language and easily recognizable symbols will be used for audio-visual campaigns when dealing with potential borrowers. In addition, the technicians will take advantage of existing social structures within each target subgroup to elicit and sustain interest in the housing program. For example, urban and rural town poor neighborhood councils will be used to arrange meetings of potential borrowers. Similarly, in rural villages, attempts will be made early in the program to enlist the local sindicato or socio-political cargo system leaders and thereby gain the participation of other community members through a demonstration-multiplier effect.

Currently, the technicians have varying levels of skills and information required to identify and utilize the social pressure points to gain entrance to and work with people in poor communities. However, S&L System technicians have gained considerable experience in these matters through the HG 005 program. This experience will be refined through periodic training during this project and extended to their counterparts in La Merced.

b. Structural Flexibility of the Program: A matter closely related to the cultural access of the beneficiaries is the degree of flexibility in the design of the program. Said simply, to the degree that the project allows for the particular needs and limitations of people in the various beneficiary subgroups, it will enhance participation; to the extent that it rigidly follows standard banking procedures, it will constrain participation.

The project, as designed, has a variety of components to take into account the particular circumstances of the beneficiaries. The HG 007 Program will permit the S&L System to continue to offer a wide range of home improvements that can be undertaken singly or in combination (e.g. repair/replacement of roofs, upgrading of dirt floors, construction of sanitary facilities, addition of new rooms including work areas). Such elasticity takes into account the personal preferences of beneficiaries, an important social and psychological variable in the context of living area. Also, repayment schedules for the loans

are not limited to a set pattern; rather a variety of formulas are used. For example, borrowers with steady incomes received over fixed periods (the majority of people in the urban subgroup) are offered payment plans based on installment periods that coincide with the receipt of income. Beneficiaries who earn their living primarily from agriculture (people in the rural village subgroup), and whose income is tied to a crop cycle are able to arrange repayment plans that are congruent with harvest and marketing periods. Taken in conjunction, these measures contribute to a housing solution that is sufficiently flexible to address the particular circumstances of a majority of potential borrowers thereby facilitating their participation in the shelter improvement program.

### 3. Benefits to the Target Population

The benefits which accrue to families receiving these loans go well beyond improvements in the durability, convenience and esthetics of their homes. Although difficult to quantify, all of the improvements have a direct impact on the health of the beneficiaries. For example, covering dirt floors with cement or brick reduces the transmission of parasites. Increased ventilation, potable water connections, and more living space are also correlated with a number of health indicators. Chagas disease which is prevalent in tropical climates is carried by the "vinchuca" insect which often lives in adobe walls and thatched roofs. Plastering walls and installing ceilings greatly reduce this health problem.

### 4. Spread Effects of HG 005

The S&L System as a whole has expanded its operations over the past few years at a rapid rate. The economic outlook, however, requires that continued expansion be based on aggressive marketing of the System's services and the promotion of savings. A major technical assistance component of the HG 007 program addresses the problem of outreach and marketing. As a first step, the experience of the S&Ls participating in HG 005 will be shared in roundtable discussions and seminars with other associations and La Merced staff as well. Because of the geographically dispersed markets, the associations in the north need to be especially creative in reaching out to a population heretofore unserved by financial institutions. Radio and television campaigns, periodic raffles to stimulate new savings accounts, and other promotional devices were utilized quite successfully for HG 005, some of these techniques will have an immediate applicability in other areas of the country. The marketing effort must be combined with the INE survey activity to provide the most accurate profile possible.

### 5. The Participation of Women in the Program

As the HG 007 program is designed to realize fundamental improvements in shelter conditions for below median income families, a direct result will be improvement of the area in which the female members concentrate their daily commercial and household activities. Direct benefits will include living areas easier to keep clean (cement or brick floors, plastered walls) and better lit (through incorporation of windows and an increased capability to make use of electric light fixtures). Improvement in sanitary conditions and minimization of the effects of precarious site conditions in rural areas (flooding, slides) will be additional benefits. Finally, access to credit permits women with home-based commercial activities to add the space necessary to house such activities.

Among the areas of special concern under the program will be assurances of equitable credit treatment for female heads of household, including coverage of those situations in which male borrowers die or default, leaving families with only partially amortized loans. In sum, the income of female family members plays an important role in the creditworthiness of the target population, a factor which, as in HG 005, will be addressed by the establishment of specific credit review practices by the participating institutions.

### C. TECHNICAL ANALYSIS

The subsection on Demand Analysis - Affordability under the Economic and Financial Analysis (Section III.A.), provided a run-down on the types of shelter solutions financed and their affordability by the target group. Annex F, Exhibit 2 provides a more detailed description of each of the seventeen solutions analyzed by geographic region, cost and affordability.

In the intensive review, a number of questions were raised concerning the different types of housing loans which would be financed under the project. These issues are discussed below.

#### 1. Self-help Construction

To help minimize cost, construction activities will be scheduled so that most of the work which can be carried out by the family will be completed prior to the disbursement of the loan for purchase of construction materials and payment of skilled labor. For example, the preparation of foundations can be carried out prior to the disbursement of loan funds for construction. Because the utilization of self-help methods often implies a considerable lengthening of the time needed to carry out the work, a potential problem in an inflationary economy, the HG 007 program proposes stockpiling construction materials in advance, thereby avoiding cost increases. In addition, as with the HG 005 rural housing program, the HG 007 program contemplates utilizing lower cost, locally available construction materials, thus reducing overall costs and construction time.

#### 2. Availability of Contractors

It is expected that loans granted under the HG 007 program will be provided to individual families desiring to construct or improve their houses rather than for the construction of large housing projects. In most cases, individual families, under the guidance of technicians from the associations and La Merced, will select their own contractors. In Bolivia, there is no shortage of small contractors, particularly in rural towns, and the utilization of small firms will help counteract some of the decline in activity in the large-scale construction sector.

Small contractors run low-overhead operations which serve efficiently for the kinds of construction projects which this loan will finance. Over the past several years, the S&L System was involved in the development of a large middle-income project (Los Pinos) in La Paz, dividing the construction of the project among the largest construction firms (of which there were three) in the country. The results of this approach were not encouraging, and it was not until smaller firms were invited to participate in the project that work proceeded on schedule. This change of direction was also reflected in the

Cipriano Baraco project in Trinidad (a project of 771 units for low income families) where the formal-sector firms involved in the construction of the project were delivering their finished units at costs considered too high by the S&L system. As a result, several cooperative type groups were organized among masons, carpenters, and other workers in Trinidad, and soon demonstrated that they could deliver units of comparable quality at 25 percent less cost. Subsequent analyses demonstrated that the average cost would be at least 35-40 percent higher if a large construction firm performed a single small construction job. Under the HG 005 program, together with La Merced's experience in home improvement loans, virtually no use was made of large construction companies, as these were not considered well adapted to small home improvement jobs, particularly in rural areas. In view of its similarity in design with the HG 005 program, the proposed program also precludes the utilization of larger, formal sector construction companies.

### 3. Availability and Price of Construction Materials

The availability and price of some construction materials in Bolivia represents a serious problem, as these are directly affected by economic conditions. For example, certain materials (e.g. door hinges, fittings, electrical outlets, sanitary fixtures) are imported. The recent changes in the exchange rate make these items considerably more expensive. To alleviate the situation, the Chamber of Constructors has proposed legislation which would allow the industry to import directly, thus reducing intermediary charges. In addition, the Chamber has also petitioned for lower duties on imports necessary for the sector, a proposal which has been favorably received by the GOB.

Other factors contributing to increases in cost are being addressed in different ways. Cement, while locally produced, has disproportionately increased in price. To lessen this impact, construction techniques for social interest housing are being utilized (e.g. foundations are prepared with a lime mixture in place of cement, fired-clay drain pipes are replacing cement tubes, and fired-clay flooring tiles are replacing cement tiles).

Given the need to utilize some imported materials in low cost housing improvement/construction activities, the participating institutions will carefully monitor the supply and price of these items and purchase stockpiles at the most favorable price. In this respect, CACEN and the Bolivian Chamber of Constructors are expected to play an important role. In sum, where alternatives exist or can be devised, the construction sector is taking advantage of them to cut costs. Where imports must continue to be used, every effort is being made to increase the availability of such elements at the lowest cost possible.

With respect to alternatives for ensuring the availability of construction materials, an expansion of the present bulk purchasing practices of a number of the S&Ls promises to be an effective means. This practice has been carried out with considerable success due to the S&Ls familiarity with 1) construction material needs, and 2) the various materials utilized and preferred in specific regions. One example relates to associations in the northern part of the country which have found it feasible to purchase items during the dry season that are scarce during the rainy season when roads are in poor condition. This has enable those S&Ls to maintain an active construction portfolio throughout the year. A sampling of materials presently stockpiled by some of the associations include roofing sheets, nails, paint, sand, bricks and lumber.

The savings which the S&Ls have realized by purchasing materials directly from the manufacturer have been approximately 20-30 percent of retail sales prices. The S&Ls have found that their expenses for administering the purchase program are roughly 5 percent, resulting in a savings in the range of 15-25 percent. In turn, this amount has been passed to the borrowers.

To illustrate the possible cost savings which this approach represents, the cost of the 24 m2 core unit, which has been examined as example No. 4 of Exhibit 3 in Annex H, could be reduced by the amounts indicated in the table below.

TABLE C-1

SAVINGS IN CONSTRUCTION COSTS RESULTING FROM BULK PURCHASES (\$b)  
(1982 data)

Improvement:

<u>Core Unit Construction 24 m2</u>	<u>La Paz</u>	<u>North</u>	<u>South</u>	<u>Valley</u>
Costs without bulk purchase	156,574	217,905	184,666	223,972
Costs with bulk purchase	149,348	207,028	172,800	213,783

Another alternative frequently used is to make advance purchase of materials according to the types of loan applications being received. Technical supervision is another important area in helping borrowers achieve cost reductions in shelter upgrading. In this regard, the use of less expensive and/or locally available materials is expected to result in a considerable reduction in final costs.

In other instances, the S&Ls have organized "buying groups" to purchase in bulk, thus saving in material and transportation costs. These savings are noteworthy, especially in the case of heavy materials such as roofing sheets and cement. A further advantage is that these "buying groups" have assisted in organizing technical supervision and inspection of work in progress.

4. Cost-design Methodology

The experience gained from the HG 005 program demonstrates that the established low cost-design methodology has had only limited success in lowering per unit costs. This situation can be attributed to the underutilization of the original manual devised to implement the methodology. Considering that the System is receptive to the cost-design methodology concept, plans are now being developed for further training of management and technical staffs. Specifically, the training will emphasize the practical aspects of the design process and will enable the technical staffs of La Merced and the associations to visit those areas where the System has been most successful. The technical assistance proposed for the S&L System and La Merced will be utilized to strengthen these training activities, particularly by providing information gained on cost-effective construction methods in other countries where AID has supported social-interest housing activities.

## 5. Technical Supervision of Low-Cost Housing Activities

The final evaluation of the HG 005 low-cost rural housing program carried out in August 1982 pointed out that the quality of technical supervision and inspection of construction work had not been uniform. To correct this situation, CACEN has drawn up a training program to reinforce the quality of the technical support services to be provided by the associations. The technical assistance to be furnished under the HG 007 loan will be utilized to assist the System to implement those training activities which it has identified as essential to the ongoing success of its low-cost housing program and to assist La Merced to expand its efforts in this area.

### D. ADMINISTRATIVE ANALYSIS

The Bolivian Savings and Loan System which represents the country's largest and most effective housing finance institution, is composed of CACEN, established in 1966 as its central bank and regulatory agency, and twelve savings and loan associations. These member S&Ls are located in each of Bolivia's nine departments with six branch offices providing more extensive coverage throughout the country. Since the early 1970s, the System has been considered one of Bolivia's healthiest and most respected financial institutions. Today, the System has over 130,000 savers, accounting for 11 percent of total savings held by the entire banking system. During 1982, over 6,000 loans were disbursed by the associations.

The current housing guaranty program (511-HG-005), which began in 1979, has been successful in creating a nationwide home improvement outreach capability to serve rural areas. Accordingly, additional staff has been hired by each of the participating associations to promote the program and attend to the increasing housing needs of their low-income clientele. Low cost construction designs have been developed to make the shelter solutions more affordable, and locally produced materials and supplies are being used to a greater extent. Extensive publicity campaigns and promotion work have been performed to attract new customers in areas previously unfamiliar with formal credit services.

The HG 005 program has reinforced a considerable redirection of services toward lower income populations, which the System began to undertake over five years ago. Data about borrower's income for 1981 indicate that more than 70 percent of the System's current portfolio serves families with modest and low incomes (at or below the 65th percentile). A full 30 percent of its lending volume is providing benefits to families below the 40th percentile. This expansion into low income housing is all the more impressive if one considers that, with exception of the largest S&Ls, the member institutions are directed by the part-time efforts of professionals and rely on a small cadre of technical personnel to carry out day-to-day operations. Based on the approximately 4,400 loans placed in 1981, each loan officer processed on the average a total of 130 new loans.

To accommodate the anticipated additional loan volume they will manage under the HG 007 program (increased lending for housing needs to below median income families and a greater diversification of its portfolio into short term credit), each association will need to hire a few additional technicians over the life of the project.

Generally, administrative expenses throughout the System relate directly to the experience and strength of each S&L. Administrative expenses for Mutual La Primera, the oldest and largest of the S&Ls with 3,800 members and total savings of \$641 million, have averaged 2.7 percent of assets over the past few years. Newer associations, such as La Frontera, Guyaramerin, with 1,500 members and total savings of \$18.5 million, have reached as high as 5.5 percent of assets. Though these statistics are high by U.S. standards, they are acceptable given the developmental nature of many of the System's activities (e.g. low-income housing in rural areas) and the higher overhead costs attached to this type of activity.

The permanent staff of CACEN, 12 professionals, is a critical resource for the member associations in the areas of programming and technical assistance. The CACEN staff, which maintains regular contact with the associations, organizes training seminars for management and technical personnel and assists the S&Ls with financial planning, program innovation and operations. CACEN has also been the primary source of investment capital, largely as a result of its successful negotiation for AID and IDB program funding. CACEN's role has been enhanced by the relative autonomy it enjoys with respect to the Bolivian Central Bank (BCB). Under the 1970 reform of the nation's financial structure the System was identified as a component of the national financial structure with the BCB having a supervisory role over its operations. However, regulations were never drawn up to enable the BCB to carry out this role. Therefore, the System operates independently, with CACEN serving as the qualifying and regulating institution, as a secondary market for resources and as a discount window. In effect, CACEN offers financial services to the associations similar to those which the BCB offers to the commercial banks.

Despite the System's records for efficiency and growth over the past decade, a number of institutional constraints (identified in Section II.A.2) must be addressed to assure that the program's objectives are met. These constraints involve the lack of financial planning capacity, over-reliance on long term lending, dependency on external sources of financing, the lack of reliable information on household incomes and the diverse financial positions of member associations.

While the grant-funded long-term advisor and short-term technical assistance will help the System to deal with these constraints, specific actions by CACEN and the individual associations are also needed. Technical assistance will be directed toward strengthening the System's capacity in financial planning, lending diversification and savings mobilization. Simultaneously, the System's managing director will hire additional technical staff, conduct periodic training courses at both the managerial and technical levels, undertake promotion and publicity campaigns to attract new savings, and develop recovery plans to balance the portfolios of the four S&Ls (La Frontera, Manutata, Tarija and Potosi) most affected by the current economic situation.

Short-term technical assistance to the National Statistical Institute, (INE) will be provided to assist with a national household income survey. The results of this survey will enable the System to determine the affordability and appropriate financing arrangements for its lending activities. Finally, technical assistance will be provided to improve the System's capability in shelter construction cost analysis. This assistance will add to experience already gained under the IG 005 program with respect to self-help construction techniques, use of locally produced construction materials, bulk purchasing, and

more cost effective designs. It is expected that the lessons learned under the HG 005 program will be applicable to the housing necessities of below median income families in urban areas as well.

To help La Merced increase its volume of housing loans, project supported technical assistance will help improve the technical and administrative efficiency of existing personnel as well as additional housing staff. Project advisors, in addition to training and supervision, will orient La Merced's housing technicians in low-cost housing alternatives, greater use of locally-made construction materials, tailoring financial arrangements to the individual borrowers' repayment capacity and improved uses of publicity and promotion campaigns. Technical assistance will also be directed toward improving and expanding La Merced's savings mobilization campaign, which was recently initiated with technical assistance provided under the Operational Program Grant (OPG) 511-0533. A recently conducted institutional and impact evaluation of this OPG by Rural Development Services indicates that, to a large degree, the project's targeted objectives have been met or surpassed and La Merced has significantly broadened the geographic scope of its services into rural areas. La Merced interacted well with, and took full advantage of, project-funded technical assistance designed to improve the Coop's technical as well as administrative capabilities in small farm credit.

#### E. ENVIRONMENTAL CONCERNS

In addition to the Initial Environmental Examination (IEE) submitted with the HG-007 PID and attached as Annex H, the use of the environmental checklist which was developed under the HG 005 Program for core unit construction in rural areas was to be reviewed. Two weeks of grant-funded technical assistance provided to CACEN in the fall of 1980 reviewed the System's environmental planning capacity and developed a practical checklist for determining the eligibility of shelter construction activities in rural areas. Urban areas were not addressed due to the existence of municipal building codes and other requirements.

The final evaluation of the HG 005 Program, conducted during the July-August 1982 period, concluded that the S&L System's utilization of the environmental checklist had been, on the whole, very positive. In virtually all instances, the checklists were completed for Type C (core unit) construction, but for a number of reasons the evaluation recommended that the examination be applied to home improvement loans as well. Also, a number of home improvements financed under Type A and B loans (e.g. digging wells, installation of sanitary systems such as latrines or septic tanks, adding on rooms, etc.) have potential impacts on the environment. As a result, CACEN has amended the environmental guidelines and expanded use of the checklist to include home improvements which potentially have an impact upon the environment.

An additional modification to the environmental examination procedure will be the addition of a certification for the mortgage insurance program operated by the System. The purpose of so modifying the checklist is to give the person executing the checklist a higher degree of responsibility for certification than is now the case. This procedural modification is a safeguard to ensure that the checklist does not become simply a routine paperwork step in processing loan applications.

The loan agreements signed between the CACEN and La Merced will require that the environmental checklist and certification be included in individual subloans which are determined to have a potential impact upon the environment. CACEN staff will also provide practical training to La Merced technicians in the use of this checklist.

The Environmental Threshold Decision for this project, which resulted in a negative determination, is also included in Annex H.

#### IV. IMPLEMENTATION ARRANGEMENTS

##### A. IMPLEMENTATION PLAN

The implementation responsibilities of USAID/B, RHUDO/LA, BCB, CACEN, the S&L associations and La Merced have been explained in previous sections.

HG Loan disbursements will be made over a five-year period, with a thirty percent advance (\$4.5 million) provided as soon as possible after the signing of the Loan Agreement. Subsequent disbursements will be made against presentations by CACEN of documentation on loan placement to eligible borrowers. The advance will be fully liquidated prior to the end of the third year. The S&Ls and La Merced will finance 20 percent of each subloan from their own resources.

Grant funding for technical assistance will be provided from two sources: a) new development assistance grant resources totalling \$500,000, of which \$150,000 will be obligated in FY 1983, and b) the PRE/H-financed resources (\$50,000). The GOB counterpart contribution of \$40,000 will be direct budgetary support for INE.

An Implementation Agreement between AID, CACEN and the GOB will be negotiated shortly after Project authorization. This agreement will outline operational procedures, expected project outputs, and the responsibilities of the participating agencies in project implementation.

The tentative schedule for initiating the project is as follows:

1. Authorization - May 31
2. Letter of Advice - June 15
3. Signing of Implementation Agreement - June 30
4. Meeting CPs prior to seeking an investor - August 15
5. Signing of BCB/CACEN loan agreement - August 15
6. Selection of investor - August 30
7. Signing of Guarantee Agreements (HG and GOB) - September 30
8. Signing of Loan Agreement - September 30

##### B. MONITORING AND EVALUATION

###### 1. Monitoring

CACEN will submit quarterly reports to the Mission and RHUDO/LA which will include: (1) the number and type of shelter solutions provided during the reporting period; (2) a financial statement detailing the CACEN's disbursements and repayments for the quarter; (3) the rate of default for each S&L and for the System as a whole; (4) problem areas and recommendations for Mission consideration; and (5) a brief statement of what the CACEN expects to accomplish in the next quarter.

AID will monitor CACEN's performance in forecasting economic trends and S&L Association and La Merced progress in generating increased savings, diversifying

lending, expanding outreach to below median income families, and development of low-cost shelter financing arrangements. To bolster the Mission's monitoring program, long term and short-term technical assistance will be provided to the CACEN. This will be supplemented by periodic visits by members of the RHO/PSA staff.

## 2. Evaluation

During the five-year life of this project, there will be two evaluations, one in the first quarter of FY 1985 and the other during FY 1988. The first evaluation will concentrate on assessing the S&L System's and La Merced's success in maintaining financial viability and implementing proposed operational changes. The first evaluation will also develop baseline data against which the later evaluation's finding can be made.

The objectives of the project's final evaluation, which will be carried out in the last year of the project, will be two-fold. The first objective will be to determine the success of the project in terms of its stated purpose, that is, its success in expanding the private sector's capacity to provide housing construction and home improvement loans to Bolivia's low income families. The evaluation will also assess the impact of the S&L System and La Merced on improving shelter conditions nation-wide.

## C. CONDITIONS, COVENANTS AND NEGOTIATING STATUS

1. CACEN will prepare a Financial Strategy satisfactory to AID for the Program, including a technical assistance plan, setting forth:

- 1) The general terms and conditions of lending under the Program,
- ii) income distributions for eligible families, and
- iii) plans for each participating institution (including La Merced) which address: (a) portfolio diversification, (b) targets for savings and a savings mobilization plan, (c) the criteria for distributing Program resources and the amounts to be disbursed, (d) the repayment to CACEN of debt, due from member associations, and (e) divestiture of investments.

The Financial Strategy will form the basis of agreements between CACEN and Participating Institutions and will be reviewed and updated annually with concurrences of AID/Bolivia and RHUDD/LA.

2. If the variable interest rate system for lending is continued, i) the Participating Institutions will establish interest rates for new housing loans which are as close as feasible to maximum legal commercial rates, given the market and demand conditions in the regions where the institutions operate, and ii) the interest rates for non-housing loans within the Savings and Loan System shall approximate the highest legal rates charged by commercial credit institutions, except as may be specifically prohibited by government decree or regulation.

3. The BCB and the Exchange Commission will sign arrangements with La Merced and CACEN whereby foreign exchange will be made available to CACEN and La Merced on a preferential basis at the lowest existing official exchange rate, and in the amounts and at the times necessary for these institutions to meet their outstanding housing-related dollar obligations. The BCB shall also be responsible for any penalty charges resulting from late payments due to delays by the BCB in providing foreign exchange.

4. If at the time of the selection of an investor, in the judgement of AID, the terms of the HG loan should provide protection against the effects of a debt rescheduling, the borrower agrees that protection satisfactory to AID shall be included in the Loan Agreement.

5. CACEN shall present to AID a plan for providing the staff resources necessary to carry out the Program.

#### Further Conditions Precedent

Prior to disbursement of loan resources to the BCB to finance housing loans through La Merced, La Merced shall have converted its housing portfolio to peso denomination and shall have established an interest rate structure for housing loans comparable to that of the participating savings and loan associations.

#### Covenants

1. The Government of Bolivia will provide the necessary budget to the Instituto Nacional de Estadísticas (INE) to enable it to carry out household surveys for use by housing sector institutions.

2. Reflows to CACEN resulting from the amortization of program subloans will be reinvested in comparable types of shelter subloans during the life of the project.

3. The Savings and Loan System shall maintain an interest rate structure for loans and savings which maximizes earnings and long-term viability, and a review of interest rates shall occur periodically.

4. All participating credit institutions will utilize the environmental questionnaire developed under the 511-HG-005 Program and fill out the FHA-2 certification when reviewing loan applications for core units and home improvement loans in rural areas not subject to municipal or provincial codes regulating environmental concerns.

5. Separate accounts for this HG Program will be established as a part of the CACEN's books and records. These accounts will reflect inflows and outflows of HG resources as well as financial and administrative charges connected with the implementation of the HG Program.

6. CACEN will conduct periodic evaluations of the program and will take necessary steps to implement the recommendations resulting from such evaluations.

Negotiating Status

Meetings have been held with the Ministry of Finance, the Central Bank, CACEN and the individual S&Ls and La Merced. The purposes, objectives, and conditions of the program have been discussed extensively and agreed to as outlined in this PP.



ANNEX A  
Exhibit 1  
Page 1 of 2

Mayo 11, 1983

Cite: S.G.-92/ 08.1

Señor  
Henry H. Bassford,  
Director de la Misión de  
USAID/Bolivia  
Presente.-

Señor Director:

Ref.: Solicitud de Crédito

Con referencia a las conversaciones que tuvimos el agrado de realizar con la Misión de su digna dirección en conocimiento de las autoridades del Ministerio de Urbanismo y Vivienda y del Banco Central de Bolivia, nos permitimos mediante la presente solicitar la concesión a la Caja Central de un crédito por Sus. 15.000.000.-- en los términos y condiciones previamente acordados. Dicho crédito se canalizaría a través del Banco Central para los fines de desdolarización del mismo, corriendo el riesgo de cambio a cargo de la mencionada institución bancaria. Del total de Sus.15.000.000 se destinaba un millón (Sus. 1.000.000) para préstamos a la Cooperativa La Merced de la ciudad de Santa Cruz de la Sierra.

Al presente, nuestro Sistema de Ahorro y Préstamo para la Vivienda, es la única institución de carácter privado mutualista que canaliza ahorros y recursos de fuentes internas y externas para la solución del problema habitacional de distintos sectores de la población y en particular de las familias de ingresos limitados y bajos que habitan en las áreas urbanas y rurales en que operan las Mutuales.

Con el fortalecimiento de nuestro Sistema no sólo se promueve a la movilización del ahorro interno sino que también estimula el desarrollo de sectores económicos al afís mediante el mayor empleo de mano de obra y materiales de construcción de obra...

2).

//////

Confiando en que nuestro pedido recibirá favorable atención, nos es grato reiterarle nuestra distinguida consideración.

Ernesto Wende  
PRESIDENTE

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MINISTERIO DE DEFENSA NACIONAL  
LA PAZ - BOLIVIA

Sección: Stría. Gral. No. 166/83  
Objeto : Enviar fotocopia of.  
Anexos : Una foja de ref.

La Paz, 11 de mayo de 1983.

Señor  
Henry H. Bassford  
DIRECTOR USAID BOLIVIA  
Presente.

Señor Director:

Conforme al acuerdo arribado en reuniones entre per  
soneros de la Caja Central, el Ministerio de Finanzas, AID BOLI -  
VIA, y nuestra Institución y con la finalidad de coadyuvar a la  
solución de los problemas financieros por los que actualmente atra  
viesa el Sistema de Ahorro y Préstamo para la Vivienda como emer-  
gencia de las últimas disposiciones adoptadas por el Supremo Go -  
bierno en política monetaria, solicitamos la concesión de un prés  
tamo por quince millones de dólares americanos; los mismos que se  
rán canalizados a través de nuestra Institución en pesos bolivia-  
nos a la Caja Central de Ahorro y Préstamo para la Vivienda, bajo  
las mismas condiciones de período de gracia y plazo que reciba el  
Banco Central y dos puntos por encima del interés que este obten  
ga.

Las condiciones bajo las cuales se conceda este prés  
tamo al Banco Central de Bolivia por parte de inversionistas pri-  
vados en los EE.UU. y garantizado por USAID y las otras entre nues  
tra Institución y la Caja Central serán las que se acuerden en for  
ma conjunta mediante el Convenio de Implementación.

Esperando que la presente tenga buena acogida, salu-  
damos a usted con las consideraciones más distinguidas.

  
-----  
Lc. José Ortiz Mercado  
MINISTRO DE DEFENSA NAL.  
MINISTRO DE FINANZAS a.i.

## THE HOUSING GUARANTY PROGRAM

STATUTORY CHECKLISTBOLIVIAPROJECT NO. 511 -HG-007

ANSWER YES/NO PUT PP PAGE  
REFERENCES AND/OR EXPLANATIONS  
WHERE APPROPRIATE

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A. General Criteria Under HG Statutory  
Authority.

Section 221(a)

Will the proposed project meet the  
following criteria.

- (1) is intended to increase the availability of domestic financing by demonstrating to local entrepreneurs and institutions that providing low-cost housing is financially viable;
- (2) is intended to assist in marshalling resources for low-cost housing;
- (3) supports a pilot project for low-cost shelter, or is intended to have a maximum demonstration impact on local institutions and national policy; and,
- (4) is intended to have a long run goal to develop domestic construction capabilities and stimulate local credit institutions to make available domestic capital and other management and technological resources required for effective low cost shelter programs and policies.

YES

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YES

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YES

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YES

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Section 222(a)

Will the issuance of this guaranty cause the total face amount of guaranties issued and outstanding at this time to be in excess of \$1,718,000,000?

NO

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Will the guaranty be issued prior to September 30, 1984?

YES

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- 2 -

Section 222(b)

Will the proposed guaranty result in activities which emphasize:

- (1) projects providing improved home sites to poor families on which to build shelter and related services; or
- (2) projects comprised of expandable core shelter units on serviced sites; or
- (3) slum upgrading projects designed to conserve and improve existing shelter; or
- (4) shelter projects for low-income people designed for demonstration or institution building; or
- (5) community facilities and services in support of projects authorized under this section to improve the shelter occupied by the poor?

YES

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NO

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YES

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YES

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NO

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Section 222(c)

If the project requires the use or conservation of energy, was consideration given to the use of solar energy technologies, where economically or technically feasible?

YES

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Section 223(a)

Will the A.I.D. guaranty fee be in an amount authorized by A.I.D. in accordance with its delegated powers?

YES

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Section 223(f)

Is the maximum rate of interest allowable to the eligible U.S. Investor, as prescribed by the Administrator, not more than one percent (1%) above the current rate of interest applicable to housing mortgages insured by the Department of Housing and Urban Development?

YES

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Section 223(j)

(1) Will the proposed Housing Guaranty be coordinated with and complementary to other development assistance in the host country?

YES

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(2) Will the proposed Housing Guaranty demonstrate the feasibility of particular kinds of housing and other institutional arrangements?

YES

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(3) Is the project designed and planned by A.I.D. so that at least ninety percent (90%) of the face value of the proposed guaranty will be for housing suitable for families below the median urban income for housing in urban areas, in the host country?

YES

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(4) Will the issuance of this guaranty cause the face value of guaranties issued with respect to the host country to exceed \$25 million in any fiscal year?

NO

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(5) Will the issuance of this guaranty cause the average face value of all housing guaranties issued in this fiscal year to exceed \$15 million?

NO

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Section 238(c)

Will the guaranty agreement provide that will cover only lenders who are "eligible investors" within the meaning of this section of the statute at the time the guaranty is issued?

YES

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B. Criteria Under General Foreign Assistance Act Authority.

Section 620/620A

(a) Does the host country meet the general criteria for country eligibility under the Foreign Assistance Act as set forth in the country eligibility checklist prepared at the beginning of each year?

YES

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(2) Is there any reason to believe that circumstances have changed in the host country so that it would now be ineligible under the country statutory checklist?

NO

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PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

ANNEX C  
Life of Project  
From FY 83 to FY 86  
Total US Funding 15.0 million (IG)  
Date Prepared 12/20/82 (Grant)

Project Title & Number: Low-Cost Shelter through the Private Sector, 511-107-007

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><b>Program or Sector Goal:</b> The broader objective to which this project contributes: To improve the shelter conditions of low income families in Bolivia.</p>	<p><b>Measure of Goal Achievement:</b> Increased number of low income families with access to housing finance.</p>	<p>CACFH, Individual SSL and La Merced loan documentation.</p>	<p><b>Assumptions for achieving goal target:</b> The SSL System is successful in effecting basic structural changes in its savings and loan operations so as to overcome its foreign exchange difficulties and strengthen its long-run financial viability.</p>
<p><b>Project Purpose:</b> To expand the Private Sector's capacity to address the shelter-related needs of low income families.</p>	<p><b>Conditions that will indicate purpose has been achieved: End of project status.</b> 1. Mobilization of increased domestic resources; 2. an improved planning capacity of the SSL System in housing finance 3. an expanded housing program in La Merced which includes an outreach capability directed towards low income families; 4. an improved application of cost effective building technologies; 5. an improved cash flow including a reduction of dollar debt obligations by the SSL System and La Merced.</p>	<p>CACFH/SSL and La Merced records.</p>	<p><b>Assumptions for achieving purpose:</b> Below median income families' purchasing power is not so severely restricted as to preclude borrowing for housing needs.</p>
<p><b>Outputs:</b> 1. Increased financing for housing solutions for below median income families; 2. Strengthened SSL System financial planning capability; 3. Greater diversification of SSL System's portfolio into short-term lending; 4. Increased savings mobilization by SSL System and La Merced; 5. Strengthened SSL System and La Merced financial viability; 6. Improved GOB capacity in formulating shelter sector strategy; 7. Increased capacity of INE to collect, analyze and publish national household income data on a regular basis; 8. Increased employment in the construction industry.</p>	<p><b>Magnitude of Outputs:</b> 1. 23,000 subloans to below median income families; 2. SSL System and La Merced remain current on outstanding dollar debt servicing; 3. 40% minimal annual increase in SSL System and La Merced's nominal savings generation; 4. The SSL System maintains its percentage of national savings 5. Up to 30% of SSL System's portfolio composed of short-term diversified lending; 6. Periodic publication of national household income data.</p>	<p>CACFH/SSL and La Merced records. INE publications.</p>	<p><b>Assumptions for achieving outputs:</b> 1. GOB support for the SSL System's diversification efforts continues; 2. GOB support for INE's publication of national income data.</p>
<p><b>Inputs:</b> 1. IG program loan; 2. GOB guaranty; 3. GOB assumption of exchange risk; 4. GOB provides peso loan to SSL System in amount equivalent to \$15 million IG; 5. Participating credit institutions contribute 20% of value of each subloan; 6. AID grant; 7. GOB budget support for INE.</p>	<p><b>Implementation Target (Type and Quantity)</b> 1. Disbursement of \$15 million IG loan within 5 years of signing loan agreement. 2. Disbursement of \$550,000 in AID grant resources over 5 year life-of-project. 3. GOB disburses up to \$40,000 in budget support to INE for periodic publication of national household income data.</p>	<p>AID, BCR, CACFH/SSL, La Merced and INE reports and records.</p>	<p><b>Assumptions for providing inputs:</b> 1. A U.S. investor will be found; 2. AID grant resources will be made available on a timely basis; 3. BCR makes peso equivalent of IG resources available on a timely basis to CACFH.</p>

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ACTION: AID

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PP RUESLZ  
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ZNR UUUUU 22H  
P 100227Z AUG 82  
FM SECSTATE WASHDC  
TO RUESLZ/AMEMBASSY LA PAZ PRIORITY 3002  
INFO RUESLM/AMEMBASSY LIMA PRIORITY 5646  
RUEHZP/AMEMBASSY PANAMA PRIORITY 5146  
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Action: FS  
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DP  
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C RF SF

UNCLAS SECTION 01 CF 02 STATE 222316

AIDAO : LIMA FOR TOM GEIGER, RLA

E O. 12356: N/A

TACS:

SUBJECT: PID 511-HG-007. SAVINGS & LOAN HG

1. THIS PID WAS REVIEWED AND APPROVED BY THE DAEC ON JULY 27, 1982 WITH INTENSIVE REVIEW APPROVED SUBJECT TO THE FOLLOWING COMMENTS AND CONDITIONS.

Reply due 8/13

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2. GOB OBLIGATIONS. IN DISCUSSION AT THE DAEC MEETING, MISSION REPRESENTATIVES CONFIRMED THAT, WITH RECENT CONVERSION OF S&L SYSTEM TO A "FULL PESO SYSTEM" THE REMAINING THREAT TO FINANCIAL VIABILITY IS SYSTEM'S DOLLAR OBLIGATIONS (TOTALLING APPROXIMATELY DOLS. 30 MILLION COUPLED WITH THE GOB'S REFUSAL TO MAKE AVAILABLE DOLLARS AT THE OFFICIAL EXCHANGE RATE TO SERVICE THESE OBLIGATIONS. THE PROPOSED HIG WOULD PROVIDE RESOURCES TO THE SYSTEM WHICH ARE ESSENTIAL FOR ITS VIABILITY, GIVEN THE CAJA'S NEED TO PURCHASE DOLLARS, FOR DEBT SERVICING, ON PARALLEL MARKET. WE ARE PREPARED IN PRINCIPLE TO GO FORWARD WITH A HIG JUSTIFIED ON THIS BASIS. HOWEVER, WE FIRST MUST BE SATISFIED THAT THE THREAT TO THE SYSTEM'S FINANCIAL VIABILITY CANNOT OTHERWISE BE OVERCOME AS A CONSEQUENCE OF THE GOB'S LEGAL OBLIGATIONS TO THE SYSTEM AND TO FOREIGN CREDITORS. WE THEREFORE REQUEST THAT THE

MISSION SUBMIT TO US, AS SOON AS POSSIBLE, A COMPLETE ANALYSIS OF THE GOB'S LEGAL COMMITMENTS WITH RESPECT TO THE SERVICING OF EXTERNAL DEBT. IN ADDITION TO ANY OTHER RELEVANT ISSUES, THE ANALYSIS SHOULD ADDRESS THE FOLLOWING POINTS: (A) DOES THE GOB HAVE A LEGAL OBLIGATION TO PROVIDE DOLLARS TO THE CAJA CENTRAL FOR DEBT SERVICING AT THE OFFICIAL RATE, AS A CONSEQUENCE OF ITS AGREEMENTS TO GUARANTEE MOST OF THE CAJA'S EXTERNAL DEBT. OR BY VIRTUE OF ANY PROVISION OF BOLIVIAN LAW E.G. REGISTERING OF FOREIGN DEBT WHEN DOLLARS ENTERED BOLIVIA? (B) WHAT WOULD BE THE CONSEQUENCES FOR THE S&L SYSTEM IF THE CAJA WERE TO PAY LESS THAN THE FULL AMOUNT DUE ON ITS EXTERNAL DEBT E.G. SUPPOSE THE CAJA PAID ONLY THE AMOUNT OF DOLLARS IT COULD BUY ON THE PARALLEL MARKET WITH THE AMOUNT OF PESOS WHICH, ON THE

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OFFICIAL MARKET. WOULD PURCHASE THE QUANTITY OF DOLLARS REQUIRED TO MAKE FULL PAYMENT)? PRESUMABLY THE GOB WOULD BE OBLIGED UNDER ITS GUARANTY AGREEMENT. TO MAKE UP THE SHORTFALL. WOULD IT THEN HAVE ANY RIGHTS OVER THE CAJA AND IF SO. WHAT WOULD THESE BE?

THE ANALYSIS SHOULD INCLUDE A REVIEW OF EXISTING GUARANTY AGREEMENTS; AND SHOULD CONSIDER THE IMPLICATIONS OF THE RECENTLY ENACTED BOLIVIA SUPREME DECREE WHICH RESTRICTS THE ACCESSIBILITY OF FOREIGN EXCHANGE AT THE OFFICIAL RATE TO THE SETTLEMENT OF CENTRAL GOVERNMENT DEBT ONLY. AND ITS EFFECT ON THE GOB'S COMMITMENTS ESTABLISHED IN THE VARIOUS GUARANTY AGREEMENTS. THE PURPOSE OF THIS ANALYSIS, AGAIN, IS TO VERIFY THAT THE GOB IS MEETING ALL ITS LEGAL COMMITMENTS TO THE S&L SYSTEM AND THAT THE PROPOSED HG PROJECT WILL NOT PROVIDE RELIEF TO THE SYSTEM WHICH THE GOB MAY ALREADY BE OBLIGED TO PROVIDE.

THE ANALYSIS SHOULD BE TRANSMITTED TO AID/W AS SOON AS IT IS COMPLETED. WE SUGGEST THAT RLA TOM GEIGER COULD PLAY A MAJOR ROLE IN THIS EFFORT. WHILE THE MISSION MAY PROCEED WITH OTHER ASPECTS OF THE INTENSIVE REVIEW AT THIS TIME. THE PP SHOULD NOT BE SUBMITTED UNTIL AFTER THE ANALYSIS HAS BEEN RECEIVED, REVIEWED, AND COMMENTED UPON BY AID/W.

3. FX RISK UNDER THE PROPOSED HIG, THE GOB IS PREPARED TO ASSUME THE FOREIGN EXCHANGE RISK. A SIMILAR COMMITMENT (ASSUMING ONE DOES NOT ALREADY EXIST) WITH RESPECT TO THE EXISTING FOREIGN DEBT WOULD FURTHER ASSURE THE FINANCIAL HEALTH OF THE S&L SYSTEM. THEREFORE WHILE DEVELOPING THIS HIG WITH THE GOB,

MISSION SHOULD ATTEMPT TO OBTAIN SUCH A COMMITMENT FROM THE GOB OR THE CENTRAL BANK WITH RESPECT TO AT LEAST SOME OF THE EXISTING FOREIGN DEBT.

4. INTEREST RATES. IN SETTING INTEREST RATES TO BE PAID DEPOSITORS AND CHARGED BORROWERS., THE S&LS SHOULD ATTEMPT TO MAXIMIZE THE ATTRACTION OF DEPOSITS AND SHOULD BE COMPETITIVE WITH OTHER INSTITUTIONS. MECHANISM FOR SETTING INTEREST RATES SHOULD BE DESCRIBED IN DETAIL IN THE PP, AND THE FINANCIAL ANALYSIS SHOULD DEMONSTRATE THE S&L SYSTEM'S VIABILITY WITH SUCH INTEREST RATE MECHANISMS. THE PP SHOULD ALSO DEMONSTRATE THROUGH APPROPRIATE SURVEY OR ON OTHER PRAGMATIC BASIS. ADEQUACY OF DEMAND FOR MORTGAGE MONEY ON THE PROPOSED NEW TERMS.

5 FINANCIAL PROSPECTS. THE PP SHOULD CONTAIN A DETAILED FINANCIAL ANALYSIS OF THE FULL PESO S&L SYSTEM. INTER ALIA, THIS ANALYSIS SHOULD REFLECT THE

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PP RUESLZ  
DE RUSHC #2316/02 2220456  
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P 102227Z AUG 82  
FM SECSTATE WASHDC  
TO RUESLZ/AMEMBASSY LA PAZ PRIORITY 3003  
INFO RUESLM/AMEMBASSY LIMA PRIORITY 5647  
RUEHZP/AMEMBASSY PANAMA PRIORITY 5147  
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UNCLAS SECTION 02 OF 02 STATE 222316

AIDAC : LIMA FOR TOM GEIGER, RLA

DEMAND FOR MORTGAGE MONEY ON THE PROPOSED NEW TERMS, AND SHOULD PROJECT OPERATING EARNINGS FROM THE READJUSTED MORTGAGE PORTFOLIO AND FROM THE PROPOSED NEW CREDIT LINES. THE ANALYSIS SHOULD BE MADE FOR EACH ASSOCIATION AS WELL AS FOR THE SYSTEM OVERALL. THE BASIC PURPOSE OF THIS EXERCISE IS TO ASCERTAIN WHETHER THE ASSOCIATIONS REALISTICALLY CAN BE EXPECTED TO EARN ENOUGH PESOS FROM MORTGAGE LENDING AND OTHER OPERATIONS TO MEET THEIR OBLIGATIONS. THIS IMPLIES PROJECTIONS NOT ONLY OF PESO EARNINGS, BUT ALSO OF FX PAYMENT OBLIGATIONS AGAINST A RANGE OF POSSIBLE EXCHANGE RATES. SINCE THE PID INDICATES THAT THERE WILL BE A GUARANTY PROVIDED BY THE CENTRAL BANK, THE ANALYSIS SHOULD ALSO DEFINE THE GUARANTY TO BE PROVIDED (BY CENTRAL BANK AND/OR GOB) AND EVALUATE THE CREDITWORTHINESS OF THE GUARANTOR(S).

6 OTHER DOLLAR DEBTORS. THE PP SHOULD ALSO DESCRIBE HOW OTHER PRIVATE MEDIUM- AND LOW-COST HOUSING FINANCE ENTITIES WITH DOLLAR OBLIGATIONS, E.G. LA MERCED OF SANTA CRUZ, ARE MEETING THEIR OBLIGATIONS.

7 IEE IEE APPROVED BY CHIEF ENVIRONMENTAL OFFICER BASED ON CONDITION THAT ENVIRONMENTAL LESSONS LEARNED UNDER 511-HQ-205 AND ENVIRONMENTAL DESIGN CONSIDERATIONS OF CACEN AND SAVINGS AND LOAN ASSOCIATIONS BE OUTLINED IN PP SUGGEST MISSION UTILIZE SERVICES OF REGIONAL ENVIRONMENTAL MANAGEMENT SPECIALIST DENNIS MCCAFFREY (USAIL/PERU TO ASSIST PP TEAM IN THIS.

9. STATUTORY PROHIBITIONS. AS MISSION IS AWARE, GOB IS PRESENTLY IN ARREARS FOR PURPOSES OF FAA SECTION 620 O AND AS FAR AS BUREAU CAN TELL, BROOK ALEXANDER. UNTIL SUCH ARREARAGES ARE CLEARED UP, AID CANNOT LEGALLY EXECUTE ANY PRO AG OR HIG GUARANTY DOCUMENT. AN AUTHORIZATION WILL NOT BE PROCESSED UNTIL ISSUES RELATED TO THE ABOVE, THE COCA CONTROL PLAN, AND OTHER AREAS OF CONCERN TO THE USG, HAVE BEEN RESOLVED. SHULTZ

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Rec'd 10/28

File: PD&I

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PP RUEFSLZ  
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INFO RUEFZP/AMEMBASSY PANAMA PRIORITY 6750  
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UNCLAS STATE 302913

DAEC TECHNICAL REVIEW CABLE

ACTION: AID

INFO: AMB  
DCM  
ADM

Action: PS  
Info: D

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E.O. 12756: N/A

AGS:  
SUBJECT: PP 511-FG-007, LOW COST SHULTER THROUGH THE PRIVATE SECTOR

C RF SF

Reply due 11/1

1. THE DAEC CONDUCTED A TECHNICAL REVIEW OF THE SUBJECT PP ON SEPTEMBER 30, 1982. THIS REVIEW CENTERED AROUND THE ISSUES OF TIMING AND FINANCIAL FEASIBILITY, AS DISCUSSED BELOW. ONCE THE 178 MEGAWATT PROGRAM (SECTION 6200 OF THE FAA) AND ISSUES RELATED TO OTHER MATTERS OF CONCERN TO THE USG ARE RESOLVED, THE MISSION SHOULD SUBMIT A PROJECT AUTHORIZATION POSSIBLE. THE MISSION SHOULD INCLUDE: A) A REEXAMINATION OF THE ASSUMPTIONS AFFECTING THE PROJECT'S FINANCIAL FEASIBILITY; B) A FINANCIAL ANALYSIS DEMONSTRATING THE SAL SYSTEM'S VIABILITY WITH THE PROPOSED NG ASSISTANCE; AND C) ANALYSES OF ANY NEW DEVELOPMENTS IN THE BOLIVIAN ECONOMY WHICH IMPACT UPON THE SAL SYSTEM'S LONG-RUN GROWTH (E.G. ANY SIGNIFICANT FURTHER DETERIORATION IN THE PESO/DOLLAR EXCHANGE RATE, A COP DECISION TO IMPLEMENT ECONOMIC REFORMS LEADING TOWARD THE NEGOTIATION OF A STANDBY AGREEMENT WITH THE IMF, ETC.). ALSO, THE MISSION SHOULD

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*fill*

ACTIVELY PURSUE A RESOLUTION OF THE DISPUTE OVER ACCESS TO FOREIGN EXCHANGE AT THE OFFICIAL RATE OF 44 PESOS TO THE DOLLAR FOR THE REPAYMENT OF THE 511-L-348 LOAN, AND REPORT THE STATUS OF THIS ISSUE.

2. IN DISCUSSING THE PROJECT'S FINANCIAL FEASIBILITY, THE DAEC QUESTIONED THE NG'S ASSUMPTIONS THAT: (A) THE BOLIVIAN PESO WILL NOT EXPERIENCE EXTREME FURTHER DEVALUATION OVER THE NEXT YEAR, WHICH WOULD LEAVE THE SYSTEM UNABLE TO MEET ITS FX OBLIGATIONS DURING THE NEXT FIVE YEARS; AND (B) IF GIVEN A LESS EXTREME RATE OF DEVALUATION, THAT THE SYSTEM COULD REALIZE SUFFICIENT EARNINGS FROM THE SPREAD ON THE RESOURCES PROVIDED UNDER THIS LOAN PLUS NEW LENDING OPERATIONS TO OFFSET THE EXCHANGE LOSS ON ITS EXISTING PORTFOLIO AND ENABLE THE SYSTEM TO MEET ITS DOLLAR OBLIGATIONS. IT WAS POINTED OUT THAT A NUMBER OF RECENT IMF AGREEMENTS (E.G. PERU) DO NOT PROVIDE A SIGNIFICANT REDUCTION OF THE RATE OF

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INFLATION, AND THEREFORE CONTEMPLATE A STEADY CONTINUING DEPRECIATION OF THE EXCHANGE RATE. IT WAS NOT CLEAR FROM THE ANALYSIS PROVIDED THAT THE S&L SYSTEM COULD SURVIVE UNDER SUCH A SCENARIO, EVEN IF THE INTEREST RATE PROVIDED BY THE GOB TO CACEN UNDER THIS LOAN WERE TO BE FURTHER REDUCED, OR THAT THE GOB WOULD BE PREPARED TO COMMIT-ITSELF TO ADJUST THE INTEREST RATE STRUCTURE SUFFICIENTLY TO PROTECT THE SYSTEM IN SUCH AN EVENTUALITY. THE CONCERN RAISED IN THE DAEC WAS NOT THAT THE SYSTEM IS PROTECTED AGAINST ALL POSSIBLE EVENTUALITIES, BUT RATHER THAT AN IMPORTANT RISK, WITH A FAIRLY HIGH-PROBABILITY ASSOCIATED WITH IT, NOT REMAIN UNCOVERED.

IT IS RECOMMENDED THAT THE MISSION PURSUE WITH THE NEW CIVILIAN GOVERNMENT THE POSSIBILITY OF THE GOB ELIMINATING THE S&L SYSTEM'S EXCHANGE RISK BY AGREEING TO A FIXED RATE, THEREBY ESTABLISHING THE PESO EQUIVALENCY OF THE SYSTEM'S TOTAL FX OBLIGATION. WHILE WE CAN APPRECIATE THE GOB'S RELUCTANCE TO SET A PRECEDENT FOR OTHER POSSIBLE CLAIMANTS TO PREFERENTIAL ACCESS TO FOREIGN EXCHANGE, IT WAS FELT THAT PROSPECT OF ACCESS TO ADDITIONAL FOREIGN CURRENCY TO BE PROVIDED UNDER HC 207 MIGHT CARRY SOME WEIGHT.

IF THE GOB WILL NOT AGREE TO THIS IDEAL SOLUTION, THE MISSION SHOULD DEMONSTRATE THAT THE S&L SYSTEM WILL REMAIN SOLVENT UNDER SCENARIO INVOLVING A CONTINUATION OF CURRENT RATES OF INFLATION AND THE EXCHANGE RATE DEPRECIATION WHICH THAT IMPLIES. IF CONTINUED SOLVENCY DEPENDS ON DOWNWARD ADJUSTMENTS IN THE INTEREST RATE ON THE GOB-CACEN LOAN UNDER THIS PROJECT OR UPWARD ADJUSTMENTS IN SUBLOAN INTEREST RATES, FIRM COMMITMENTS TO MAKE SUCH ADJUSTMENTS SHOULD BE PART OF THE PACKAGE.

5. THE MISSION IS AUTHORIZED AND ENCOURAGED TO CONDUCT TECHNICAL DISCUSSIONS RELEVANT TO THE RESOLUTION OF THESE ISSUES; BUT IS NOT AUTHORIZED TO ENTER INTO NEGOTIATIONS OF AN AGREEMENT OR GIVE THE IMPRESSION THAT THIS PROPOSAL WAS BEEN APPROVED. SHULTZ

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1. PER RFF CABLE, SRLA ASSISTED LA PAZ MISSION IN ANALYSING THE ISSUES RAISED THEREIN. SRLA REVIEWED THE GUARANTY AGREEMENTS IN QUESTION, BOLIVIAN SUPREME DECREES APPROVING THE AGREEMENTS, AND OTHER RELEVANT BOLIVIAN LAWS, AND CONSULTED WITH THE MISSION'S LOCAL COUNSEL AS WELL AS THE ATTORNEY FOR CAJA CENTRAL. ON THE BASIS OF THESE REVIEWS AND CONSULTATIONS, SRLA PROVIDES THE ANALYSIS AND CONCLUSIONS BELOW.

2. RFF CABLE RAISES THE THREE ISSUES CONCERNING THE GO'S LEGAL OBLIGATIONS TO THE CAJA CENTRAL AND ITS FOREIGN CREDITORS. FIRST, WHETHER THE GOB HAS A LEGAL OBLIGATION TO PROVIDE US DOLLARS TO THE CAJA AT THE OFFICIAL RATE (CURRENTLY 44 BOLIVIAN PESOS TO ONE US DOLLAR) FOR DEBT SERVICING AS A CONSEQUENCE OF THE GOB'S AGREEMENTS TO GUARANTEE MOST OF THE CAJA'S EXTERNAL DEBT. SECOND, WHETHER THE GOB HAS SUCH AN OBLIGATION BY VIRTUE OF ANY PROVISION OF BOLIVIAN LAW, INCLUDING BUT NOT LIMITED TO, ANY LAWS GOVERNING THE REGISTRATION OF FOREIGN DEBT. THIRD, ASSUMING THE CAJA PAID THE INVESTOR ONLY THE AMOUNT OF DOLLARS IT COULD BUY ON THE PARALLEL MARKET WITH THE PESOS WHICH AT THE OFFICIAL RATE WOULD PURCHASE THE QUANTITY OF US DOLLARS REQUIRED TO MAKE FULL PAYMENT AND ASSUMING THE GOB PURSUANT TO ITS GUARANTY AGREEMENTS MADE UP THE SHORTFALL, WOULD THE GOB HAVE ANY LEGAL RIGHTS AGAINST THE CAJA AND, IF SO, WHAT RIGHTS. THE THREE ISSUES ARE DISCUSSED BELOW IN SEQUENCE.

3. THE GOB HAS ENTERED GUARANTY AGREEMENTS UNDER THE FOLLOWING AID ANDIDE PROJECTS: 511-L-049; 511-EG-004; 511-EG-005; BIAPE; AND IDB LOAN AGREEMENT DATED SEPTEMBER 29, 1977. SRLA UNDERSTANDS THE TEXT OF THESE GUARANTY AGREEMENTS ARE AVAILABLE IN AID/W, AND THUS, THEY WILL NOT BE REPEATED

HERE. BECAUSE THE GUARANTY AGREEMENT FOR THE 048 LOAN HAS A SPECIFIC CLAUSE DEALING WITH THE PROVISION OF FOREIGN EXCHANGE FOR DEBT SERVICING, IT WILL BE DISCUSSED IN A SEPARATE PARAGRAPH BELOW. HENCE THE ANALYSIS IN THIS PARAGRAPH DOES NOT APPLY TO THE 048 LOAN. NONE OF THE OTHER GUARANTY AGREEMENTS CONTAINS ANY LANGUAGE WHICH COMMITS THE GOB TO PROVIDE DOLLARS TO THE CAJA AT THE OFFICIAL RATE OR ANY OTHER RATE FOR DEBT SERVICING. INDEED THOSE GUARANTY AGREEMENTS ARE COMPLETELY SILENT ON THE MATTER OF FOREIGN EXCHANGE FOR DEBT SERVICING. THEREFORE, IT IS CLEAR THAT THE GOB HAS MADE NO EXPRESS PROMISE TO PROVIDE DOLLARS TO THE CAJA AT THE OFFICIAL RATE UNDER THOSE GUARANTY AGREEMENTS. THE NEXT QUESTION IS WHETHER THE GOB HAS AN IMPLIED OBLIGATION TO PROVIDE DOLLARS AT THE OFFICIAL RATE. IT MAY BE ARGUED THAT BECAUSE THE GOB (OR IN SOME CASES THE CENTRAL BANK) GUARANTEES TO PAY ANY AMOUNTS THE CAJA FAILS TO PAY, THE GOB HAS IMPLIEDLY PROMISED TO MAKE DOLLARS AVAILABLE TO THE CAJA AT A RATE WHICH WILL ALLOW IT TO HONOR ITS OBLIGATIONS. BY PROVIDING THE CAJA WITH DOLLARS AT THE OFFICIAL RATE, THE GOB WOULD BE MERELY UTILIZING ITS FOREIGN EXCHANGE TO SATISFY A DEBT FOR WHICH IT IS ULTIMATELY RESPONSIBLE. THIS ARGUMENT IS SPURIOUS BECAUSE A PROMISE BY A GOVERNMENT TO GUARANTEE A DEBT PAYABLE TO AN INTERNATIONAL LENDER IS NOT THE SAME AS A PROMISE TO PROVIDE THE BORROWER FOREIGN EXCHANGE AT AN AGREED UPON RATE TO SERVICE THAT DEBT. THE COVENANT TO GUARANTEE PAYMENT OF A LOAN RUNS TO THE INTERNATIONAL LENDER WHEREAS A COVENANT TO PROVIDE FOREIGN EXCHANGE WOULD BE A COMMITMENT TO THE BORROWER OR PRINCIPAL DEBTOR. THE TWO COVENANTS ARE CLEARLY SEPARABLE. A GOVERNMENT MAY CHOOSE TO GUARANTEE AN INTERNATIONAL LOAN AND AT THE SAME TIME ELECT NOT TO PROVIDE FOREIGN EXCHANGE AT A SPECIAL RATE TO THE BORROWER. IN SUCH A CASE, THE RISK OF DEVALUATION WOULD REMAIN ON THE BORROWER OR ITS SUPPORSERS EVEN THOUGH THE GOVERNMENT GUARANTEES ULTIMATE PAYMENT TO THE INTERNATIONAL LENDER. IN OTHER WORDS, A GOVERNMENT GUARANTY ALONE DOES NOT IMPLY A COMMITMENT TO SELL FOREIGN EXCHANGE TO A PRINCIPAL DEBTOR AT A GIVEN RATE. THUS, THE GOB'S GUARANTY TO PAY AID, BIAPE AND IDB DOES NOT IMPLY OR IMPOSE ON THE GOB THE OBLIGATION TO SELL THE CAJA DOLLARS AT THE OFFICIAL OR ANY OTHER RATE. IN SUMMARY, THE GOB DOES NOT HAVE AN EXPRESS OR IMPLIED OBLIGATION TO PROVIDE DOLLARS TO THE CAJA AT THE OFFICIAL RATE AS A CONSEQUENCE OF ITS GUARANTY AGREEMENTS, EXCEPT FOR THE GUARANTY AGREEMENT UNDER THE 048 LOAN.

4. THE 048 GUARANTY AGREEMENT IS A SPECIAL CASE. IN PARAGRAPH 4 OF THE AGREEMENT THE GOB COVENANTS TO PROVIDE THE CAJA ACCESS TO DOLLARS AT THE SAME RATE GIVEN ITS OWN PUBLIC AGENCIES: QUOTE THE GOVERNMENT AGREES THAT, IN ORDER TO FACILITATE THE COMPLIANCE BY THE CAJA WITH ITS OBLIGATIONS TO MEET PAYMENT OF INTEREST OR REPAYMENT OF PRINCIPAL UNDER LOAN AGREEMENT 511-L-048 AND TO PROTECT THE FINANCIAL STABILITY OF THE CAJA, IT WILL PROVIDE TO THE CAJA ACCESS TO US DOLLAR FOREIGN EXCHANGE AT THE RATE OF EXCHANGE AVAILABLE TO THE PUBLIC AGENCIES OF THE GOVERNMENT FOR MEETING OBLIATIONS UNDER AGREEMENTS ENTERED INTO WITH INTERNATIONAL DEVELOPMENT AGENCIES.

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INFO RUEZP/AMEMBASSY PANAMA 4967  
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END OF QUOTE.  
TO DETERMINE THE OBLIGATION OF THE GOB TO THE CAJA UNDER THIS  
CLAUSE, WE FIRST MUST DEFINE WHAT ARE "PUBLIC AGENCIES" AS THAT  
TERM IS USED IN THE AGREEMENT. IN THE SPANISH VERSION THE TERM  
IS TRANSLATED "ENTIDADES PUBLICAS DEL GOBIERNO". THE PLAIN  
MEANING OF THE TERM "ENTIDADES PUBLICAS DEL GOBIERNO"  
INCLUDES ALL GOB ENTITIES INCLUDING CENTRAL MINISTRIES AS WELL  
AS PUBLIC CORPORATIONS SUCH AS COMIBOL AND YPF. PURSUANT TO  
SUPREME DECREE 18890 DATED MARCH 22, 1982, THE CENTRAL MINISTRIES  
OF THE GOB ENJOY ACCESS TO FOREIGN EXCHANGE AT THE OFFICIAL  
RATE WHEREAS GOB PUBLIC CORPORATIONS AND DECENTRALIZED ENTITIES  
(SUCH AS COMIBOL AND YPF) MUST PURCHASE DOLLARS ON THE PARALLEL  
MARKET. BECAUSE THERE ARE NOW TWO RATES FOR GOB "PUBLIC AGENCIES"  
THE QUESTION ARISES WHICH ONE APPLIES TO THE CAJA UNDER THE  
ABOVE CLAUSE. ON THE ONE HAND, IT MAY BE ARGUED THAT BECAUSE  
THE CAJA IS A REVENUE GENERATING ENTITY, SIMILAR TO COMIBOL AND  
YPF, THE CAJA SHOULD RECEIVE THE SAME RATE WHICH THOSE PUBLIC  
CORPORATIONS AND ENTERPRISES RECEIVE. UNDER THIS INTERPRETATION  
THE CAJA WOULD HAVE TO BUY DOLLARS ON THE PARALLEL MARKET.  
THE CONSTRUCTION, HOWEVER, RUNS CONTRARY TO THE PURPOSE OF  
THE PROVISION WHICH IS TO PROTECT THE FINANCIAL STABILITY OF  
THE CAJA. IN SRLA'S VIEW, THE PARTIES INTENDED THAT THE CAJA  
HAVE ACCESS TO A FAVORABLE RATE IN ORDER TO HELP ASSURE ITS  
FINANCIAL STRENGTH. THUS, RLA CONCLUDES THAT THE GOB HAS  
PROMISED TO PROVIDE FOREIGN EXCHANGE AT THE OFFICIAL RATE TO  
THE CAJA TO SERVICE THE 048 LOAN. IN ORAL CONSULTATIONS,  
AID'S LOCAL COUNSEL (DR. LADISLAW VASQUEZ) AND THE CAJA'S  
GENERAL COUNSEL (DR. GASTON MUJIA) BOTH CONCURRED IN THE SRLA'S  
CONCLUSION. ACCORDING TO DR. MUJIA, THE CAJA HAS MADE  
*REPRESENTATION TO GOB OFFICIAL TO THAT EFFECT.* FOR YOUR  
INFORMATION, THE SUPREME DECREE WHICH AUTHORIZED THE 048  
GUARANTY AGREEMENT HAS NO LANGUAGE COMMITTING THE GOB TO PROVIDE  
DOLLARS TO THE CAJA AT THE OFFICIAL RATE TO SERVICE THE DEBT.  
THUS, THE GOB COULD ARGUE THAT ITS COVENANT TO PROVIDE DOLLARS  
IS NOT A DULY AUTHORIZED LEGAL COMMITMENT. SRLA OPINES THAT  
THE GOB IS BOUND BY ITS WRITTEN AGREEMENT TO PROVIDE DOLLARS  
REGARDLESS OF THE ABSENCE OF ANY SPECIFIC LANGUAGE IN THE  
SUPREME DECREE. IF THE GOB RAISES THIS POINT, THEN SRLA  
WOULD HOWEVER RECOMMEND FURTHER RESEARCH IN AID/W TO REVIEW  
APPLICABLE INTERNATIONAL LAW.

5. THE SECOND ISSUE IS WHETHER THE GOB HAS A LEGAL  
OBLIGATION TO PROVIDE DOLLARS TO THE CAJA AT THE OFFICIAL

RATE FOR DEBT SERVICING BY VIRTUE OF ANY PROVISION OF BOLIVIAN LAW. BOTH DR. MASQUEZ AND DR. MUJIA CONFIRMED TO SRLA THAT THERE ARE NO PROVISIONS OF BOLIVIAN LAW WHICH REQUIRE THE CENTRAL BANK OR THE GOB TO MAKE AVAILABLE FOREIGN FX CHANGE AT THE OFFICIAL RATE TO THE CAJA OR OTHER PRIVATE ENTITIES BY VIRTUE OF HAVING REGISTERED A FOREIGN DEBT OR FOR ANY OTHER REASON. DR. MUJIA FURTHER STATED THAT THE CAJA HAS FOR SEVERAL YEARS ATTEMPTED TO OBTAIN A WRITTEN COMMITMENT FROM THE CENTRAL BANK TO PROVIDE DOLLARS AT THE OFFICIAL RATE. IN RESPONSE, THE CENTRAL BANK CONSISTENTLY REFUSED TO MAKE ANY WRITTEN OR ORAL COMMITMENT TO THE CAJA IN THIS RESPECT.

6. THE THIRD ISSUE IS WHETHER ASSUMING THE CAJA PAID THE INVESTOR ONLY THE AMOUNT OF DOLLARS IT COULD BUY ON THE PARALLEL MARKET WITH THE PESOS WHICH AT THE OFFICIAL RATE WOULD PURCHASE THE QUANTITY OF DOLLARS REQUIRED TO MAKE FULL PAYMENT AND ASSUMING THE GOB PURSUANT TO ITS GUARANTY AGREEMENTS MADE UP THE SHORTFALL, WOULD THE GOB HAVE ANY RIGHTS AGAINST THE CAJA AND, IF SO, WHAT RIGHTS. BOLIVIAN LAW CLEARLY GIVES A GUARANTOR WHO PAYS THE OBLIGATION OF A PRINCIPAL DEBTOR PURSUANT TO A GUARANTY AGREEMENT THE RIGHT TO RECOVER FROM THE PRINCIPAL DEBTOR ANY SUCH AMOUNTS PAID INCLUDING INTEREST, PRINCIPAL, LATE CHARGES, PENALTIES, AND COSTS INCURRED BY THE GUARANTOR. IN ADDITION THE GUARANTOR CAN RECOVER DAMAGES FROM THE PRINCIPAL DEBTOR INCURRED AS A RESULT OF HONORING THE GUARANTY. THESE RIGHTS ARE SPECIFIED IN THE BOLIVIAN COMMERCIAL CODE AS WELL AS THE CIVIL CODE. SRLA CONCLUDES THAT IN THE HYPOTHETICAL CASE POSED, THE GOB WOULD HAVE THE RIGHT UNDER APPLICABLE BOLIVIAN LAWS TO RECOVER FROM THE CAJA THE AMOUNTS PAID AND ANY DAMAGES INCURRED IN MAKING PAYMENTS ON BEHALF OF THE CAJA.

7. SRLA IS AVAILABLE IN LIOA FOR FURTHER

DISCUSSION FOR THE

ABOVE ISSUES AND HIS CONCLUSIONS VIA PHONE OR CABLE.

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TABLE A-5

ANNEX F  
Exhibit 1

## AFFORDABILITY BY AREAS AND INCOME RANGE

(Examples of Shelter Solutions)

Item to be Financed	LA PAZ			N O R T H			S O U T H			V A L L E Y		
	Income Percentile			Income Percentile			Income Percentile			Income Percentile		
	0-10	10-30	30-50	0-10	10-30	30-50	0-10	10-30	30-50	0-10	10-30	30-50
1. Construction of Additional room of 12 m2.			Yes						Yes			
2. Home Improvement: Plastering, cement floor, doors, windows, paint.		Yes	Yes			Yes		Yes	Yes			Yes
3. New roof for 21 m2 unit		Yes	Yes									
4. Home Improvement: 28 m2 roof and 24 m2 wood floor			Yes			Yes			Yes			Yes
5. Home Improvement: Plaster for adobe walls	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes			Yes
6. Home Improvement: Installation of electric system	Yes	Yes	Yes									
7. Home Improvement: Installation of water system from street lines.	Yes	Yes	Yes									

- ASSUMPTIONS:
1. Term of loan 8 year
  2. Interest rate 39% per annum
  3. Loan finances 100 percent of improvement/construction (more costly undertakings are possible with a contribution by the borrower).
  4. Income percentiles per May 1983 projections.

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REGIONAL COST VARIATIONS FOR SAMPLE SHELTER SOLUTIONS

<u>Item to be Financed</u>	<u>La Paz</u>	<u>North</u>	<u>South</u>	<u>Valley</u>
1. 21m2 core unit with 84m2 of roofed area and 56m2 of additional floor	\$b822,816 a/ \$b28,043/mo 90% *	\$b1,228,235 \$b41,860/mo 90-100% *	\$b977,917 \$b33,329/mo 90-100% *	\$b1,152,729 \$b39,287/mo 90-100% *
2. 24m2 core unit with 91m2 of roofed area and 48m2 of additional floor	\$b932,905 \$b31,795/mo 90-100% *	\$b1,312,740 \$b44,740/mo 100% *	\$b1,072,516 \$b36,553/mo 90-100% *	\$b1,256,181 \$b42,813/mo 100% *
3. Home Improvement: Plastering, painting, new roof, wood floor, ceiling, doors, windows	\$b555,507 \$b18,933/mo 70-80% *	\$b796,072 \$b27,131/mo 80-90% *	\$b599,703 \$b20,439/mo 70-90% *	\$b752,219 \$b25,637/mo 80-90% *
4. 24m2 core unit	\$b537,980 \$b18,335/mo 70-80% *	\$b694,797 \$b23,680/mo 80-90% *	\$b623,791 \$b21,260/mo 80-90% *	\$b700,885 \$b23,887/mo 80-90% *
5. New roof 84m2	\$b344,064 \$b11,726/mo 40-60% *	\$b512,652 \$b17,472/mo 70-80% *	\$b485,100 \$b16,533/mo 60-80% *	\$b553,896 \$b18,878/mo 70-80% *
6. Construction of additional room of 12m2	\$b292,277 \$b9,961/mo 40-60% *	\$b411,008 \$b14,008/mo 60-70% *	\$b324,125 \$b11,047/mo 40-60% *	\$b439,084 \$b14,965/mo 60-70% *
7. Home Improvement or Completion: roof, wood floor, windows, paint	\$b327,784 \$b11,171/mo 40-60% *	\$b380,469 \$b12,967/mo 50-70% *	\$b377,759 \$b12,875/mo 50-70% *	\$b410,408 \$b13,987/mo 60-70% *
8. Home Improvement: plastering, cement floor, doors, windows, paint	\$b209,355 \$b7,135/mo 20-40% *	\$b288,972 \$b9,849/mo 40-60% *	\$b206,024 \$b7,022/mo 20-40% *	\$b233,755 \$b7,967/mo 30-40% *
9. Construction of a bath- room with toilet, sink and shower	\$b226,489 \$b7,719/mo 30-40% *	\$b361,533 \$b12,322/mo 50-70% *	\$b309,581 \$b10,551/mo 40-60% *	\$b361,616 \$b12,324/mo 50-70% *

<u>Item to be Financed</u>	<u>La Paz</u>	<u>North</u>	<u>South</u>	<u>Valley</u>
10. Home Improvement: 35m2 roof, internal and external plastering	\$b183,308 \$b6,418/mo 20-30% *	\$b267,780 \$b9,376/mo 30-50% *	\$b226,331 \$b7,924/mo 30-40% *	\$b290,344 \$b10,166/mo 40-60% *
11. New roof for 21m2 unit	\$b159,656 \$b5,590/mo 20-30% *	\$b241,080 \$b8,441/mo 30-50% *	\$b234,694 \$b8,217/mo 30-50% *	\$b265,028 \$b9,279/mo 30-50% *
12. Home Improvement: 28m2 roof and 24m2 wood floor	\$b226,000 \$b7,913/mo 30-40% *	\$b260,572 \$b9,123/mo 30-50% *	\$b282,588 \$b9,894/mo 40-60% *	\$b300,288 \$b10,514/mo 40-60% *
13. Home Improvement: 48m2 of cement floor	\$b92,090 \$b3,224/mo 0-10% *	\$b188,759 \$b6,609/mo 20-30% *	\$b69,204 \$b2,423/mo 0-10% *	\$b102,864 \$b3,602/mo 0-10% *
14. Home Improvement: Plaster for adobe walls	\$b76,159 \$b2,667/mo 0-10% *	\$b168,487 \$b5,899/mo 20-30% *	\$b77,931 \$b2,729/mo 0-10% *	\$b232,095 \$b8,126/mo 30-50% *
15. Home Improvement Loan: Plaster for brick walls	\$b27,526 \$b964/mo 0-10% *	\$b35,233 \$b1,234/mo 0-10% *	\$b25,408 \$b890/mo 0-10% *	\$b38,536 \$b1,349/mo 0-10% *
16. Home Improvement: Installation of electric system	\$b18,000 \$b630/mo 0-10% *	\$b18,500 \$b648/mo 0-10% *	\$b17,800 \$b623/mo 0-10% *	\$b21,800 \$b763/mo 0-10% *
17. Home Improvement: Installation of water system from street lines	\$b12,680 \$b444/mo 0-10% *	\$b15,060 \$b527/mo 0-10% *	\$b11,800 \$b413/mo 0-10% *	\$b14,530 \$b509/mo 0-10% *

a/ \$b183,308 is the total cost of this Home Improvement based upon May 1983 prices and detailed specifications regarding the amounts and types of materials required to make this improvement.

b/ \$b6,418/mo is the monthly payment required to pay for this Home Improvement in eight years assuming an interest rate of 3%.

\* Income percentile of borrowers who could afford this shelter solution (see Annex F, Exhibit 3), i.e., only the 90th percentile (10% of the urban population) could afford this core unit given current costs of construction materials and the current income distribution.





OBRA A REALIZARSE	LA PAZ	NORTE	SUR	VALLE
UNIDAD BASICA HABITACIONAL				
1) Excavación 5,52 m3	483	315	724	452
2) Cimientos 5,52 m3	29.076	38.369	21.384	18.939
3) Sobrecimientos 1,38 m3	9.556	19.908	8.885	10.033
4) Muros 42,44 m2	16.448	93.395	79.659	91.458
5) Puertas 5,4 m2	60.476	84.056	85.870	75.600
6) Ventanas 4 m2	32.820	43.332	33.008	36.912
7) Cubierta Calamina 42,24 m2	173.015	257.790	243.936	278.530
8) Piso madera 21 m2	97.398	78.477	105.777	101.199
9) Cielo falso 21 m2	28.791	45.780	26.481	72.009
10) Revoque interior 89 m2	30.104	33.375	18.067	15.753
11)				
12)				
13)				
14)				
TOTAL POR REGIONES:	537.980	694.797	623.791	700.895
CUOTA MENSUAL AL 39 % A 5 AÑOS	20.491	26.464	23.760	26.696
CUOTA MENSUAL AL 39 % A 10 AÑOS	17.869	23.077	20.719	23.280
CUOTA MENSUAL AL 39 % A 15 AÑOS	17.539	22.652	20.337	22.850

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OBRA A REALIZARSE INSTALACION DE UN TECHO NUEVO	LA PAZ	NORTE	SUR	VALLE
1) TOMANDO EN CUENTA LA CUBIERTA DE				
2) UNA UNIDAD BASICA HABITACIONAL				
3) DE 84 m2	344.064	512.652	485.100	553.896
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
TOTAL POR REGIONES:	344.064	512.652	485.100	553.896
CUOTA MENSUAL AL 39 % A 5 AÑOS	13.105	19.526	18.477	21.097
CUOTA MENSUAL AL 39 % A 10 AÑOS	11.428	17.027	16.112	18.397
CUOTA MENSUAL AL 39 % A 15 AÑOS	11.217	16.714	15.815	18.058

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OBRA A REALIZARSE	LA PAZ	MORDE	SUR	VALLE
12 m2 CONSTRUCCION DE PIEZA ADICIONAL				
1) Excavación 3,36 m3	294	191	440	275
2) Cimientos 3,36 m3	17.697	23.355	13.016	11.528
3) Sobrecimientos 0,84 m3	5.817	11.691	5.408	6.107
4) Muro de adobe 32,42 m2	26.624	41.533	13.820	40.734
5) Puerta 1,89 m2	21.166	29.419	30.054	26.460
6) Ventanas 3 m2	24.615	32.499	24.756	27.684
7) Piso de madera 12m2	55.656	44.844	60.444	57.828
8) Cubierta Calamina 23,76 m2	97.320	145.007	137.214	156.673
9) Cielo Falso 12 m2	16.452	26.160	15.132	41.148
10) Revoque interior 30,25 m2	10.224	11.343	6.140	5.354
11) Revoque exterior 32,42 m2	16.412	44.566	17.701	65.293
12)				
13)				
1)				
TOTAL POR REGIONES:	292.277	411.608	324.125	439.064
CUOTA MENSUAL AL 39 A 5 AÑOS	11.132	15.655	12.345	16.724
CUOTA MENSUAL AL 39 A 10 AÑOS	9.708	13.651	10.765	14.584
CUOTA MENSUAL AL 39 A 15 AÑOS	9.529	13.400	10.567	14.315

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OBRA A REALIZARSE TERMINACION DE UNA VIVIENDA	LA 222	NORTE	SUR	VALLE
1) Cubierta Calamina 24 m2	98.304	146.472	138.600	158.256
2) Piso Macihembre 24 m2	111.312	89.688	120.888	115.656
3) Pintura 40 m2	31.195	29.480	30.800	38.680
4) Ventanas 10,6 m2	86.973	914.829	87.471	97.816
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
<b>TOTAL POR REGIONES:</b>	<b>327.784</b>	<b>380.469</b>	<b>377.759</b>	<b>410.408</b>
CUOTA MENSUAL AL 39 % A 5 AÑOS	12.485	14.492	14.388	15.632
CUOTA MENSUAL AL 39 % A 10 AÑOS	10.887	12.637	12.547	13.631
CUOTA MENSUAL AL 39 % A 15 AÑOS	10.686	12.404	12.316	13.380

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OBRA A REALIZARSE HABILITACION DE UNA VIVIENDA	LA PAZ	NORTE	SUR	VALIE
1) Revoque interior 42 m2	14.206	15.750	8.526	7.434
2) Pintura interior 42 m2	32.718	30.954	32.340	40.614
3) Piso Cemento 24 m2	46.032	94.368	34.512	51.432
4) Puertas 2 Pzas. 3,04 m2	34.044	47.320	48.342	42.560
5) Ventanas 3 Pzad. 7,56 m2	62.029	81.897	62.385	69.763
6) Pintura fachada 21,5 m2	20.326	18.683	19.919	21.952
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
<b>TOTAL POR REGIONES:</b>	<b>209.355</b>	<b>288.972</b>	<b>206.024</b>	<b>233.755</b>
CUOTA MENSUAL AL <u>39</u> y a <u>5</u> AÑOS	7.974	11.006	7.847	8.903
CUOTA MENSUAL AL <u>39</u> y a <u>10</u> AÑOS	6.953	9.598	6.843	7.764
CUOTA MENSUAL AL <u>39</u> y a <u>15</u> AÑOS	6.825	9.421	6.717	7.621

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OBRA A REALIZARSE INSTALACION DE UN BAÑO C. SERV.	LA PAZ	NORTE	SUR	VALJE
1) Excavación 1,90 m3	166	108	249	155
2) Cimiento 1,90 m3	10.007	13.206	7.360	6.518
3) Sobrecimiento 0,36 m3	2.493	5.010	2.318	2.617
4) Muro ladrillo 27,53 m2	49.443	60.538	51.673	59.327
5) Puerta 1,47 m2	16.462	22.882	23.375	20.580
6) Ventana 1 m2	8.205	10.833	8.252	9.228
7) Piso de cemento 5,04 m2	9.666	19.817	7.247	10.800
8) Puerta de madera 12 m2	49.152	73.236	69.300	79.128
9) Cielo falso 5,04 m2	6.909	10.937	6.355	17.292
10) Revoque Int. de cemento 25,53 m2	16.186	100.383	36.712	54.710
11) Ducha	9.800	15.288	9.400	18.816
12) Inodoro	26.000	13.420	66.040	50.560
13) Lavabos	20.500	18.850	19.800	29.315
1) Rejilla	1.500	1.995	1.500	2.180
<b>TOTAL POR REGIMENS:</b>	<b>226.489</b>	<b>361.553</b>	<b>309.581</b>	<b>361.616</b>
CUOTA MENSUAL AL 39 % A 5 AÑOS	8.626	13.771	11.791	13.773
CUOTA MENSUAL AL 39 % A 10 AÑOS	7.522	12.009	10.282	12.011
CUOTA MENSUAL AL 39 % A 15 AÑOS	7.384	11.787	10.093	11.789

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OBRA A REALIZARSE TERMINACION DE UNA VIVIENDA	LA PAZ	NOITE	SUR	VALLE
1) Cubierta de calamina 35 m2	143.360	213.605	202.125	230.790
2) Revoque interior 52 m2	17.589	19.500	10.556	9.204
3) Revoque exterior 25 m2	22.359	34.675	13.650	50.350
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
<b>TOTAL POR REGIONES:</b>	<b>183.308</b>	<b>267.780</b>	<b>226.331</b>	<b>290.344</b>
CUOTA MENSUAL AL <u>39</u> y A <u>5</u> AÑOS	6.982	10.199	8.620	11.059
CUOTA MENSUAL AL <u>39</u> y A <u>10</u> AÑOS	6.088	8.294	7.517	9.643
CUOTA MENSUAL AL <u>39</u> y A <u>15</u> AÑOS	5.976	8.730	7.379	9.466

OBRA A REALIZARSE INSTALACION DE UN NUEVO TECHO	LA PAZ	NOORTE	SUR	VALIE
1) TOMANDO EN CONSIDERACION UN TECHO				
2) DE 42,24 m2 PARA CUBRIR UNA VIVIEN				
3) DA BASICA DE 7x3 metros	159.656	241.080	234.694	265.028
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
15)				
<b>TOTAL POR REGIONES:</b>	<b>159.656</b>	<b>241.080</b>	<b>234.694</b>	<b>265.028</b>
CUOTA MENSUAL AL 39 y A 5 AÑOS	6.081	9.182	8.939	10.094
CUOTA MENSUAL AL 39 y A 10 AÑOS	5.303	8.007	7.795	8.803
CUOTA MENSUAL AL 39 y A 15 AÑOS	5.205	7.859	7.651	8.640

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OBRA A REALIZARSE	LA PAZ	NORTE	SUR	VALLE
CUBIERTA DE UNA VIVIENDA				
1) Cubierta Calamina 28 m2	114.688	170.884	161.700	184.632
2) Piso madera 24 m2	111.312	89.688	120.888	115.656
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
1)				
<b>TOTAL POR REGIONES:</b>	<b>226.000</b>	<b>260.572</b>	<b>282.588</b>	<b>300.268</b>
CUOTA MENSUAL AL 39 y a 5 años	8.608	9.925	10.763	11.437
CUOTA MENSUAL AL 39 y a 8 años	7.702	8.880	9.631	10.234
CUOTA MENSUAL 22 y a años				

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OBRA A REALIZARSE INSTALACION DE FISO DE CEMENTO	LA PAC	NORTE	SUR	VALLE
1) Baño 3 m2	5.755	11.797	4.314	6.429
2) Cocina 6 m2	11.511	23.595	8.628	12.858
3) Dormitorio 9 m2	17.267	35.392	12.942	19.287
4) Dormitorio padres 12 m2	23.023	47.190	17.256	25.716
5) Estar-comedor 18 m2	34.534	70.785	25.884	38.574
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
TOTAL POR ADICIONES:	92.090	188.759	69.204	102.864
CUOTA MENSUAL AL 39 y A 5 AÑOS	3.507	7.189	2.635	3.918
CUOTA MENSUAL AL 39 y A 10 AÑOS	3.058	6.269	2.298	3.416
CUOTA MENSUAL AL 39 y A 15 AÑOS	3.002	6.145	2.256	3.353

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OBRA A REALIZARSE IMPERMEABILIZACION DE MUROS DE ADOBE	LA PAZ	NORTE	SUR	VALLE
1)				
2) Revoque Ext. adobe 54,40 m2	48.633	133.254	52.523	193.559
3) Revoque Ext. ladrillo 54,40 m2	27.526	35.233	25.408	38.536
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
TOTAL POR REGIONES:	76.159	168.487	77.931	232.095
CUOTA MENSUAL AL 39% A 5 AÑOS	2.900	6.417	2.968	8.840
CUOTA MENSUAL AL 39% A 10 AÑOS	2.529	5.596	2.588	7.709
CUOTA MENSUAL AL 39% A 3 AÑOS	3.619	8.007	3.703	11.031

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OBRA A REALIZARSE	LA PAZ	NOCTE	SUR	VALLE
TERMINACION DE MUROS DE LADRILLO(REVOQUE)				
1) Revoque exterior ladrillo 54,40 m2	27.526	35.233	25.408	38.536
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
:				
TOTAL POR PROYECTOS:	27.526	35.233	25.408	38.536
CUOTA MENSUAL AL 39 y A 5 AÑOS	1.048	1.342	967	1.467
CUOTA MENSUAL AL 39 y A 10 AÑOS	914	1.170	843	1.279
CUOTA MENSUAL AL 39 y A 3 AÑOS	1.308	1.674	1.207	1.831

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CORA A REALIZARSE INSTALACION ELECTRICA (4 PUNTOS)	LA PAZ	NOITE	SUR	VALLE
1)				
2) 4 puntos	18.000	18.500	17.800	21.800
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
15)				
16)				
17)				
18)				
19)				
20)				
21)				
22)				
23)				
24)				
25)				
26)				
27)				
28)				
29)				
30)				
31)				
32)				
33)				
34)				
35)				
36)				
37)				
38)				
39)				
40)				
TOTAL POR PUNTOS:	18.000	18.500	17.800	21.800
CUOTA MENSUAL AL 39 C A 5 AÑOS	685	704	678	830
CUOTA MENSUAL AL 39 C A 10 AÑOS	597	614	591	724
CUOTA MENSUAL AL C A AÑOS				

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CUOTA A REALIZARSE	REGION SERVICIO DOM. DE AGUA POTABLE	LA PAZ	NORTE	SUR	VALIE
1)	1 punto	12.680	15.060	11.800	14.530
2)					
3)					
4)					
5)					
6)					
7)					
8)					
9)					
10)					
11)					
12)					
13)					
14)					
TOTAL POR REGIONES:		12.680	15.060	11.800	14.530
CUOTA MENSUAL AL 39 : A 5 AÑOS		482	573	449	553
CUOTA MENSUAL AL 39 : A 10 AÑOS		421	500	391	482
CUOTA MENSUAL AL 39 : A 1 AÑOS		1.292	1.535	1.203	1.481

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METHODOLOGY USED IN ESTIMATING URBAN INCOME DATA

The methodology used in estimating urban income data relies on macroeconomic statistics published by the Bolivian Central Bank and the National Institute of Statistics (i.e. national accounts and population statistics) to indirectly estimate average family income and income distribution. It is based on the report "Preliminary Description of Methodology for Estimating Household Incomes", August 1978, AID which was further redefined by the National Savings and Loan League in January 1980 and, at present time, is being applied in countries with data problems similar to those encountered in Bolivia.

The basic equations used in the estimation are the following:

1.  $NUI = \frac{GNP - GNP_{ag}}{GNP} * NI$
2.  $UHU = \frac{Pop}{Avg\ UHU} * \frac{EAP - EAP_{ag}}{EAP}$
3.  $Avg\ UFI = \frac{NUI}{UHU}$
4.  $Median\ UFI = Avg\ UFI * .66$

where:

- NUI = National Urban Income
- GNP = Gross National Product
- GNP ag = Gross National Product - Agricultural Sector
- NI = National Income
- UHU = Number of Urban Household Units
- Pop = Population of the Country
- Avg UHU = Average size of the Urban Household Unit
- EAP = Economically Active Population
- EAP Ag = Economically Active Population - Agricultural Sector
- Avg UFI = Mean Urban Family Income
- Median UFI = Median Urban Family Income

The statistics utilized in the estimation of the family income are as follows:

	<u>1980 (\$b)</u>	<u>1981 (\$b)</u>	<u>1982 (\$b)</u>
GNP 1/	134,017	180,772	460,115
GNP Ag 1/	22,258	32,538	66,257
NI 1/	123,054	164,608	342,325
NUI	102,134	134,979	366,287
Population 2/	5,599	5,755	5,916
Avg UHU 2/	4.5	4.5	4.5
EAP 2/	1,792	1,842	1,893
EAP Ag 2/	806	829	852
UHU	684,599	703,319	722,963

- Source: 1/ Bolivian Central Bank, National Accounts Department  
 1980 figures, estimates  
 1981 figures, preliminary estimates  
 1982 figures, projections
- 2/ National Statistics Institute (INE), Department of Demography.  
 Figures based on the 1976 National Census and projections based  
 on subsequent surveys.

The Income Distribution is based on a study carried out by the United Nations entitled "Informe sobre Política de los Asentamientos Humanos en Bolivia", 1977, which estimates the income distribution around the mean income. This study in itself is based on an income distribution study of an area in Brazil with conditions similar to the ones found in Bolivia.

ESTIMATED DISTRIBUTION OF MONTHLY INCOME IN URBAN AREAS

<u>Percentage of families by income level</u>	<u>Distribution of income as related to the mean</u>
<u>Percentiles:</u>	
5	0.188
10	0.250
20	0.346
30	0.438
40	0.543
50	0.665
60	0.815
70	1.015
80	1.346
90	2.045
100	+

Source: Informe sobre Política de los Asentamientos Humanos en Bolivia. Report prepared jointly by U.N. Foundation for Housing and Human Settlements and the Ministry of Housing, Bolivia, March 1977.

It should also be noted that income figures estimated according to this methodology represent Urban Household Unit income and do not represent monthly salaries received by the average worker. Monthly salaries understate income since formal sector workers receive extra paychecks in the form of bonuses during the year. By law, employers must pay an equivalent of 14 monthly salaries per year; and some up to 18 monthly salaries. At the level of 14 salaries, a worker earns about 17 percent more per year than the regular monthly wage would indicate. At 16 salaries, the additional income is equivalent to 33 percent and rises to 50 percent with 18 salaries. Also, INE estimates that there are 1.48 salaried workers per household. Informal sector participation would make this ratio even higher and some estimates place the number of working members between 1.7 and 2.0 per household. In synthesis, total household income should be about 50% higher than simple wage scale distribution might indicate. In that context, the household incomes in the previous chart seem to be in the indicated range.

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ANNEX F  
Exhibit 5

ESTIMATED DISTRIBUTION OF ANNUAL AND MONTHLY  
INCOME IN URBAN AREAS (1982 AND 1983)

<u>Percentage of Families by Income Level</u> <u>Percentiles</u>	<u>Distribution of Income as Related to the Mean</u>		
	<u>1982</u>	<u>1982</u>	<u>1983</u>
	<u>Annual</u>	<u>Monthly</u>	<u>Monthly</u>
5	95,245	7,937	11,588
10	126,655	10,555	15,410
20	175,291	14,608	21,328
30	221,900	18,492	26,998
40	275,095	22,925	31,866
50	336,903	28,075	39,024
60	412,896	34,408	47,827
70	514,220	42,852	59,564
80	681,912	56,826	78,988
90	1,036,040	86,337	120,008
100	+	+	+

## Annex G: Expansion of Cash Flow Line Items

### 1. CACEN

#### Income

Repayment of Portfolio 12/82 (U.S. \$)- Payments from S & L's on prior loans which are still tied to dollar exchange rate

Amortization Old Portfolio (pesos)-Payments from S & L's on prior loans in pesos

Cash on Hand-Cash balance from previous year's operation

Short-term Receivables-Repayment of arrearages due CACEN by S & L's. Assumes repayment of one fourth of total over two years

Liquidity Reserves on Savings-8% of savings deposits collected by CACEN from S & L's as a reserve fund

Commissions/Repayments from La Merced-1% commission paid by La Merced on new HG disbursements and repayments by La Merced

Commissions/Repayments Mutuuls - Same payments by S & L's

New Loans from BCB/AID-Disbursements of new HG resources to CACEN. Amounts needed to finance assumed fixed level of housing loans after subtracting reflow and savings used to finance such loans and providing for adequate cash reserves.

Interest on Bank Account-Interest received on cash balances

Other Income-One time gain from foreign exchange transaction

#### Outlays

Amortization Old Portfolio (US \$)-Repayments to investors on existing dollar debt

Amortization Old Portfolio (pesos)- Repayments on existing peso loans

Administrative Costs-Self-explanatory

Short-term Payables-Short-term debt

Interest on Liquidity Reserves-Interest paid on savings reserves to S & L's, (same rate as S & L's pay on savings deposits)

New loans-Disbursements to S & L's and La Merced to finance housing loans under new HG

Commissions on Loans from BCB-1% paid by BCB

Repayment of Loans from BCB-Repayment of new HG resources (interest and principal)

## 2. S & L System

### Income

Repayment Portfolio 12/81-Repayments on existing portfolio

Cash on Hand-Balance from previous period

Short-term Receivables-Repayments on special short-term loans made by S & L's

Investments-Proceeds from sale of investments in land and buildings

Savings-Incremental increases in savings deposits

Interest on Liquidity Reserves-Interest payments by CACEN on savings reserves

Commissions on Reflows-4% commission paid by borrowers on new loans

Repayment Reflows Housing/Diversified Loans-Repayments of new housing and diversified loans

New Loans from CACEN-New HG resources disbursed by CACEN

Interest on Bank Accounts-Interest earned on cash balances

### Outlays

Repayments Portfolio 12/81 (US \$)-Payments to CACEN on dollarized debt

Amortization Old Portfolio (pesos)-Repayments by S & L's of peso loans

Administrative Costs-self-explanatory

Short-term Payables-Short-term debt payments

Liquidity Reserves on Savings-Savings reserve payments to CACEN

Interest on Savings-Payments of interest to depositors

Reflows Housing/Diversified loans-New housing and diversified loans disbursements

Repayment New Loans-Repayments on new HG to CACEN

Commissions on New Loans-1% commission paid to CACEN

## 3. La Merced

### Income

Repayment Portfolio 12/81-Repayments of outstanding housing loans to La Merced. Converted at 44 pesos/dollar

Loans from CACEN-New HG resources

Cash on Hand-Balance from previous period

Short-term Receivables-Repayment of loans under one year maturity

Members Deposits-Incremental increases in savings deposits

Sales of Goods and Services-Revenue from La Merced's non-housing operations

Other income-Disbursements of recent loans/grants from IDB and under Title III for new credit programs

Repayments regular loans-Repayments on minor lending

Repayment Reflows (pesos)-Repayments on new housing loans

Outlays

Repayments Old Portfolio (US \$, Pesos)-Repayments of existing debt

Administrative Costs-Self-explanatory

Repayments to BID-Repayments on new IDB loan

Short-term Payables-Short-term debt payment

Repayment Loans to CACEN-Repayments on new HG funds

Commissions on Loans to CACEN-1% charged by CACEN

Regular Loans-Minor loans to members

Cost of Goods and Services-Expenses for non-housing activities

Reflows to Borrowers-New housing loans

## Annex B: Note Regarding Indexation

The cash flows for the S & L System under both the variable rates of interest and indexation scenarios are based on a fixed estimate of yearly new housing loans. Indexation will result in different repayments flows to the S & L's because the effective interest rates charged differ from those assumed under the variable rate scenario. The effective rates of interest paid by the S & L's on savings will also differ of course. Indexation will also change the reflows on the existing loan portfolio. This being the case, the amounts of new HG funds required to finance a given amount of new housing loans differs under the variable rate and indexation scenario. The dollar disbursements of the HG shown in the PP are based on the variable rate scenario and would change under indexation. In addition, the benefits of indexation to the S & L's as time goes on are relatively so much better than employment of the variable rates assumed that the S & L's eventually are able to finance the full amount of new housing loans projected completely from reflows and new savings deposits. Should this occur, it is likely that more loans would in fact be financed, either by the existing S & L's or by new ones initiated by CACEN.

CASH FLOW FOR CALEN VARIABLE INTEREST RATE NO NO HG FUNDS 00-09 (IN THOUSANDS OF \$)											SEE NOTE BELOW
EXCHANGE RATE:	150	250	350	438	547	685	790	865	930	975	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
<b>INCOME:</b>											
REPAYMENT PORT 12/82 MS	189191	670250	1110550	0	0	0	0	0	0	0	1969991
AMORT. OLD PORT. MS	7689	9410	9995	0	0	0	0	0	0	0	27094
CASH ON HAND	357818	262277	217	0	0	0	0	0	0	0	6207
SHORT TERM RECEIVABLES	36973	170304	170304	0	0	0	0	0	0	0	377581
INTL. RESERVES ON SAVINGS	6717	29303	41024	0	0	0	0	0	0	0	77445
LOAN. FROM LA MERCED	0	750	1464	0	0	0	0	0	0	0	2214
LOAN. FROM MUTUALS	1045	1693	33	0	0	0	0	0	0	0	2771
REPAY. LOANS FR MERCE	0	5375	25769	0	0	0	0	0	0	0	32142
REPAY. LOANS MUTUALS	4966	35828	51800	0	0	0	0	0	0	0	92592
NEW LOANS FROM BCB/ATB	0	0	0	0	0	0	0	0	0	0	0
INTEREST ON BANK ACCOUNT	88462	72750	440	0	0	0	0	0	0	0	161612
OTHER INCOME	77341	0	0	0	0	0	0	0	0	0	77341
<b>TOTAL INCOME :</b>	<b>770202</b>	<b>1258940</b>	<b>1411996</b>	<b>0</b>	<b>3363797</b>						
<b>OUTLAYS:</b>											
AMORT. OLD PORT. MS	277900	742750	1138550	0	0	0	0	0	0	0	2159200
AMORT. OLD PORT. MS	345	5700	6650	0	0	0	0	0	0	0	13895
ADMINISTRATIVE COSTS	29824	49307	66564	0	0	0	0	0	0	0	145695
SHORT TERM PAYABLES	74883	161224	0	0	0	0	0	0	0	0	256107
INTL. LIQUIDITY RESERV	20424	33892	46097	0	0	0	0	0	0	0	100417
NEW LOANS TO MUTUALS	104549	169250	3337	0	0	0	0	0	0	0	277132
NEW LOANS TO LA MERCED	0	75000	146375	0	0	0	0	0	0	0	221375
LOAN. ON LOANS FR BCB	0	0	0	0	0	0	0	0	0	0	0
REPAY. LOANS FR BCB	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL OUTLAYS :</b>	<b>507925</b>	<b>1258323</b>	<b>1407573</b>	<b>0</b>	<b>3173921</b>						
<b>SURPLUS:</b>	<b>262277</b>	<b>617</b>	<b>4423</b>	<b>0</b>	<b>189476</b>						

NOTE: ASSUMES THAT CALEN CREATES A ROTATING FUND FOR LA MERCED WITH THE INITIAL \$1.0 MILLION

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CASH FLOW FOR THE SYSTEM - VARIABLE INTEREST RATE NO MG FUNDS (IN THOUSAND OF \$)

(SEE NOTE BELOW)

EXCHANGE RATE:	150	250	350	479	547	685	790	865	930	975	
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL
<b>INCOME:</b>											
REPAYMENT PORT 12/31/81	699114	389016	618789	0	0	0	0	0	0	0	1706920
CASH ON HAND	259882	635592	0	0	0	0	0	0	0	0	895474
SHORT TERM RECEIVABLES	58469	313029	0	0	0	0	0	0	0	0	371498
INVESTMENTS	72148	244398	342157	0	0	0	0	0	0	0	658702
SAVINGS	281761	366289	512805	0	0	0	0	0	0	0	1160855
INT. ON LIQUIDITY RESERV	10424	33892	46097	0	0	0	0	0	0	0	100413
COMM. ON REFLWS	7490	20000	37044	0	0	0	0	0	0	0	66534
REFPAY REFLWS HOUSING	10760	139283	440489	0	0	0	0	0	0	0	600531
REFPAY REFLWS DIVERSIFI	0	21500	232110	0	0	0	0	0	0	0	253610
NEW LOANS FROM CACEN	104549	169250	3337	0	0	0	0	0	0	0	277136
INTEREST ON BANK ACCOUNT	88462	89012	-154734	0	0	0	0	0	0	0	22741
<b>TOTAL INCOME :</b>	<b>1615059</b>	<b>2421261</b>	<b>2078094</b>	<b>0</b>	<b>6114414</b>						
<b>OUTLAYS:</b>											
REPAYMENT PORT 12/31/81	189191	670250	1110550	0	0	0	0	0	0	0	1969991
AMORT. OLD PORTF. \$B.	7689	9410	9995	0	0	0	0	0	0	0	27094
ADMINISTRATIVE COSTS	169027	278895	334674	0	0	0	0	0	0	0	782596
SHORT TERM PAYABLES	74883	465352	0	0	0	0	0	0	0	0	560235
LIB. RESERVES ON SAVINGS	6717	29303	41024	0	0	0	0	0	0	0	77645
INTEREST ON SAVINGS	282931	452597	618282	0	0	0	0	0	0	0	1363810
REFLWS HOUSING LOANS	243018	300000	579600	0	0	0	0	0	0	0	1122618
REFLWS DIVERSIFIED LOAN	0	200000	346500	0	0	0	0	0	0	0	546500
REPAYMENT NEW LOANS	4966	35828	51800	0	0	0	0	0	0	0	92594
COMM. ON NEW LOANS	1045	1693	33	0	0	0	0	0	0	0	2771
<b>TOTAL OUTLAYS :</b>	<b>979467</b>	<b>2473328</b>	<b>3092459</b>	<b>0</b>	<b>6545254</b>						
<b>SURPLUS:</b>	<b>635592</b>	<b>-52067</b>	<b>-1014365</b>	<b>0</b>	<b>-430840</b>						

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CACEN AS LIQUIDITY RESERVES

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CASH FLOW FOR CDFEN: VARIABLE INTEREST RATE 00-09 (IN THOUSANDS OF \$) with HG funds											SEE NOTE BELOW
EXCHANGE RATE:	150	250	350	438	547	685	790	865	930	975	
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL
<b>INCOME:</b>											
REPAYMENT PORT 12-82 MSB	189191	670250	1110550	1389774	1735631	2173505	2506670	2744645	2950890	3093675	18564781
AMORT. OLD PORTF. \$B.	7689	9410	9995	9455	7530	3540	3530	3510	3530	3540	61729
CASH ON HAND	357818	262277	494418	317135	692594	1069456	2186952	1681514	1947748	677501	9626413
SHORT TERM RECEIVABLES	36973	170304	170304	0	0	0	0	0	0	0	377581
LIQ. RESERVES ON SAVINGS	6717	29303	41024	57434	80408	112571	157599	220639	308895	432453	1447043
COMM. FROM LA MERCEZ	0	750	1464	1572	527	717	927	964	1123	1307	9251
COMM. FROM MUTUALS	1045	7943	8583	9643	9787	19823	15002	9746	27528	20302	129402
REPAY. LOANS/LA MERCEZ	0	6375	25769	52696	71743	82725	96407	112269	130748	152268	730998
REPAY. LOANS/MUTUALS	4966	88953	235531	397054	569626	828841	1140076	1361988	1686314	2114045	8427414
NEW LOANS FROM BCB/FBI	0	1125000	540382	1349472	1094000	2654419	0	0	0	0	6763273
INTEREST ON BANK ACCOUNT	99462	102801	156370	130070	257034	479576	772542	642504	604768	191281	3424409
OTHER INCOME	77341	0	0	0	0	0	0	0	0	0	77341
<b>TOTAL INCOME :</b>	<b>770202</b>	<b>2473366</b>	<b>2794391</b>	<b>3714303</b>	<b>4518880</b>	<b>7423173</b>	<b>6879526</b>	<b>6777779</b>	<b>7661545</b>	<b>6686372</b>	<b>49622295</b>
<b>OUTLAYS:</b>											
AMORT. OLD PORT. MSB	277900	742750	1138550	1380138	1668350	2055000	2219900	2231700	2408700	2505750	16628739
AMORT. OLD PORT. \$B	345	6900	6650	6370	6100	5850	3580	1500	490	930	38715
ADMINISTRATIVE COSTS	29824	49307	66564	89862	121314	163774	221094	298477	462944	543975	1987135
SHORT TERM PAYABLES	74863	181224	0	0	0	0	0	0	0	0	256107
INT. ON LIQUIDITY RESERV	20424	33892	46097	59389	77998	115611	156137	212873	292303	403505	1418229
NEW LOANS TO MUTUALS	104549	794250	858337	964269	978748	1982289	1500185	974583	2752847	2030212	12940269
NEW LOANS TO LA MERCEZ	0	75000	146375	157169	52696	71743	82725	96407	112269	130748	925131
COMM. ON LOANS FR BCB	0	11250	5404	13495	10940	26544	0	0	0	0	67633
REPAY. LOANS FR BCB	0	84375	269279	351018	534278	815410	1014491	1014491	1014491	1014491	6052323
<b>TOTAL OUTLAYS :</b>	<b>507925</b>	<b>1978948</b>	<b>2477256</b>	<b>3021709</b>	<b>3450424</b>	<b>5236221</b>	<b>5198112</b>	<b>4830030</b>	<b>6984044</b>	<b>6629611</b>	<b>40314280</b>
<b>SURPLUS:</b>	<b>262277</b>	<b>494418</b>	<b>317135</b>	<b>692594</b>	<b>1068456</b>	<b>2186952</b>	<b>1681514</b>	<b>1947748</b>	<b>677501</b>	<b>56761</b>	<b>9308016</b>

NOTE: ASSUMES THAT CDFEN CREATES A ROTATING FUND FOR LA MERCEZ WITH THE INITIAL \$1.0 MILLION

MMH 6/30/83

## CASH FLOW FOR THE SYSTEM - VARIABLE INTEREST RATE 00-09 (IN THOUSANDS OF \$) with HG funds

(SEE NOTE BELOW)

EXCHANGE RATE:	150	250	350	438	547	685	790	865	930	975	
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL
<b>INCOME:</b>											
REPAYMENT PORT 12/31/81	699114	389012	618789	656025	656025	674114	622397	614033	0	0	4889505
CASH ON HAND	25982	635592	615371	604547	590724	586612	491341	527246	534346	613132	5456792
SHORT TERM RECEIVABLES	58457	313029	0	0	0	0	0	0	0	0	371498
INVESTMENTS	72148	244398	342157	428184	534742	0	0	0	0	0	1621628
SAVINGS	281761	366289	512805	717927	1005098	1407137	1969992	2757988	3861184	5405657	18285839
INT. ON LIQUIDITY RESERV	20424	33892	46097	59389	77998	115611	156137	212873	292303	403505	1416229
COMM. ON REFLWS	9490	20000	37044	60024	89953	125176	152286	183418	203839	279764	1270994
REPAY REFLWS HOUSING	20760	139283	440489	931911	1679534	2676252	3936058	5198971	7116582	9815471	31955311
REPAY REFLWS DIVERSIFI	0	21500	232110	536106	944976	1362372	1851575	2354702	2841802	3276803	17421946
NEW LOANS FROM CACEN	104549	794250	858337	964269	978748	1982289	1500185	974583	2752847	2020212	12940269
INTEREST ON BANK ACCOUNT	88452	190825	186089	182329	179594	179659	169765	176932	183211	196162	1273033
<b>TOTAL INCOME :</b>	<b>1615059</b>	<b>3148074</b>	<b>3889288</b>	<b>5140711</b>	<b>6737391</b>	<b>9679223</b>	<b>10849725</b>	<b>13000747</b>	<b>17886113</b>	<b>22120713</b>	<b>93467644</b>
<b>OUTLAYS:</b>											
REPAYMENT PORT 12/31/81	189191	670250	1110550	1389774	1735631	2170506	2506670	2744645	2950890	3093675	18564781
REPAY. OLD PORTF. \$B.	7689	9410	9995	9455	7530	3540	3530	3510	3530	3540	61729
ADMINISTRATIVE COSTS	169027	278895	334674	401609	481931	576317	693980	832776	999331	1199197	5969737
SHORT TERM PAYABLES	74863	485352	0	0	0	0	0	0	0	0	560235
LIQ. RESERVES ON SAVINGS	6717	29303	41024	57434	80408	111571	157599	220639	308895	432453	1447943
INTEREST ON SAVINGS	282931	462597	618282	784431	1017040	1491879	1998449	2707646	3700521	5090548	18154323
REFLWS HOUSING LOANS	243018	300000	579600	1040688	1559606	2347696	2640338	3180103	5933923	7406010	25226973
REFLWS DIVERSIFIED LOAN	0	200000	346500	459900	689220	1025720	1166816	1405348	1662048	2088083	9053636
REPAYMENT NEW LOANS	4956	88953	235531	397054	569626	329841	1140096	1361988	1686314	2114045	9427414
COMM. ON NEW LOANS	1045	7943	8583	9643	9787	19823	15062	9746	27528	20302	129402
<b>TOTAL OUTLAYS :</b>	<b>979467</b>	<b>2532703</b>	<b>3284741</b>	<b>4549982</b>	<b>6150779</b>	<b>8567982</b>	<b>10322479</b>	<b>12466401</b>	<b>17272981</b>	<b>21447857</b>	<b>87595277</b>
<b>SURPLUS:</b>	<b>635592</b>	<b>615371</b>	<b>604547</b>	<b>590724</b>	<b>586612</b>	<b>491341</b>	<b>527246</b>	<b>534346</b>	<b>613132</b>	<b>672560</b>	<b>5871771</b>

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CACEN AS LIQUIDITY RESERVES

MM 6/30/93

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CASH FLOW FOR CACEN INDEXED 01-09 NO HG FUNDS (IN THOUSANDS OF \$B)											SEE NOTE BELOW
EXCHANGE RATE:	150	250	350	438	547	685	790	855	930	975	
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL
<b>INCOME:</b>											
REPAYMENT FORT 12/82 USA	189191	670250	1110550	0	0	0	0	0	0	0	1969991
AMORT. OLD FORT. US	7689	9410	9995	0	0	0	0	0	0	0	27094
CASH ON HAND	157818	262277	1481	0	0	0	0	0	0	0	621576
SHORT TERM RECEIVABLES	75972	170304	170304	0	0	0	0	0	0	0	377581
INTL RESERVES ON SAVINGS	5717	138674	190654	0	0	0	0	0	0	0	336045
COMM. FROM LA MERCEZ	0	750	1464	0	0	0	0	0	0	0	2214
COMM. FROM MUTUALS	1045	2688	2326	0	0	0	0	0	0	0	5959
REPAY. LOANS LA MERCEZ	0	6375	25769	0	0	0	0	0	0	0	32144
REPAY. LOANS MUTUALS	4968	44291	88125	0	0	0	0	0	0	0	137383
NEW LOANS FROM SUBSTATE	0	0	0	0	0	0	0	0	0	0	0
INTEREST ON SAV. ACCOUNT	89462	43284	74	0	0	0	0	0	0	0	131821
OTHER INCOME	77341	0	0	0	0	0	0	0	0	0	77341
<b>TOTAL INCOME :</b>	<b>770202</b>	<b>1348364</b>	<b>1600542</b>	<b>0</b>	<b>3641807</b>						
<b>OUTLAYS:</b>											
AMORT. OLD FORT. USA	277900	742750	1138550	0	0	0	0	0	0	0	2159200
AMORT. OLD FORT. US	345	6900	6650	0	0	0	0	0	0	0	13895
ADMINISTRATIVE COSTS	24824	49307	65564	0	0	0	0	0	0	0	145695
SHORT TERM PAYABLES	74893	181224	0	0	0	0	0	0	0	0	256107
INTL ON LIQUIDITY RESERV	20424	22830	10648	0	0	0	0	0	0	0	53902
NEW LOANS TO MUTUALS	104549	268811	222567	0	0	0	0	0	0	0	595927
NEW LOANS TO LA MERCEZ	0	75000	146375	0	0	0	0	0	0	0	221375
COMM. ON LOANS FR BCB	0	0	0	0	0	0	0	0	0	0	0
REPAY. LOANS FR BCB	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL OUTLAYS :</b>	<b>507925</b>	<b>1346822</b>	<b>1591354</b>	<b>0</b>	<b>3446101</b>						
<b>SURPLUS:</b>	<b>262277</b>	<b>1481</b>	<b>9289</b>	<b>0</b>	<b>195706</b>						

NOTE: ASSUMES THAT CACEN CREATES A ROTATING FUND FOR LA MERCEZ WITH THE INITIAL \$1.0 MILLION

MMH 6/30/83

## CASH FLOW FOR THE SYSTEM - INDEXED 01-09 NO HG FUNDS

(IN THOUSANDS OF \$)

(SEE NOTE BELOW)

EXCHANGE RATE:	150	250	350	478	547	685	790	865	930	975	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
<b>INCOME:</b>											
REPAYMENT PORT 12/28/81	699114	389016	458023	0	0	0	0	0	0	0	1546153
CASH ON HAND	259982	625592	87365	0	0	0	0	0	0	0	982839
SHORT TERM RECEIVABLES	55469	313029	0	0	0	0	0	0	0	0	371498
INVESTMENTS	72148	244398	342157	0	0	0	0	0	0	0	658702
SAVINGS	291761	366289	512805	0	0	0	0	0	0	0	1160855
INT. ON LIQUIDITY RESERV	2424	22830	10648	0	0	0	0	0	0	0	53902
COMP. ON REFLWS	496	20000	37044	0	0	0	0	0	0	0	66534
REFLW REFLWS HOUSING	2760	253495	309271	0	0	0	0	0	0	0	582526
REFLW REFLWS DIVERSIF	0	39130	146635	0	0	0	0	0	0	0	195765
NEW LOANS FROM CACEN	104549	268811	222567	0	0	0	0	0	0	0	595927
INTEREST ON BANK ACCOUNT	88452	50439	-13975	0	0	0	0	0	0	0	124526
<b>TOTAL INCOME :</b>	<b>1815059</b>	<b>2603029</b>	<b>2112540</b>	<b>0</b>	<b>6330528</b>						
<b>OUTLAYS:</b>											
REPAYMENT PORT 12/28/81	139191	670250	1110550	0	0	0	0	0	0	0	1969991
INT. ON LIQ. FORIF. FR.	7589	9410	9995	0	0	0	0	0	0	0	27094
ADMINISTRATIVE COSTS	159027	278895	334674	0	0	0	0	0	0	0	782596
SHORT TERM PAYABLES	14883	465352	0	0	0	0	0	0	0	0	560225
LIQ. RESERVES ON SAVINGS	6717	138674	190654	0	0	0	0	0	0	0	336045
INTEREST ON SAVINGS	262931	386103	165823	0	0	0	0	0	0	0	824858
REFLWS HOUSING LOANS	243018	300000	579600	0	0	0	0	0	0	0	1122618
REFLWS DIVERSIF. LOAN	0	200000	346500	0	0	0	0	0	0	0	546500
REPAYMENT NEW LOANS	4966	44291	88125	0	0	0	0	0	0	0	137383
COMP. ON NEW LOANS	1045	2688	2226	0	0	0	0	0	0	0	5959
<b>TOTAL OUTLAYS :</b>	<b>979467</b>	<b>2515664</b>	<b>2828147</b>	<b>0</b>	<b>6323276</b>						
<b>SURPLUS:</b>	<b>835592</b>	<b>87365</b>	<b>-715608</b>	<b>0</b>	<b>7350</b>						

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CACEN AS LIQUIDITY RESERVES

MMH 6/30/83

CASH FLOW FOR CACER INDEXED 01-09 (IN THOUSANDS OF \$) with HG funds										SEE NOTE BELOW	
EXCHANGE RATE:	150	250	350	438	547	685	790	865	930	975	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
<b>INCOME:</b>											
REPAYMENT FORT 12-82 USA	189141	670259	1110550	1389774	1735631	2178545	2506679	2744645	2950890	3093675	12564781
RENT. OLD FORT. \$B.	7134	9416	9995	9455	7530	3540	3530	3510	3520	3540	61727
CASH ON HAND	151916	262277	595349	213400	598445	908938	2239423	2576219	2480356	2991632	13223957
SHORT TERM RECEIVABLES	26972	170204	170304	0	0	0	0	0	0	0	377591
LIQ. RESERVES ON SAVINGS	6717	109674	190654	242517	362498	539660	639914	782438	1005711	1326229	5228912
INT. FROM LA MERCED	0	759	1464	1572	527	717	827	964	1123	1307	9251
INT. FROM MUTUALS	145	7589	16726	12815	12467	13250	5839	15000	12572	25895	122278
REPAY. LOANS/LA MERCED	0	6075	25769	52696	71743	82725	94407	112269	130748	152268	780496
REPAY. LOANS/MUTUALS	4111	85941	247444	455790	680541	951478	1174973	1357056	1598964	1935615	8454768
NEW LOANS FROM BSA/BAH	0	1125000	474999	1511362	1094000	2529395	0	0	0	0	6704356
INTEREST ON BANK ACCOUNT	68462	51227	26717	9720	26581	41128	94502	109315	105263	125919	680677
OTHER INCOME	241	0	0	0	0	0	0	0	0	0	77241
<b>TOTAL INCOME :</b>	<b>474212</b>	<b>2627797</b>	<b>2663970</b>	<b>3899100</b>	<b>4589942</b>	<b>7249267</b>	<b>4760035</b>	<b>7697417</b>	<b>9299156</b>	<b>9650080</b>	<b>54219645</b>
<b>EXPENSES:</b>											
RENT. OLD FORT. USA	277600	742769	1136550	1380138	1668350	2055000	2219700	2231700	2408700	2545750	16623729
RENT. OLD FORT. \$B	246	250	650	6370	6100	5600	3580	1500	490	920	75715
ADMINISTRATIVE COSTS	29014	4927	66564	89862	121314	167774	221094	298477	402944	583975	1987135
SHORT TERM PAYABLES	70000	181224	0	0	0	0	0	0	0	0	256107
CASH ON LIQUIDITY RESERV	29614	20220	10648	17145	26220	34752	57445	79779	105601	140490	519224
NEW LOANS TO MUTUALS	104549	758811	1072567	1281521	1246665	1828077	588873	1500000	1257322	2589518	12207844
NEW LOANS TO LA MERCED	0	75000	146375	157169	52696	71743	82725	94407	112269	170748	625131
INT. ON LOANS FR ECB	0	11250	4749	15114	10940	25294	0	0	0	0	67347
REPAY. LOANS FR \$LB	0	84375	204367	353337	548739	820444	1010198	1010198	1010198	1010198	6052106
<b>TOTAL OUTLAYS :</b>	<b>507425</b>	<b>1932447</b>	<b>2650470</b>	<b>3300655</b>	<b>3681024</b>	<b>5009944</b>	<b>4183815</b>	<b>5217061</b>	<b>5297525</b>	<b>6921609</b>	<b>38702474</b>
<b>SURPLUS:</b>	<b>262777</b>	<b>595349</b>	<b>213400</b>	<b>598445</b>	<b>908938</b>	<b>2239423</b>	<b>2576219</b>	<b>2480356</b>	<b>2991632</b>	<b>2728471</b>	<b>15517169</b>

NOTE: ASSUMES THAT CACER CREATES A ROTATING FUND FOR LA MERCED WITH THE INITIAL \$1.0 MILLION

MM 6/30/83

CASH FLOW FOR THE SYSTEM - INDEXED 01-09

(IN THOUSAND OF \$)

with HG funds

(SEE NOTE BELOW)

EXCHANGE RATE:	150	250	350	438	547	685	790	865	936	975	
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL
<b>INCOME:</b>											
REPAYMENT PORT. 12-31-91	599114	389016	452023	709915	993909	1391472	1948061	2532480	0	0	9122014
CASH ON HAND	259892	635592	507676	418713	295789	298669	342286	460963	2433574	440073	6293219
SHORT TERM RECEIVABLES	58469	313029	0	0	0	0	0	0	0	0	371498
INVESTMENTS	72146	244398	342157	428184	534742	0	0	0	0	0	1621628
SAVINGS	281761	266284	512805	717927	1005048	1407137	1969992	2057983	2661184	5415657	18295839
INT'L. LIQUIDITY RESERVE	2424	22870	10548	17145	22220	39753	57445	78774	105661	140496	519334
COMM. ON REFLWS	4440	20009	37044	60024	89953	135176	152286	182418	203879	279764	1370994
REFLW REFLWS HOUSING	21001	263311	206518	615977	1197821	2173778	3467612	4131760	5139920	7624550	25750011
REFLWS DIVERSIFIED LOAN	0	31650	146675	392069	966114	1178162	1558659	1939577	2011418	2612444	16927928
NEW LOANS FROM CASH	104549	758611	1072567	1291521	1246665	1828027	588973	1500000	1257700	2589518	12027667
INTEREST ON NEW LOANS	88462	79753	20697	17533	17102	15950	16706	60229	55519	14645	390726
<b>TOTAL INCOME :</b>	<b>1515059</b>	<b>3669389</b>	<b>3414679</b>	<b>4662028</b>	<b>6313412</b>	<b>8568135</b>	<b>10102122</b>	<b>13645194</b>	<b>16062381</b>	<b>19266141</b>	<b>86921939</b>
<b>OUTLAYS:</b>											
REPAYMENT PORT. 12-31-91	189191	676250	1110556	1229774	1725631	2173505	2506670	2744645	2450290	2047675	18564781
ADMT. LID PORTF. AS.	7689	9410	9995	9455	7530	3540	3530	3510	3670	3540	61720
ADMINISTRATIVE COSTS	169027	278695	334674	431679	619331	578317	693980	832771	990791	1149197	5969737
SHORT TERM PAYABLES	14983	485352	0	0	0	0	0	0	0	0	560075
LID. RESERVES ON SAVINGS	6717	128674	190034	262517	362199	539660	639814	782436	1057111	1220229	6028412
INTEREST ON SAVINGS	282931	386103	165823	253640	285320	581661	813149	1094742	1455237	1927256	7346014
REFLWS HOUSING LOANS	243018	300000	579500	1040699	1559606	2343686	2640338	3180167	5023610	7466610	25228973
REFLWS DIVERSIFIED LOAN	0	200000	246500	459900	689220	1035720	1166816	1405346	1662048	2089880	9052626
REPAYMENT NEW LOANS	4966	85941	247444	455790	690541	951478	1170973	1753051	1699164	1935615	9484768
COMM. ON NEW LOANS	1045	7588	10726	12815	12467	18280	5889	15000	12573	25895	122275
<b>TOTAL OUTLAYS :</b>	<b>479467</b>	<b>2562214</b>	<b>2995966</b>	<b>4266239</b>	<b>5914743</b>	<b>8225848</b>	<b>9641159</b>	<b>11411620</b>	<b>15622307</b>	<b>15999500</b>	<b>80615063</b>
<b>SURPLUS:</b>	<b>635592</b>	<b>507676</b>	<b>418713</b>	<b>355789</b>	<b>298669</b>	<b>342286</b>	<b>460963</b>	<b>2433574</b>	<b>440073</b>	<b>268641</b>	<b>6201977</b>

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CACEN AS LIQUIDITY RESERVES

MHP 6/26/92

## VARIABLE INTEREST RATE WITH HG

CASH FLOW FOR LA MERGED

(IN THOUSAND OF \$)

## VARIABLE INTEREST RATE WITH HG

EXCHANGE RATE:	250	350	438	547	685	790	865	930	975		
YEARS :	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL	
<b>INCOME:</b>											
REPAY. PORTF. 12/31/82	25282	26310	27135	27135	27135	27135	0	"	0	160132	
LOANS FROM CACEN	75000	146375	157169	52696	71743	82725	96407	112269	130748	925132	
LOAN ON HAND	2756	19339	48668	81417	87988	137858	254126	401675	633535	1667365	
SHORT TERM RECEIV.	5991	0	0	0	0	0	0	0	0	5991	
MEMBERS DEPOSITS	66253	61648	162906	116513	136591	157533	161802	209920	242510	1297679	
SALES OF GS & SERVIC	198000	275800	36477	46726	612390	733910	837860	930000	1049125	5412225	
OTHER INCOME (*)	55929	77966	96760	10538	12118	13936	16026	16430	21195	322803	
REPAY. REGULAR LOANS	1108	4648	6609	10228	11647	13065	14484	15902	17321	97211	
REFLWS TO BORROWERS	19329	61172	245214	467579	765411	1250659	2067955	3355419	5390392	13658001	
<b>TOTAL INCOME:</b>	0	439658	725260	1047129	1237422	1725022	2416821	3464662	5046619	7444736	23547328
<b>OUTLAYS:</b>											
REPAY. OLD PORTF. BUS	77750	11800	108624	135656	169880	0	0	0	0	578710	
REPAY. OLD PORTF. SB	9695	3113	3113	3113	0	0	0	0	0	19032	
ADMINISTRATIVE COSTS	4166	5206	65258	81576	101965	127457	159321	199151	248929	1077638	
REPAYMENTS TO BID	0	250	950	1826	1826	1826	1826	1826	1826	1826	
SHORT TERM PAYABLES	5705	0	0	0	0	0	0	0	0	5705	
REPAY. LOANS TO CACEN	6375	25769	52696	71743	82725	96407	112269	130748	152268	731600	
LOAN. LOANS TO CACEN	750	1464	1572	527	717	827	964	1123	1307	9251	
REGULAR LOANS	6518	7710	8902	10094	11285	12477	13669	14860	16052	101567	
COST OF GD & SERV.	158000	228900	296088	391806	493200	586180	668860	730980	787600	4323814	
REFLWS TO BORROWERS	113761	270389	428509	463694	725566	1337518	2114078	3334396	5246792	14028095	
<b>TOTAL OUTLAYS :</b>	420319	676592	965711	1149434	1587165	2162692	3062987	4413082	6445985	20874812	
<b>SURPLUS:</b>	0	19334	46668	81417	87988	137858	254126	401675	633535	995751	2672516

(\*) INCLUDES BID &amp; PL480

INITIAL ENVIRONMENTAL EXAMINATION AND REVISED  
ENVIRONMENTAL CHECKLIST AND CERTIFICATION

ANNEX H  
Page 1 of 14

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

LAC/DR-IEE-82-30

ENVIRONMENTAL THRESHOLD DECISION

Project Location : Bolivia

Project Title and Number : Strengthening of the Savings and  
Loan System

Funding : \$20,200,000

Life of Project : 3 years

IEE Prepared by : William Kaschack, USAID/La Paz

Recommended Threshold Decision : Negative Determination

Bureau Threshold Decision : Concurrence with recommendation

Action ✓ : Copy to Henry Mansford, Director  
USAID/La Paz

: Copy to William Kaschack, USAID/La Paz

: Copy to Charles Connolly, LAC/DR

: Copy to IEE file

James S. Hester Date 29 July 1982

James S. Hester  
Environmental Officer  
Bureau for Latin America  
and the Caribbean

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VIII. INITIAL ENVIRONMENTAL EXAMINATION (IEE)

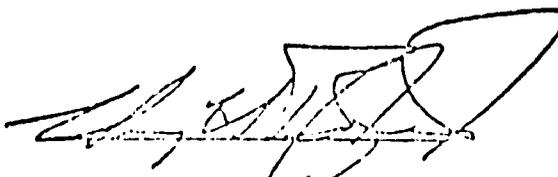
Project Location:	Bolivia		
Project Title:	Strengthening of the Savings and Loan System		
Funding:	LOP		20.2 million
	USAID/B	HG	10.0 million
		Grant	.15 million
	PRE/HUD		.05 million
	GOB Counterpart		10.0 million
Life of Project:	3 years		
IEE Prepared by:	William G. Kaschak Deputy Capital Development Officer USAID/Bolivia		

Environmental Action Recommended: It is recommended that a negative determination be made for this project. Based on this Initial Environmental Examination, the project will have no significant detrimental effect on the physical and socio-economic milieu. Project components which could impact directly on the environment (e.g. housing construction and the installation of basic service networks such as sewage and water systems and street lighting) are identical to those included in Shelter Project 511-HG-005. The environmental analysis conducted for 005 concluded that there would be no significant adverse effect on the environment. Moreover, this analysis noted that the agencies (CACEN and the Savings and Loan Associations) responsible for project implementation demonstrated a substantial level of concern for environmental issues. The same agencies associated with the 511-HG-005 will implement this proposed project. It is important to note that their sensitivity toward and their procedures for

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taking into account environmental considerations when carrying out project activities, have been enhanced through the application of recommendations furnished by an environmental expert financed with 511-HG-005 funds. These recommendations include but are not limited to the use of a questionnaire dealing with questions such as flooding, landslides, liquid and solid, waste disposal and the like as a part of the preparation of every loan portfolio.

CONCURRENCE: Henry H. Bassford  
Director  
USAID/Bolivia



Date: June 23, 1978

INITIAL ENVIRONMENTAL EXAMINATION CHECKLIST

(IMPACT Identification and Evaluation Form)

## A. Land Use

## 1. Changing the character of land through

- |                                 |   |
|---------------------------------|---|
| a. increasing population        | N |
| b. extracting natural resources | N |
| c. land clearing                | L |
| d. changing soil character      | N |

- |                                  |   |
|----------------------------------|---|
| 2. Altering Natural Defenses     | L |
| 3. Foreclosing Important Uses    | N |
| 4. Jeopardizing Man or His Works | N |
| 5. Other Factors                 | - |

## B. Water Quality

- |                                   |   |
|-----------------------------------|---|
| 1. Physical State of Water        | L |
| 2. Chemical and Biological States | N |
| 3. Ecological Balance             | N |
| 4. Other Factors                  | - |

## C. Atmospheric

- |                    |   |
|--------------------|---|
| 1. Air Additives   | N |
| 2. Air Pollution   | N |
| 3. Noise Pollution | N |
| 4. Other Factors   | - |

## D. Natural Resources

- |   |   |
|---|---|
| 1. Diversion, Altered Use of Water      | L |
| 2. Irreversible, Inefficient Commitment | - |
| 3. Other Factors                        | - |

## E. Cultural

- |                                    |   |
|------------------------------------|---|
| 1. Altering Physical Symbols       | N |
| 2. Dilution of Cultural Traditions | L |
| 3. Other Factors                   | - |

## F. Socio-Economic

- |  |   |
|--|---|
| 1. Changes in Economic-Employment Patterns | N |
| 2. Changes in Population                   | L |
| 3. Changes in Cultural Pattern             | L |
| 4. Other Factors                           | - |

## G. Health

- |                                     |   |
|-------------------------------------|---|
| 1. Changing a Natural Environment   | N |
| 2. Eliminating an Ecosystem Element | N |
| 3. Other Factors                    | - |

H. General

1. International Impacts	N
2. Controversial Impacts	N
3. Larger Program Impacts	M
4. Other Factors	-

Symbols Employed are: N - No Environmental Impact  
L - Little Environmental Impact  
M - Moderate Environmental Impact  
H - High Environmental Impact  
U - Unknown Environmental Impact

**PLANIFICACION AMBIENTAL DEL SITIO  
VERIFICACION DE CONDICIONES**

**OBJETIVO**

El presente Formulario permitirá en forma simple un análisis de las condiciones generales del sitio donde se ejecutará el Proyecto de Soluciones Habitacionales para Familias de Bajos Ingresos en el Area Rural; tanto para Mejoras; Ampliaciones y Mejoras, y Unidades Básicas.

**INSTRUCCIONES**

El presente Formulario deberá ser llenado en todos los casos de construcciones, ampliaciones o mejoras que correspondan a los casos contemplados en el Listado de Préstamos Susceptibles de Análisis con Referencia a Posibles Impactos en el Medio Ambiente proporcionada por la Caja Central a las Mutuales.

El mismo Formulario deberá ser llenado por el Técnico responsable por la aprobación de los proyectos de la mejora o construcción a efectuarse, debiéndose realizar la ejecución de la lista de chequeo en el lugar donde se realizará la obra. Una vez llenada la lista de chequeo se deberá completar y firmar la Certificación que aparece en la Pág. N°5 del Formulario.

En la primera columna de localización donde aparece A-V-T, significa :

- (A) = " Altiplano
- (V) = Valles y Yungas
- (T) = Trópico
- (XX) = Significa que el tema está íntimamente ligado a la zona geográfica marcada.
- (X) = Parcialmente relacionado y
- (-) = No hay relación;

de modo que, en cada área geográfica de Bolivia, se pone interés en aquellos aspectos más característicos de cada zona.

LOCALIZACION A-V-T	CONSULTA	RESPUESTAS	OBSERVACIONES
X-XX-XX	1. EL AREA DONDE SE EJECUTARA EL PROYECTO ESTA SUJETA A POSIBLES INUNDACIONES ?  i. Caso afirmativo especificar acciones a tomar para evitar las mismas.	SI ( ) NO ( )	
XX-XX	2. EL AREA DONDE SE EJECUTARA EL PROYECTO ESTA SUJETA A POSIBLES DESLIZAMIENTOS O SE ENCUENTRA EN UNA AREA GEOLOGICAMENTE DESA CONSEJABLE ?  i. Caso afirmativo especificar acciones a tomar para evitar dichos problemas.	SI ( ) NO ( )	

XX-XX--	<p>3. EL AREA DONDE SE EJECUTARA EL PROYECTO TIENE EXCESIVAS PENDIENTES NATURALES PARA LOCALIZACION DE VIVIENDAS ?</p> <p>i. Caso afirmativo especificar acciones a tomar (corte, relleno, compactación, defensivos, costos).</p>	SI ( ) NO ( )	
XX-XX-XX	<p>4. EXISTE UN CURSO DE AGUA (RIO O RIACHUELO) QUE PASA CERCANO AL AREA DONDE SE EJECUTARA EL PROYECTO Y QUE PODRIA AFECTAR SU ESTABILIDAD ?</p> <p>i. Caso afirmativo indicar tipo de provisión a tomar, especificar razones, costos, otros.</p> <p>a. Construcción de defensas.</p> <p>b. Forestación.</p> <p>c. Ningún sistema de control.</p> <p>d. Otros.</p>	<p>SI ( ) NO ( )</p>	
XX-XX	<p>5. EXISTEN TOPIENTERAS DE CERROS PROXIMOS QUE PODRIAN AFECTAR EL AREA DONDE SE EJECUTARA EL PROYECTO ?</p> <p>i. Caso afirmativo indicar tipo de provisión a tomar, especificar razones, costos, otros.</p> <p>a. Canalización total y defensivos de control</p> <p>b. Defensivos y canalización parcial.</p> <p>c. Limpieza previa época de lluvias y canalización precaria</p> <p>d. Ningún sistema de control</p> <p>e. Otros</p>	<p>SI ( ) NO ( )</p>	
XX-XX-XX	<p>6. EXISTEN OTROS PROBLEMAS RESPECTO AL SANEAMIENTO AMBIENTAL DEL SITIO ?</p> <p>i. Caso afirmativo indicar tipo de provisión a tomar, especificar razones, costos, otros.</p> <p>a. Limpieza y erradicación de basurales</p> <p>b. Limpieza y erradicación de plagas</p> <p>c. Desboscado</p> <p>d. Otros problemas: especificar acciones a tomar</p>	<p>SI ( ) NO ( )</p>	

XX-XX-XX	7. EN CASO DE DESAGUES LIQUIDOS (ALCANTARILLADO) Y DE DESECHOS SOLIDOS (BASURAS) SE ESTA EVITANDO CONTAMINAR FUENTES DE AGUA ?	SI ( ) NO ( )	
LAS MUTUALES SOLO DEBEN RESPONDER DE ACUERDO AL LUGAR EN QUE SE EJECUTARA EL PROYECTO.			
XX-XX-XX--	8. PARA EL ALTIPLANO SE HA BUSCADO EL ASOLEAMIENTO ?  PARA EL TROPICO SE HA EVITADO EL ASOLEAMIENTO ?  PARA EL VALLE Y YUNGAS SE HA CONSIDERADO UN PUNTO INTERMEDIO ?  i. En caso negativo indicar acciones a tomar	SI ( ) NO ( )  SI ( ) NO ( )  SI ( ) NO ( )	
XX-XX-XX-	9. PARA EL ALTIPLANO SE HA EVITADO EL VIENTO ?  PARA EL TROPICO SE HA BUSCADO EL VIENTO ?  PARA EL VALLE Y YUNGAS SE HA CONSIDERADO UN PUNTO INTERMEDIO ?  i. En caso negativo indicar acciones a tomar	SI ( ) NO ( )  SI ( ) NO ( )  SI ( ) NO ( )	
XX-XX-XX	10. EXISTEN OTRAS OBSERVACIONES PARTICULARES DEL SITIO ?  Detallar en caso afirmativo:  ----- ----- ----- -----	SI ( ) NO ( )	

PLANIFICACION DE DESECHOS SOLIDOS Y LIQUIDOS  
ANEXO A - DOCUMENTO 3

CLASIFICACION

Dividiremos la vivienda rural en 3 Tipos con planificación diferente :

- a. La vivienda rural aislada dispersa
- b. Viviendas en poblados menores
- c. Viviendas en poblados intermedios

INSTRUCCIONES

El presente Formulario servirá de orientación para todos los Rubros del Crédito Línea "A", "B" y "C" de Mejoras; Mejoras y Ampliaciones; Unidades Básicas, y permitirá orientar al Prestatario sobre acciones que debe tomar en cuanto a saneamiento ambiental se refiere, en el contrato con el prestatario se incluirá una pequeña Cláusula en relación al saneamiento básico de la Unidad Habitacional a construir o mejorar.

Este Formulario no se aplica en caso de existir un sistema de alcantarillado público al que se conecta la vivienda a construir o mejorar y existe un sistema de recolección de basuras de tipo público.

- a. Vivienda Rural Aislada Dispersa.

LOCALIZACION A-V-T	CONSULTA	RESPUESTAS	OBSERVACIONES
XX-XX-XX-	1. SE ESTAN ACUMULANDO LOS DESECHOS SOLIDOS EN UN SITIO ESPECIFICO DEL TERRENO Y ALEJADO DE LA VIVIENDA CONVIERTO CONTRARIO EVITANDO LA CONTAMINACION ?  i. Caso negativo: Indicar razones.	SI ( ) NO ( )	
XX-XX-XX-	2. EN RELACION A LOS DESECHOS LIQUIDOS? SE ESTA REALIZANDO ALGUNA ACCION DE DESECHO SISTEMATICO ?  i. Caso afirmativo indicar qué se está haciendo a. Foso séptico absorvente. b. Otros: Especificar	SI ( ) NO ( )  SI ( ) NO ( ) SI ( ) NO ( )	

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b. Viviendas en área rural localizadas en poblados menores.

XX-XX-XX	<p>3. ES GRANDE EL PATIO INTERIOR DE LA VIVIENDA ?</p> <p>SI ( ) NO ( )</p> <p>i. Caso afirmativo responder 3.a. y 3.b.</p> <p>3.a. Se están acumulando los desechos sólidos en un sitio específico del terreno y alejado de la vivienda con viento contrario evitando la contaminación ?</p> <p>SI ( ) NO ( )</p> <p>3.b. En relación a los desechos líquidos se está realizando alguna acción de desecho sistemático ?</p> <p>SI ( ) NO ( )</p>		
XX-XX-XX	<p>4. SI EL PATIO FUERA PEQUEÑO O NO EXISTIERA, SE NOTARA LA FALTA EN UN AREA DE BOTADERO PUBLICO ?</p> <p>SI ( ) NO ( )</p>		
XX-XX-XX	<p>5. SE ENCUENTRA EL BOTADERO PUBLICO DE BASURAS EN UN AREA ALEJADA DEL PUEBLO CON VIENTO CONTRARIO ?</p> <p>SI ( ) NO ( )</p> <p>i. Caso negativo qué recomendación se realizó sobre el particular. Especificar.</p> <p>SI ( ) NO ( )</p>		
XX-XX-XX	<p>6. SE MIECLA EN EL BOTADERO PUBLICO LA PASTURA CON TIERRA MEDIANTE ACCIONES COMUNALES ?</p> <p>SI ( ) NO ( )</p> <p>i. Caso negativo qué recomendación se realizó sobre el particular. Especificar.</p>		
XX-XX-XX	<p>7. EXISTEN LETRINAS PARA LOS DESECHOS LIQUIDOS ?</p> <p>SI ( ) NO ( )</p> <p>i. Caso negativo se construirán ?</p> <p>SI ( ) NO ( )</p> <p>Caso afirmativo de futura construcción, especificar tipo de construcción, costos (A)</p> <p>Se compartirá el foso séptico para 2-3 y 4 viviendas ?</p> <p>SI ( ) NO ( )</p> <p>Si no se realizan letrinas por recomendaciones efectuaron sobre el particular ?</p> <p>Especificar (B)</p>		

X-XX-XX	<p>8. EXISTE SISTEMA PARA DESECHOS LIQUIDOS ?</p> <p>i. Caso negativo se construirán ?</p> <p>Caso afirmativo de futura construcción: Especificar tipo de construcción, costos (A)</p> <p>Se compartirá un foso séptico absorbente para 2-3 y 4 viviendas ?</p> <p>Si no se ejecutará un sistema de desechos líquidos qué recomendaciones se realizó sobre el particular? : Especificar (B)</p>	<p>SI ( ) NO ( )</p>	
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c. Viviendas en áreas rurales localizadas en poblados intermedios

XX-XX-XX	<p>9. SE INSTALARA UN SISTEMA DE ALCANFARILLADO ? (NED)</p> <p>i. Caso negativo responder a, b, c, d, e, y f.</p> <p>a. Es grande el patio interior de la vivienda?</p> <p>Caso afirmativo responder a.1 y a.2.</p> <p>a.1. Se están acumulando los desechos sólidos en un sitio específico del terreno y alejado de la vivienda con viento contrario evitando la contaminación ?</p> <p>Caso negativo indicar razones</p> <p>a.2. En relación a los desechos líquidos se está realizando alguna acción de desecho sistemático ?</p>	<p>SI ( ) NO ( )</p>	
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<p>Continúa..9 XX-XX-XX</p>	<p>b. Si el patio fuera pequeño o no existiera, se botará la basura - en un área de botadero público ?</p>	<p>SI ( ) NO ( )</p>
	<p>c. Se encuentra el botadero público de basuras en área alejada - del pueblo con viento contrario ?</p>	<p>SI ( ) NO ( )</p>
	<p>Caso contrario qué recomendación se realizó sobre el particular Especificar.</p>	
	<p>d. Se mezcla en el botadero público la basura con tierra mediante acciones comunales?</p>	<p>SI ( ) NO ( )</p>
	<p>Caso negativo qué recomendación se realizó sobre el particular Especificar.</p>	
	<p>e. Existen letrinas para los desechos humanos?</p>	<p>SI ( ) NO ( )</p>
	<p>Caso negativo, se construirán ?</p>	<p>SI ( ) NO ( )</p>
	<p>Caso afirmativo de futura construcción, especificar tipo de construcción, costos (A)</p>	
	<p>Se compartirá el foso séptico para 2, 3 y 4 viviendas ?</p>	<p>SI ( ) NO ( )</p>
	<p>Si no se realizará letrinas, qué recomendaciones se realizó sobre el particular : Especificar (B)</p>	
	<p>f. Existe sistema para desechos líquidos ?</p>	<p>SI ( ) NO ( )</p>
	<p>Caso negativo: se construirán ?</p>	<p>SI ( ) NO ( )</p>
	<p>Caso afirmativo de futura construcción : Especificar tipo de construcción, costos (A)</p>	
	<p>Se compartirá un foso séptico alternativo para 2, 3 y 4 viviendas ?</p>	<p>SI ( ) NO ( )</p>

<p>Continua..9 XX-XX-XX</p>	<p>Si no se ejecutará un sistema de desechos líquidos, que recomendaciones se realizó sobre el particular Especificar (B)</p>		
---------------------------------	---	--	--

- CERTIFICACION -

<u>INFORME DEL DEPARTAMENTO TECNICO DE LA ASOCIACION</u>	<u>SI</u>	<u>NO</u>
1. Considera Ud. que la vivienda a construirse o la mejora a efectuarse está bien diseñado de acuerdo a las necesidades y costos de la misma ?	<input type="checkbox"/>	<input type="checkbox"/>
2. Considera Ud. que las especificaciones técnicas - están de acuerdo con normas razonables para tal - construcción ?	<input type="checkbox"/>	<input type="checkbox"/>
3. Considera Ud. que el presupuesto contempla precios unitarios razonables y que el costo total de la obra está de acuerdo con los métodos constructivos y materiales a emplearse en la construcción ?	<input type="checkbox"/>	<input type="checkbox"/>
4. Considera Ud. que las cantidades indicadas en los cómputos métricos están de acuerdo al diseño y al volumen de obra que será ejecutada ?	<input type="checkbox"/>	<input type="checkbox"/>
5. En base al análisis de los puntos anteriores, recomienda Ud. que la Asociación otorgue el financiamiento solicitado ?	<input type="checkbox"/>	<input type="checkbox"/>

OBSERVACIONES : ( Anote sus observaciones en caso de ser negativa una de las respuestas )

.....  
.....  
.....  
.....  
.....

**CERTIFICO QUE :** No tengo interés actual o futuro en esta propiedad, ni interés personal en la solicitud de préstamo, habiendo confeccionado el presente informe de acuerdo con las normas para Préstamos Rurales.

FECHA: .....

.....  
**NOMBRE Y FIRMA DEL TECNICO DE LA MUTUAL**

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CASH FLOW SENSITIVITY ANALYSES

A. Objective.

It appears most likely that the system for indexing housing loans described in the body of the Project Paper will be adopted. This will help the S and L System significantly to maintain the value of its loans and to keep cash inflows at levels high enough for the foreseeable future to meet both loan demand and repayments of existing dollar debt.

Two of the most important variables included in the cash flows presented in the PP are the exchange rate and the indexation rates applied to S and L lending and savings deposits. The former will influence the peso payments necessary to meet fixed dollar obligations and the latter, along with the interest rate spread between savings and lending rates, will affect the profitability of S and L operations. In order to assess the sensitivity of the basic cash flow projections made for both the S and L mutuals as a group and CACEN (Tables G7 and G8) to changes in these two variables, our assumptions regarding the two variables were modified, keeping all other assumptions -most notably loan demand and the increase in saving's deposits- constant.

B. Assumptions in Basic Cash Flow Projections.

- . Percentage changes in the average peso/dollar exchanges rate of 67% in 1983, 40% in 1984, 25% per year 1985-87, 15% in 1988, 10% in 1989, 8% in 1990 and 7% in 1991.
- . Indexation of both outstanding loan principals and savings deposit balances at the rates of increase in the minimum wage, which will just keep pace with inflation in Bolivia.
- . An interest rate spread of 6% (9% charged on loans and 3% paid on savings).
- . Indexation (Bolivian inflation) rates 15 points above the decrease in the value of the Bolivian peso; i.e., 82% in 1983, 55% in 1984, etc.

The assumption regarding indexation rates takes into consideration (a) assumed inflation in the United States (5% to 10% per year) and devaluation of the dollar and (b) continued efforts by the GOB to contain devaluation of the official peso exchange rate. With respect to the latter, it is recognized that the GOB will require foreign exchange resources to influence the official peso/dollar exchange rate. These resources will be available once the GOB/IMF stabilization program is in full operation. Our assumption in the basic cash flow projections regarding the relationship between movements in the exchange rate and relative inflation in the U.S. and Bolivia recognizes that foreign exchange markets do not operate completely freely and automatically.

Using the above assumptions, the basic cash flow tables show that both CACEN and the S and L System will be able to maintain their financial

viability for the foreseeable future.

#### C. Sensitivity of Exchange Rates

Tables I1 and I2 show that with average annual official exchange rate changes lower than expected, i.e. at 20% p.a., both the System and CACEN would maintain financial viability. This is to be expected; however, it is interesting to note that the average exchange rate in 1991 still reaches 946 under the assumption of 20% p.a. devaluation, versus 975 in the basic tables. The slower pace of initial devaluations in this simulation would be beneficial to the S and L System.\*

Tables I3 and I4 show, as is to be expected, that at very high devaluations of 100% p.a. the S and L System would go bankrupt by 1987. Tables I5 and I6, run with annual devaluations of 40%, indicate that negative cash flows would commence in 1990. From this analysis, it can be concluded that with average devaluations in the official exchange rate higher than about 30% p.a., the S and L System would have difficulty maintaining its financial viability under the assumptions in the basic tables. Additional changes either in lending rates charged and savings rates paid to increase spreads, or in the number and amount of new loans generated, would be necessary to increase profitability and cash balances in order to remain solvent.

#### D. Sensitivity of Indexation Rates

Tables I7 and I8 were run with indexation rates 10 points below those in the basic tables; i.e. at 5 points above assumed devaluation rates. This indexation rate would not allow for maintenance of value. The tables show that even with this significant decrease in earnings, the S and L System would not begin experiencing negative cash flows until 1990. Under these circumstances, the S and L System would either have to petition the GOB to increase the indexation rate or, on its own, increase the spread between interest rates paid on savings and charged on loans. The latter would be much easier and very feasible because the S and L System has full authority to set its own interest rates. In addition, charging higher interest rates on loans would be reasonable, both in terms of coming closer to maintaining their value under conditions where indexation rates were too low in relation to inflation, and in terms of affordability on the part of borrowers. (Even under the "full" indexation assumed in the basic tables, the impact on borrowers of higher effective interest rates is delayed until the later years of mortgage repayment periods. The effect of adjusting mortgage principals by rates equivalent to inflation, assuming salaries at least keep pace with inflation, is to provide for smaller percentage increases in installment payments in earlier

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\* It should be noted that the assumption regarding indexation rate: 15 points above devaluation rates were retained for these sensitivity analyses; e.g. 35% p.a. was used in this case.

years relative to salary increases, and larger relative increases in later years. The larger increases in later years are applied to much smaller balances, however, and also are compensated by the effect of higher earlier compounded increases in salaries. This means that borrowers can afford loans indexed at rates higher than the inflation rate, ceteris paribus.)

As an example of how providing for a larger spread with lower indexation rates would enable the System to remain viable, Tables I9 and I10 were run with the same assumptions as Tables I7 and I8, but with interest on loans at 13% rather than 9%. These tables show that by taking this sort of action to increase its spread, the System would maintain its financial viability.

#### E. Conclusions

The sensitivity analyses indicate that the S and L System should be able to respond adequately to all reasonable variations in the projected exchange rate or indexation procedures. The importance of the S and L System's constantly monitoring Bolivian economic conditions, and adjusting its lending and savings mobilization policies accordingly, cannot be over-emphasized.

CASH FLOW FOR CASH	INDEXED 01-69A (IN THOUSANDS OF \$)										20% p.a. devaluation	SEE NOTE BELOW
EXCHANGE RATE:	150	220	264	317	380	456	547	657	788	946		
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL	
<b>INCOME:</b>												
REPAYMENT PORT. LOANS	189191	589920	837672	1005841	1205740	1446888	1735631	2084661	2500324	3001658	14597426	
AMORT. OLD PORTF. AS	7689	9410	9995	9455	7530	3540	3530	3510	3530	3540	61725	
CASH ON HAND	157818	262277	626538	291406	418227	727976	2225519	2308147	2836434	2954076	13008415	
SHORT TERM RECEIVABLES	26973	170304	170304	0	0	0	0	0	0	0	377581	
LIQ. RESERVES ON SAVINGS	6717	75986	114302	170718	253443	374311	550348	806010	1176369	1711655	5239888	
COMM. FROM LA MERCEDES	0	560	1112	1163	414	557	642	749	872	1015	7193	
COMM. FROM MUTUALS	1045	5363	6931	8364	7260	10421	5000	5000	14185	25748	92218	
REPAY. LOANS FROM BCS	0	5610	21180	41372	55667	64234	74853	87170	101517	119226	589829	
REPAY. LOANS FROM BCS	4966	67029	175658	311000	450241	666624	746270	835115	1002033	1277571	5276615	
NEW LOANS FROM BCS	0	990000	211200	880880	760000	2244066	0	0	0	0	5085147	
INTEREST ON SAVINGS	98462	46669	26939	12775	18446	32941	96798	100776	123380	127574	675101	
OTHER INCOME	77341	0	0	0	0	0	0	0	0	0	77341	
<b>TOTAL INCOME :</b>	<b>770202</b>	<b>2223129</b>	<b>2201832</b>	<b>2732975</b>	<b>3176968</b>	<b>5511616</b>	<b>5438592</b>	<b>6231137</b>	<b>7758643</b>	<b>9324760</b>	<b>45292515</b>	
<b>OUTLAYS:</b>												
AMORT. OLD PORTF. AS	277900	553620	859792	998667	1159000	1368000	1537070	1695960	2040920	2431220	13020449	
AMORT. OLD PORTF. AS	345	6900	6650	6370	6100	5850	3580	1500	490	930	38715	
ADMINISTRATIVE COSTS	29824	49307	66564	89862	121314	163774	221099	298477	402944	543675	1987125	
SHORT TERM PAYABLES	74883	181224	0	0	0	0	0	0	0	0	256107	
INT. ON LIQUIDITY RESERV	20424	19069	7622	11897	18259	27676	41545	61891	91627	134947	434956	
NEW LOANS TO MUTUALS	104549	536321	693137	836417	726034	1048074	500000	500000	1419498	2874726	9237916	
NEW LOANS TO LA MERCEDES	0	66000	111210	116280	41372	55667	64234	74853	87170	101517	718303	
COMM. ON LOANS FR BCS	0	9900	2112	8809	7600	22441	0	0	0	0	50861	
REPAY. LOANS FR BCS	0	74250	164340	246246	369312	594617	762922	762922	762922	762922	4500453	
<b>TOTAL OUTLAYS :</b>	<b>507925</b>	<b>1596591</b>	<b>1910427</b>	<b>2314748</b>	<b>2448992</b>	<b>3286098</b>	<b>3130445</b>	<b>3394703</b>	<b>4804570</b>	<b>6850297</b>	<b>30244796</b>	
<b>SURPLUS:</b>	<b>262277</b>	<b>626538</b>	<b>291406</b>	<b>418227</b>	<b>727976</b>	<b>2225519</b>	<b>2308147</b>	<b>2836434</b>	<b>2954076</b>	<b>2474463</b>	<b>15047719</b>	

NOTE: ASSUMES THAT C-LEA CREATES A ROTATING FUND FOR LA MERCED WITH THE INITIAL \$1.0 MILLION

MHM 6/30/83

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CASH FLOW FOR THE SYSTEM - INDEXED 01-07A (IN THOUSAND OF ₦) 20% p.a. devaluation (SEE NOTE BELOW)											
EXCHANGE RATE:	150	220	264	317	380	456	547	657	788	946	
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL
<b>INCOME:</b>											
REPAYMENT FORT 12/31/81	699114	589016	559742	458652	619180	835893	1128455	1523414	0	0	5993466
CASH ON HAND	259862	635592	530398	455131	439586	449963	418929	674211	1498570	405781	5758042
SHORT TERM RECEIVABLES	58469	317029	0	0	0	0	0	0	0	0	371498
INVESTMENTS	72148	244398	232277	352155	422141	0	0	0	0	0	1384116
SAVINGS	281761	365267	512805	717927	1005098	1407137	1969992	2757998	3861184	5405657	18285979
INTL. LIQUIDITY RESERV.	20424	15069	7622	11897	18259	27676	41545	61891	91627	134947	424756
CONN. ON REFLOWS	9490	17500	27942	43442	62490	89986	105144	139313	257446	368468	1121521
REPAY REFLOWS HOUSING	20760	15971	210947	426248	806150	1420284	2370013	3275943	4775932	7075048	20572076
REPAY REFLOWS DIVERSIFIED	0	2790	109743	286328	565849	790926	1085047	1457519	1906670	2427943	8650814
NEW LOANS FROM CACEN	104549	535321	593137	836417	726034	1048074	500000	500000	1418498	2874786	9227815
INTEREST ON BANK ACCOUNT	88462	81348	20979	19046	18936	18496	23270	46252	40538	13761	371097
<b>TOTAL INCOME :</b>	<b>1615059</b>	<b>2774324</b>	<b>2746591</b>	<b>3607241</b>	<b>4683723</b>	<b>6088433</b>	<b>7642695</b>	<b>10436531</b>	<b>13850365</b>	<b>18706391</b>	<b>72151352</b>
<b>OUTLAYS:</b>											
REPAYMENT FORT 12/82 US\$	189191	589820	837672	1005841	1205740	1446888	1735631	2084661	2500324	3001658	14597426
AMORT. OLD FORT. ₦.	7669	5410	9995	9455	7530	3540	3530	3510	3530	3540	61729
ADMINISTRATIVE COSTS	169027	275295	374674	401609	481931	576317	693780	832776	999331	1199197	5989737
SHORT TERM PAYABLES	74883	485352	0	0	0	0	0	0	0	0	560235
LIQ. RESERVES ON SAVINGS	6717	75986	114302	170718	253443	374311	550748	806019	1176369	1711655	5239558
INTEREST ON SAVINGS	282931	292071	117680	174626	265359	399695	597473	888066	1312657	1931360	6258081
REFLOWS HOUSING LOANS	243018	264000	477184	753192	1083456	1560177	1828183	2415406	5027883	7185729	20798230
REFLOWS DIVERSIFIED LOAN	0	176000	261360	332850	478800	689472	807509	1067415	1408773	2025976	7248055
REPAYMENT NEW LOANS	4966	67029	175658	311000	450241	606624	746270	835115	1002033	1377871	5576897
CONN. ON NEW LOANS	1045	5363	6931	8364	7260	10481	5000	5000	14185	28748	92378
<b>TOTAL OUTLAYS :</b>	<b>979467</b>	<b>2247926</b>	<b>2291460</b>	<b>3167655</b>	<b>4233760</b>	<b>5669504</b>	<b>6968484</b>	<b>8937961</b>	<b>13444584</b>	<b>18465735</b>	<b>66402537</b>
<b>SURPLUS:</b>	<b>635592</b>	<b>530398</b>	<b>455131</b>	<b>439586</b>	<b>449963</b>	<b>418929</b>	<b>674211</b>	<b>1498570</b>	<b>405781</b>	<b>240656</b>	<b>5748816</b>

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CACEN AS LIQUIDITY RESERVES

MHM 5/70/87

CASH FLOW FOR CACEN	INDEXED 01-098 (IN THOUSANDS OF \$)										SEE NOTE BELOW
	100% p.a. devaluation										
EXCHANGE RATE:	150	300	600	1200	2400	4800	9600	19200	38400	76800	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
<b>INCOME:</b>											
REPAYMENT PORT 12/82 US\$	189191	804200	1907600	3807600	7615200	15230400	0	0	0	0	29550491
AMORT. OLD PORT. \$B.	7699	9410	9995	9455	7530	3540	0	0	0	0	47619
CASH ON HAND	757618	262277	567163	396442	3054749	5998	0	0	0	0	4644446
SHORT TERM RECEIVABLES	36972	170304	170304	0	0	0	0	0	0	0	377581
LIQ. RESERVES ON SAVINGS	6717	182690	404504	886093	1928073	4177520	0	0	0	0	7585596
COMPL. FROM LA MERCED	0	900	2477	3970	937	1385	0	0	0	0	9670
COMPL. FROM MUTUALS	1045	10355	21115	48061	92251	78009	0	0	0	0	252837
REPAY. LOANS/LA MERCED	0	7650	37042	93746	138516	158979	0	0	0	0	435934
REPAY. LOANS/MUTUALS	4966	109451	461970	1024717	2254332	3772483	0	0	0	0	7567888
NEW LOANS FROM ECB/AD	0	1350000	1802256	6939366	3406696	1411098	0	0	0	0	14909416
INTEREST ON BANK ACCOUNT	83462	54282	29093	23131	154021	321	0	0	0	0	349220
OTHER INCOME	77241	0	0	0	0	0	0	0	0	0	77341
<b>TOTAL INCOME :</b>	<b>770292</b>	<b>2961628</b>	<b>5351590</b>	<b>13232589</b>	<b>18652305</b>	<b>24839732</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65730697</b>
<b>OUTLAYS:</b>											
AMORT. OLD PORT. US\$	277900	891300	1951800	3781200	7320000	14400000	0	0	0	0	28622200
AMORT. OLD PORT. \$B	345	6900	6650	6370	6100	5850	0	0	0	0	32215
ADMINISTRATIVE COSTS	29824	49307	66564	89862	121314	163774	0	0	0	0	520645
SHORT TERM PAYABLES	74883	181224	0	0	0	0	0	0	0	0	256107
INT. ON LIQUIDITY RESERV	20424	25471	15176	34535	76747	168331	0	0	0	0	340624
NEW LOANS TO MUTUALS	104549	1075512	2311617	4806138	9225088	7800876	0	0	0	0	25283781
NEW LOANS TO LA MERCED	0	90000	247650	397042	93746	138516	0	0	0	0	966554
COMPL. ON LOANS FR ECB	0	13500	18023	69394	34067	14111	0	0	0	0	149094
REPAY. LOANS FR ECB	0	101250	337669	993291	1769245	2130580	0	0	0	0	5332035
<b>TOTAL OUTLAYS :</b>	<b>507925</b>	<b>2394465</b>	<b>4955148</b>	<b>10177832</b>	<b>18646307</b>	<b>24822038</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61503716</b>
<b>SURPLUS:</b>	<b>262277</b>	<b>567163</b>	<b>396442</b>	<b>3054749</b>	<b>5998</b>	<b>17694</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4226981</b>

NOTE: ASSUMES THAT CACEN CREATES A POSTING FUND FOR LA MERCED WITH THE INITIAL \$1.0 MILLION

MHH 6-30-92

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CASH FLOW FOR THE SYSTEM - INDEXED 01-09B (IN THOUSAND OF B\$) 100% p.a. devaluation (SEE NOTE BELOW)											
EXCHANGE RATE:	150	300	600	1200	2400	4800	9600	19200	38400	76800	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
<b>INCOME:</b>											
REPAYMENT PORT 12/31/81	699114	389016	541071	1163302	2501099	5377362	0	0	0	0	10670963
CASH ON HAND	259882	635592	479418	299962	52259	128146	0	0	0	0	1655258
SHORT TERM RECEIVABLES	59469	313029	0	0	0	0	0	0	0	0	371498
INVESTMENTS	72148	244398	488795	977590	1955180	0	0	0	0	0	3738110
SAVINGS	281761	366289	512805	717927	1005098	1407137	0	0	0	0	4291017
INT. ON LIQUIDITY RESERV	20424	25471	15176	34535	76747	168331	0	0	0	0	340684
COMM. ON REFLWS	9490	24000	63504	164446	394675	947220	0	0	0	0	1603358
REPAY REFLWS HOUSING	20760	255757	534835	1695278	5080327	14367854	0	0	0	0	21954810
REPAY REFLWS DIVERSIFI	0	45150	261318	1064703	3389791	7903762	0	0	0	0	12664724
NEW LOANS FROM CACEN	104549	1035513	2311617	4806138	9225088	7800876	0	0	0	0	25283781
INTEREST ON BANK ACCOUNT	88462	77791	19565	8842	4529	-313196	0	0	0	0	-114006
<b>TOTAL INCOME :</b>	<b>1615059</b>	<b>3412907</b>	<b>5228103</b>	<b>10932724</b>	<b>23684793</b>	<b>37787492</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>82660178</b>
<b>OUTLAYS:</b>											
REPAYMENT PORT 12/82 US\$	189191	804300	1903809	3807600	7615200	15230400	0	0	0	0	29550491
AMORT. OLD PORTF. \$B.	7689	9410	9995	9455	7530	3540	0	0	0	0	47619
ADMINISTRATIVE COSTS	169027	278895	334674	401609	481931	578317	0	0	0	0	2244453
SHORT TERM PAYABLES	74683	495352	0	0	0	0	0	0	0	0	560235
LTD. RESERVES ON SAVINGS	6717	182690	404504	886093	1928073	4177520	0	0	0	0	7585596
INTEREST ON SAVINGS	282931	452126	262527	591731	1310450	2870990	0	0	0	0	5770750
REFLWS HOUSING LOANS	243018	360000	993600	2851200	6842980	16422912	0	0	0	0	27713610
REFLWS DIVERSIFIED LOAN	0	240000	594000	1260000	3024000	7257600	0	0	0	0	12375600
REPAYMENT NEW LOANS	4566	109461	401930	1024717	2254332	3772483	0	0	0	0	7567888
COMM. ON NEW LOANS	1045	10355	23116	48061	92251	78009	0	0	0	0	252837
<b>TOTAL OUTLAYS :</b>	<b>979467</b>	<b>2932588</b>	<b>4928142</b>	<b>10880465</b>	<b>23556647</b>	<b>50391770</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>93669080</b>
<b>SURPLUS:</b>	<b>635592</b>	<b>479418</b>	<b>299962</b>	<b>52259</b>	<b>128146</b>	<b>-12604278</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-11008902</b>

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CACEN AS LIQUIDITY RESERVES

MMH 6/30/87

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CASH FLOW FOR CACEN INDEXED 01-09F (IN THOUSANDS OF \$) 40% p.a. devaluation											SEE NOTE BELOW
EXCHANGE RATE:	150	210	294	412	576	807	1129	1581	2214	3099	
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL
<b>INCOME:</b>											
REPAYMENT PORT 12:00 US\$	189191	563010	932962	1306007	1828410	2559773	3583683	5017156	7024018	0	23004109
AMORT. OLD FORT. US\$	7689	9410	9995	9455	7530	3540	3530	3510	3530	0	58199
CASH ON HAND	357819	262277	621614	270543	702888	1103285	2980462	2811328	4305830	0	13416045
SHORT TERM RECEIVABLES	36977	170304	170304	0	0	0	0	0	0	0	377511
LIQ. RESERVES ON SAVINGS	6717	102662	170847	281223	458869	743410	1197314	1918976	3062514	0	7942432
COMM. FROM LA MERCED		630	1230	1451	454	627	722	942	920	0	6926
COMM. FROM MUTUALS	1049	5324	7885	11374	12798	23924	18319	15942	98154	0	194624
REPAY. LOANS FR BCB	0	5355	21646	45378	62687	72221	84171	95020	114152	0	502411
REPAY. LOANS FR BCB	4900	66790	183075	352836	567040	888156	1264702	1570006	2552079	0	7449571
NEW LOANS FR BCB	0	945000	235200	1399657	1152480	3468540	0	0	0	0	7014577
INTEREST ON BCB	32462	48726	27939	12692	32316	51250	135334	129158	191847	0	718274
OTHER INCOME	77241	0	0	0	0	0	0	0	0	0	77241
<b>TOTAL INCOME :</b>	<b>770202</b>	<b>2179399</b>	<b>2392595</b>	<b>3690616</b>	<b>4825471</b>	<b>8915247</b>	<b>9268236</b>	<b>11564837</b>	<b>17353105</b>	<b>0</b>	<b>60672367</b>
<b>OUTLAYS:</b>											
AMORT. OLD FORT. US\$	277900	623910	956392	1296952	1757532	2420208	3173699	4079503	5733440	0	20119520
AMORT. OLD FORT. \$	345	6900	6650	6370	6100	5850	3580	1500	490	0	37725
ADMINISTRATIVE COSTS	29324	49307	66564	89862	121314	163774	221094	299477	402944	0	144710
SHORT TERM PAYABLES	74987	181224	0	0	0	0	0	0	0	0	256177
INT. ON LIQUIDITY RESERV	20424	20670	9270	16051	27152	45197	74298	121040	195761	0	529920
NEW LOANS TO MUTUALS	104549	532449	788489	1137367	1279770	2382403	1831884	1594185	9815379	0	19462470
NEW LOANS TO LA MERCED	0	63000	122955	145126	45378	62687	72221	84171	99020	0	692559
COMM. ON LOANS FR BCB	0	9450	2352	13997	11525	34685	0	0	0	0	72019
REPAY. LOANS FR BCB	0	70875	159390	282004	473415	819721	1000131	1080131	1050131	0	5046000
<b>TOTAL OUTLAYS :</b>	<b>507925</b>	<b>1557785</b>	<b>2112052</b>	<b>2987728</b>	<b>3722186</b>	<b>5934785</b>	<b>6456908</b>	<b>7259007</b>	<b>17326166</b>	<b>0</b>	<b>47864512</b>
<b>SURPLUS:</b>	<b>262277</b>	<b>621614</b>	<b>270543</b>	<b>702888</b>	<b>1103285</b>	<b>2980462</b>	<b>2811328</b>	<b>4305830</b>	<b>26939</b>	<b>0</b>	<b>13007855</b>

NOTE: ASSUMES THAT CACEN CREATES A ROTATING FUND FOR LA MERCED WITH THE INITIAL \$1.0 MILLION

MM 6/30/92

EXCHANGE RATE:	150	210	294	412	576	807	1129	1581	2214	3099	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
(IN THOUSAND OF \$) 40% p.a. devaluation (SEE NOTE BELOW)											
INCOME:											
REPAYMENT PORT 12/31/81	699114	389016	390074	604615	937153	1452587	2251510	3489241	0	0	10213910
CASH ON HAND	259882	635592	536793	446840	411032	396381	289915	339959	57391	0	3366785
SHORT TERM RECEIVABLES	58439	313029	0	0	0	0	0	0	0	0	371498
INVESTMENTS	70148	244398	342156	479019	670627	0	0	0	0	0	1809348
SAVINGS	291761	765289	512805	717927	1005093	1407137	1969992	2757498	3861194	0	12880181
INT. ON LIQUIDITY RESERV.	20424	20670	9270	16051	27152	45187	74296	120496	145761	0	529853
COMM. ON REFLWS	9490	16800	31117	56496	94762	159199	217717	336164	700009	0	1644004
REFLWS HOUSING	20700	171828	259368	585821	1254800	2527528	4836267	7560224	12676201	0	30092797
REFLWS DIVERSIFIED	0	22785	123174	267823	838683	1368052	2189185	3426516	5211739	0	13561941
NEW LOANS FROM CASH	20454	522449	789489	1137367	1279770	2382403	1831884	1594195	9615379	0	19466475
INTEREST ON BANK ACCOUNT	96462	81376	21746	19082	17960	15244	13989	8839	-44933	0	221765
<b>TOTAL INCOME :</b>	<b>1515059</b>	<b>2794231</b>	<b>3008992</b>	<b>4430950</b>	<b>6537037</b>	<b>9753718</b>	<b>13672756</b>	<b>19633867</b>	<b>32710952</b>	<b>0</b>	<b>94157563</b>
OUTLAYS:											
REPAYMENT PORT 12/82 NEW	169191	563010	932962	1306007	1828410	2559773	3583693	5017156	7024018	0	23002109
SHORT. OLD PORTF. \$6.	7659	9410	9995	9455	7530	3540	3536	3510	3530	0	59127
ADMINISTRATIVE COSTS	169027	278895	334674	401609	481931	578317	693980	822776	999331	0	4771540
SHORT TERM PAYABLES	74883	485352	0	0	0	0	0	0	0	0	568106
LIQ. RESERVES ON SAVINGS	5717	102662	170847	281223	458369	743410	1197314	1918976	3062514	0	7942432
INTEREST ON SAVINGS	281931	332085	144891	247273	415041	687789	1128339	1836198	2967993	0	8042439
REFLWS HOUSING LOANS	243013	252000	486864	977962	1642975	2760199	3774782	5813164	14114547	0	30075510
REFLWS DIVERSIFIED LOAN	0	168000	291060	432180	726062	1219785	1668148	2568949	3955181	0	11030565
REPAYMENT NEW LOANS	4966	66700	183075	352836	567040	888166	1264702	1570006	2552079	0	7449570
COMM. ON NEW LOANS	1045	5324	7885	11374	12798	23824	18319	15942	58154	0	194664
<b>TOTAL OUTLAYS :</b>	<b>979467</b>	<b>2263438</b>	<b>2562153</b>	<b>4019918</b>	<b>6140656</b>	<b>9464804</b>	<b>13332797</b>	<b>19576476</b>	<b>34799346</b>	<b>0</b>	<b>93128054</b>
<b>SURPLUS:</b>	<b>625592</b>	<b>530793</b>	<b>446840</b>	<b>411032</b>	<b>396381</b>	<b>288915</b>	<b>339959</b>	<b>57391</b>	<b>-2077394</b>	<b>0</b>	<b>1029508</b>

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CASH AS LIQUIDITY RESERVES

MMH 6/30/83

CASH FLOW FOR CACEN INDEXED 01-09C (IN THOUSANDS OF \$) Minus 10 points indexation; spread 6%										SEE NOTE BELOW	
EXCHANGE RATE:	150	250	350	438	547	685	790	865	930	975	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
<b>INCOME:</b>											
REPAYMENT PORT 12-92 USA	189191	670250	1110550	1389774	1735631	2173505	2506570	2744645	2950890	0	15471106
AMORT. OLD PORTF. \$B.	7689	9410	9995	9455	7530	3540	3530	3510	3550	0	58189
CASH ON HAND	757618	262277	599326	210359	587815	667176	726683	1134	63812	0	3476400
SHORT TERM RECEIVABLES	26970	170304	170304	0	0	0	0	0	0	0	77581
LIQ. RESERVES ON SAVINGS	6717	125335	157447	182283	259941	370087	402294	465404	581527	0	2552136
COMM. FROM LA MERCED	0	750	1464	1572	527	717	527	964	1123	0	7944
COMM. FROM MUTUALS	1645	7395	16801	13805	15586	24939	16322	13322	17414	0	121129
REPAY. LOANS FR MERCE	0	6375	25759	52696	71743	82725	96407	112269	130748	0	578731
REPAY. LOANS MUTUALS	4766	84296	246649	462115	722557	1078997	1452143	1722310	1993607	0	7716543
NEW LOANS FROM ECB/110	0	1125000	514247	1673458	1274258	1973152	0	0	0	0	6540112
INTEREST ON BOND ACCOUNT	85452	50231	26200	9362	25323	28715	29286	99	2611	0	16078
OTHER INCOME	77241	0	0	0	0	0	0	0	0	0	77241
<b>TOTAL INCOME :</b>	<b>770202</b>	<b>2511624</b>	<b>2870848</b>	<b>4064878</b>	<b>4700911</b>	<b>6403553</b>	<b>5237262</b>	<b>5063658</b>	<b>5745453</b>	<b>0</b>	<b>37231048</b>
<b>OUTLAYS:</b>											
AMORT. OLD PORT. USA	277900	742750	1138550	1380138	1668350	2055000	2219900	2231700	2408700	0	14122988
AMORT. OLD PORT. \$B.	345	6900	6654	6370	6100	5850	5590	1500	490	0	37795
ADMINISTRATIVE COSTS	29824	49307	6564	89862	121314	163774	221194	298477	402911	0	1443150
SHORT TERM PAYABLES	74883	181224	0	0	0	0	0	0	0	0	256107
INT. ON LIQUIDITY RESERV	26424	22030	9749	14845	21479	30929	42530	55560	71264	0	288210
NEW LOANS TO MUTUALS	104549	739462	1080140	1380549	1558579	2493813	1682283	1332185	1741384	0	12112944
NEW LOANS TO LA MERCED	0	75000	146720	157169	52696	71743	82725	96407	112269	0	794280
COMM. ON LOANS FR ECB	0	11250	5142	16735	12743	19732	0	0	0	0	65411
REPAY. LOANS FR ECB	0	84375	267218	371796	592475	836030	984017	994017	984017	0	5043044
<b>TOTAL OUTLAYS :</b>	<b>507925</b>	<b>1912298</b>	<b>2660499</b>	<b>3417063</b>	<b>4035734</b>	<b>5676871</b>	<b>5236129</b>	<b>4999846</b>	<b>5721068</b>	<b>0</b>	<b>34165422</b>
<b>SURPLUS:</b>	<b>262277</b>	<b>599326</b>	<b>210359</b>	<b>597815</b>	<b>667176</b>	<b>726683</b>	<b>1134</b>	<b>63812</b>	<b>24385</b>	<b>0</b>	<b>3065626</b>

NOTE: ASSUMES THAT CACEN CREATES A ROTATING FUND FOR LA MERCED WITH THE INITIAL \$1.0 MILLION

MM 1/24/83

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CASH FLOW FOR THE SYSTEM - INDEXED 01-09C (IN THOUSAND OF \$) minus 10 points indexation; (SEE NOTE BELOW)  
spread 6%

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EXCHANGE RATE:	150	250	350	438	547	685	790	865	930	975	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
<b>INCOME:</b>											
REPAYMENT PORT 12/31/81	699114	389016	432856	527642	915934	1060715	1378929	1454715	0	0	7658926
CASH ON HAND	159992	635592	509652	417568	385756	367796	276652	148937	94120	0	3675555
SHORT TERM RECEIVABLES	52469	313029	0	0	0	0	0	0	0	0	371449
INVESTMENTS	75148	244395	342157	429184	534742	0	0	0	0	0	1621103
SAVINGS	281761	366289	512805	717927	1005098	1407137	1969992	2757988	3861184	0	12820181
INT. ON LIQUIDITY RESERV	20424	20000	9749	14845	21479	30929	42530	55560	71264	0	258519
COMM. ON REFLWS	9490	20000	37044	60024	89953	135176	152286	183418	303839	0	651071
REPAY REFLWS HOUSING	20760	190285	278394	541593	1017751	1792541	2757246	3412919	4441220	0	14400339
REPAY REFLWS DIVERSIFI	0	20000	137175	353792	701465	1022342	1747220	1855945	1948946	0	7146507
NEW LOANS FROM CACEN	104549	73946	1090140	1380549	1558579	2493813	1622267	1002195	1741384	0	12112544
INTEREST ON BANK ACCOUNT	88462	79901	20182	16908	15860	13564	8754	4941	-52306	0	196205
<b>TOTAL INCOME :</b>	<b>1615059</b>	<b>3036682</b>	<b>3360153</b>	<b>4559033</b>	<b>6146617</b>	<b>8325012</b>	<b>9615893</b>	<b>11206608</b>	<b>12409650</b>	<b>0</b>	<b>60274709</b>
<b>OUTLAYS:</b>											
REPAYMENT PORT 12/82 US\$	189191	670250	1110550	1389774	1735631	2173505	2506670	2744645	2950890	0	15471106
AMORT. OLD PORTF. \$B.	7689	9410	9995	9455	7530	3540	3530	3510	3530	0	58109
ADMINISTRATIVE COSTS	169027	278895	334674	401609	491931	578317	633990	932776	999331	0	477354
SHORT TERM PAYABLES	74883	485352	0	0	0	0	0	0	0	0	500103
LIQ. RESERVES ON SAVINGS	6717	125336	157447	182283	259941	370097	403294	465404	581527	0	2582006
INTEREST ON SAVINGS	282931	360096	148369	213648	306818	439570	582363	745070	946594	0	4071400
REFLWS HOUSING LOANS	243618	300000	579600	1040688	1559606	2343696	2640336	3130103	5933923	0	17820900
REFLWS DIVERSIFIED LOAN	0	200000	346506	459900	689220	1035720	1155816	1405348	1662048	0	6965500
REPAYMENT NEW LOANS	4966	84276	244649	462115	722557	1078997	1453143	1722310	1993809	0	7766840
COMM. ON NEW LOANS	1045	7395	10801	13805	15586	24938	16823	13322	17414	0	121109
<b>TOTAL OUTLAYS :</b>	<b>979467</b>	<b>2527031</b>	<b>2942585</b>	<b>4173277</b>	<b>5778821</b>	<b>8048361</b>	<b>9466956</b>	<b>11112488</b>	<b>15089066</b>	<b>0</b>	<b>60119052</b>
<b>SURPLUS:</b>	<b>635592</b>	<b>509652</b>	<b>417568</b>	<b>385756</b>	<b>367796</b>	<b>276652</b>	<b>148937</b>	<b>94120</b>	<b>-2679416</b>	<b>0</b>	<b>156656</b>

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CACEN AS LIQUIDITY RESERVES

MHM 6/30/87

CASH FLOW FOR CACEN 1982-1995 (IN THOUSANDS OF \$) minus 10 points indexation; spread 10%

SEE NOTE BELOW

EXCHANGE RATE:	150	250	350	438	547	685	790	865	930	975	TOTAL
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
<b>INCOME:</b>											
REPAYMENT FORT 12/82 US\$	159191	670250	1110550	1389774	1735631	2173505	2506670	2744645	2950890	3093675	19554791
AMORT. OLD PORTF. \$B.	7689	9410	9995	9455	7530	3540	3530	3510	3530	3540	61729
CASH ON HAND	357812	262277	599326	209207	600933	863529	2174143	1925373	2168295	1072731	10233836
SHORT TERM RECEIVABLES	26972	170304	170304	0	0	0	0	0	0	0	377591
LIQ. RESERVES ON SAVINGS	5717	125336	157447	182283	259941	370087	402294	455404	581527	753896	3305933
COMM. FROM LA MERCED	0	750	1464	1572	527	717	827	964	1123	1307	9251
COMM. FROM MUTUALS	1045	7395	9551	11540	11506	18393	9046	7500	24177	26526	126940
REPAY. LOANS/LA MERCED	0	5375	25769	52696	71743	82725	96407	112269	130748	152268	730958
REPAY. LOANS/MUTUALS	4900	84296	234870	422415	628033	891955	1139333	1286930	1561955	201072	2206792
NEW LOANS FROM BCB/AIE	0	1125000	399197	1468502	1094000	2744585	0	0	0	0	683234
INTEREST ON BANK ACCOUNT	86462	50231	26299	9325	26044	38226	91037	80038	88571	43444	541676
OTHER INCOME	77341	0	0	0	0	0	0	0	0	0	77341
<b>TOTAL INCOME :</b>	<b>770202</b>	<b>2511624</b>	<b>2744871</b>	<b>3756769</b>	<b>4435988</b>	<b>7187263</b>	<b>6424487</b>	<b>6626634</b>	<b>7510821</b>	<b>7159486</b>	<b>49050604</b>
<b>OUTLAYS:</b>											
AMORT. OLD PORT. US\$	277900	742750	1138550	1380138	1668350	2055000	2219900	2231700	2409700	2505750	16628730
AMORT. OLD PORT. \$B	345	6900	6550	6370	6100	5850	3590	1500	490	920	35715
ADMINISTRATIVE COSTS	29824	49307	66564	89862	121314	163774	221094	298477	402944	543975	1987105
SHORT TERM PAYABLES	74983	191224	0	0	0	0	0	0	0	0	256107
INT. ON LIQUIDITY RESERV	20424	22670	9749	14845	21479	30929	42550	55560	71264	91296	380106
NEW LOANS TO MUTUALS	104549	739462	965094	1153999	1160626	1839330	904592	750000	2417730	2658621	12694002
NEW LOANS TO LA MERCED	0	750000	146375	157169	52696	71743	82725	96407	112269	130748	925131
COMM. ON LOANS FR BCB	0	11250	3992	14685	10940	27446	0	0	0	0	68313
REPAY. LOANS FR BCB	0	84375	198690	338767	530955	818849	1024693	1024693	1024693	1024693	6070406
<b>TOTAL OUTLAYS :</b>	<b>507925</b>	<b>1912298</b>	<b>2535664</b>	<b>3155835</b>	<b>3572459</b>	<b>5012920</b>	<b>4499113</b>	<b>4458336</b>	<b>6438090</b>	<b>6956012</b>	<b>39648653</b>
<b>SURPLUS:</b>	<b>262277</b>	<b>599326</b>	<b>209207</b>	<b>600933</b>	<b>863529</b>	<b>2174343</b>	<b>1925373</b>	<b>2168298</b>	<b>1072731</b>	<b>203474</b>	<b>10002151</b>

NOTE: ASSUMES THAT CACEN CREATES A ROTATING FUND FOR LA MERCED WITH THE INITIAL \$1.0 MILLION

MM 6/30/83

CASH FLOW FOR THE SYSTEM - INDEXED 01-096 (IN THOUSAND OF \$) minus 10 points indexation; (SEE NOTE BELOW)  
spread -10%

EXCHANGE RATE:	150	250	350	438	547	685	790	865	930	975	
YEARS :	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	TOTAL
<b>INCOME:</b>											
REPAYMENT FORT 12/31/81	599114	389016	485737	704319	915615	1190299	1547389	1856866	0	0	7786355
CASH ON HAND	254882	635592	509652	428740	407981	406891	341004	429920	1078383	298166	4795211
SHORT TERM RECEIVABLES	5469	313029	0	0	0	0	0	0	0	0	371496
INVESTMENTS	72145	244398	342157	428184	534742	0	0	0	0	0	1621628
SAVINGS	281761	366289	512805	717927	1005098	1407137	1969992	2757988	3861184	5465657	19295839
INT. ON LIQUIDITY RESERV	20424	22030	5749	14845	21479	20929	42530	55560	71264	91296	350106
COMM. ON REFLWS	9493	26000	37044	60024	89953	125176	152286	183418	303839	379764	1779994
REPAY REFLWS HOUSING	21760	196865	322254	624339	1167539	2051702	3133875	3882902	5081035	6790178	22231449
REPAY REFLWS DIVERSIFI	0	20100	155479	389705	767026	1118573	1467765	1802353	2120857	2412914	10264771
NEW LOANS FROM CACEN	104549	729462	965094	1153999	1169626	1839330	904592	750000	2417730	2658621	12694007
INTEREST ON NEW ACCOUNT	26462	79901	20425	17611	17151	15741	15856	30661	27651	11239	224896
<b>TOTAL INCOME :</b>	<b>1615059</b>	<b>3036682</b>	<b>3360396</b>	<b>4539293</b>	<b>6087209</b>	<b>8195778</b>	<b>9575289</b>	<b>11749669</b>	<b>14962142</b>	<b>18047835</b>	<b>81169257</b>
<b>OUTLAYS:</b>											
REPAYMENT FORT 12/82 US\$	189191	670250	1110550	1389774	1735631	2173505	2506670	2744645	2950890	3093675	18564781
SHORT. OLD FORT. \$B.	7589	9410	9995	9455	7530	3540	3530	3510	3530	3540	61729
ADMINISTRATIVE COSTS	169027	278895	334674	401609	481921	578317	693980	832776	999331	1199197	5969727
SHORT TERM PAYABLES	74883	485352	0	0	0	0	0	0	0	0	569235
LIQ. RESERVES ON SAVINGS	6717	125336	157447	182283	259941	370087	403294	465404	581527	753896	3305933
INTEREST ON SAVINGS	282931	366096	148369	213648	306818	439570	582363	745070	946594	1206138	5227592
REFLWS HOUSING LOANS	243018	300000	579600	1040688	1559606	2343686	2640338	3180103	5933923	7406010	25226973
REFLWS DIVERSIFIED LOAN	0	200000	346500	459900	689220	1035720	1166816	1405349	1662049	2088083	9053626
REPAYMENT NEW LOANS	4966	84296	274870	422415	626033	891955	1139333	1286930	1561955	2012038	8266793
COMM. ON NEW LOANS	1045	7395	9651	11540	11606	18393	9046	7500	24177	26586	126946
<b>TOTAL OUTLAYS :</b>	<b>979467</b>	<b>2527031</b>	<b>2931656</b>	<b>4131312</b>	<b>5680318</b>	<b>7854774</b>	<b>9145370</b>	<b>10671286</b>	<b>14663976</b>	<b>17789165</b>	<b>76374354</b>
<b>SURPLUS:</b>	<b>635592</b>	<b>509652</b>	<b>428740</b>	<b>407981</b>	<b>406891</b>	<b>341004</b>	<b>429920</b>	<b>1078383</b>	<b>298166</b>	<b>258670</b>	<b>4795006</b>

NOTE: EIGHT PERCENT OF SAVINGS IS KEPT BY CACEN AS LIQUIDITY RESERVES

MHM 6/30/83