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Concept Paper:

Sustainable Housing Finance for Low-Income Shelter

383-HG-004 (Second Tranche)

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Acronyms and Exchange Rate

ADB	Asian Development Bank
CBSL	Central Bank of Sri Lanka
SMIB	State Mortgage and Investment Bank
HDFC	Housing Development Finance Corporation
GSL	Government of Sri Lanka
HG	Housing Guaranty
NSB	National Savings Bank
AWDR	Average Weighted Deposit Rate
PDP	Program Delivery Plan
NHDA	National Housing Development Authority
HFSC	Housing Finance Steering Committee

The exchange rate in use in this report is Rs.49.00 = US$1.00

Table of Contents

I. Executive Summary 3

II. Description of the Current Project 4
A. Goal, purpose & objectives 4
B. Current program elements and structure 4
C. Achievements to date 5

III. Justification for a new PDP for the 383-HG-004 program 6

IV. Description of the new Program Delivery Plan (PDP) 7
A. New project description 7
B. Leveraging additional loans with the use of HG resources 11
C. Incentive to Originate Low-Income Mortgages 12
D. Policy Agenda 12
E. Expected Outputs 13
F. USAID Project Mangement 13
G. Cost estimates and financial plan 13

V. Administrative Analysis 16

Annexes

A. Constraints to Long-term lending 17
B. Financial Summaries of the SMIB and the HDFC 22
C. Mortgage-backed Securities & the Institutional Perspective 26
D. Mortgage Securities and Credit Rating Agencies 30
E. Housing and Economic data 33

I. Executive Summary

For the last several years, USAID's housing program strategy, implemented through the $25 million 383-HG-004 loan, has sought to develop a mechanism to channel funds to home lenders and to integrate housing finance with the mainstream capital markets in Sri Lanka. This objective is based on the premise that integration will allow capital from non-government sectors to flow to housing. In turn, this would reduce the GSL's role as a provider of mortgage credit, a role it is less able to afford each day.

The HG-004 program, which has disbursed $10 million to date, has achieved some successes: a refinance window was created at the Central bank to fulfill lender funding needs with respect to housing. Two state-owned mortgage institutions, the State Mortgage and Investment Bank (SMIB) and the Housing Development Finance Corporation (HDFC) have improved their pace of originations, their performance indicators and their profitability and have made bold moves to firmly position themselves as the principal mortgage origination entities in Sri Lanka. This is important because of plans to privatize both institutions in the not too distant future. However, the program has not fully satisfied the desire to involve private sector lenders in the loan origination process. This has been due to a number of reasons, the principal ones being aversion to liquidity risk (non-tradeability of mortgage instruments) and credit risk, both of which are present for portfolio mortgage lenders.

An alternative to asking private lenders to originate loans, particularly low-income loans, is to encourage them to *invest* in mortgages by way of debt instruments collateralized by mortgages. The effect is the same in any case: private sector capital will flow to mortgages and reduce the burden on GSL resources. Recent discussions with institutional investors and merchant bankers have indicated that the capital markets have the desire and the capacity to absorb approximately Rs. 100 million (US$2 million) in long-term debt every two months (Rs. 600 million per year). In essence, Sri Lanka's emerging capital markets appear poised to deal in longer-term debt instruments. Collateralizing mortgages will provide a debt instrument to the capital marketsthat adds to the demand for long-term securities.

Thus, USAID proposes to redesign the implementation of the remaining $15 million in authority for the HG-004 program. Under this new scenario, low-income loan originations will continue as before, made by institutions desiring to participate as lenders. What will be new is that USAID will assist in the creation of a "mortgage conduit" entity that will purchase loans from these originators, pool these mortgages and issue mortgage-backed debt securities as a constructive demonstration of new ways to mobilize long-term debt. Under this new program design, the GSL will take steps to implement a series of actions to be contained in a policy agenda that will seek to remove constraints or disincentives to investments in long-term debt instruments and housing. Additionally, the agenda will seek to implement a plan to address long-standing land title registration problems in Sri Lanka. These problems inhibit tenure and create excessive costs with respect to mortgaging property.

The issuance of long-term debt instruments under this program will directly complement the efforts of the Mission's Financial Markets project and should prove as a catalyst to further development of the debt market.

The beneficiaries of this program will be poor families. They will be the borrowers under the loan origination phase of the program. The program will seek to continue strengthening the two state-owned mortgage entities as the principal originators of mortgage credit, particularly for the poor. And, as these institutions are scheduled for privatization by the GSL, this program will have prepared them to mobilize resources outside of the government treasury. Thus, the program will be sustainable. Perhaps of greater benefit to the poor will be the normalization of land tenure. A family's most important investment is almost always the home. In Sri Lanka, the home is passed on from generation to generation and is frequently the site of income generating activities. Lack of clear title to land is a persistent

problem in Sri Lanka, one that threatens small-scale agricultural development and indeed, social stability in general. With the GSL committed to a program to correct land tenure deficiencies, capital will more easily flow to land and will have the greatest benefit on those who have suffered the most: the poor.

II. Description of the Current Project

The 383-HG-004 project is a project designed to move housing finance into the mainstream of financial markets in Sri Lanka. The financial markets in Sri Lanka are fragmented, with each sector in the market operating in its own discreet sphere and with little movement of capital between sectors. Additionally, the GSL intervenes in the financial markets by allocating investments, directing credit and distorting interest rates when it raises funds. Certainly, a goal of the GSL and donor agencies is to bring about some form of integration in the financial markets that will make capital transfers more demand-driven and efficient and hopefully reduce the cost of funds. The HG program shares in that goal and to that end involves government-owned mortgage institutions (SMIB, HDFC), public and private commercial banks (Bank of Ceylon, People's bank, Seylan Bank, Hatton National Bank, Commercial Bank) in program implementation.

A. Goal, purpose and objectives.

The goal of the project is to improve shelter and services provided to the urban and rural poor. The purpose of the project is to assist the GSL to develop policies, programs and solutions which, through coordination with the private sector, will increase the effectiveness of limited government resources and provide maximum benefit to lower income households.

The objectives of the project are:

1. Develop policies and programs for market-oriented housing finance within the context of both structural reform in financial and capital markets and overall shelter policies in Sri Lanka.
2. Rationalize the public sector role in financing shelter.
3. Develop instruments and procedures to facilitate the growth of the housing finance market and remove barriers and disincentives to market growth.

B. Current program elements and structure

The first tranche of the 383-HG-004 program was described in and implemented through a Program Delivery Plan (PDP) dated October 1991. The program design contained the following key elements:

Interest rates: Market interest rates apply for all loans. No subsidies are allowed in the lending program. However, due to the fact that most government shelter programs contained substantial subsidy elements and because true market rates had never been determined prior to the HG-004 program, the market rate for the program was "set" at 350 basis points above the average weighted deposit rate of 12 month instruments (AWDR) for commercial banks in Sri Lanka. The AWDR throughout most of the program has been 17%. Thus, mortgage rates have been set at a minimum of 20.5%.

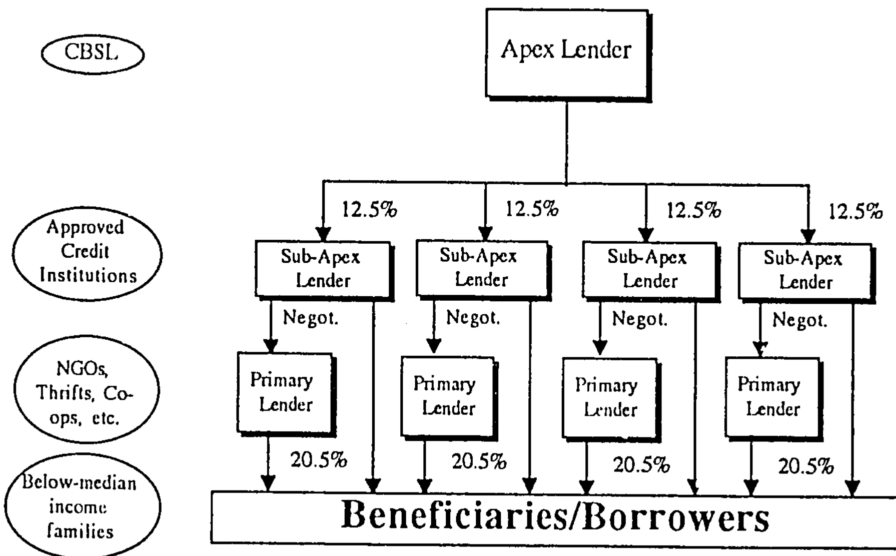
Subsidies: a direct subsidy element exists for the poorest of the poor in the form of grants made by the government through the National Housing.Development Authority (NHDA).

Loan Recovery: high loan collection rates are emphasized in the program. At the inception of the program, the collection rates by almost all public sector institutions was dangerously low. For example, the NHDA was experiencing collection rates of 20-30%. The Asian Development Bank's technical assistance program to the SMIB, HDFC and the NHDA have yielded positive results although much work still needs to be done at the NHDA in this area.

Beneficiaries: borrowers and grantees in the HG program are families whose income falls at or below the national urban median income. Currently, that income level is estimated at Rs. 5,300 (US$108) per month.

Housing Finance Steering Committee: the HFSC was set up to serve as the policy body to determine guidelines and resolve implementation issues in the housing finance sector. The HFDSC is co-chaired by the Secretary to the Minister of Finance and the Secretary to the Minister of Housing and Construction. Other key Line Ministry appointees are on the committee as well as representatives from the private sector.

The program structure created a refinance window at the Central Bank, the Apex lender to the program. Sub-apex lenders (approved credit institutions)[1] originate eligible mortgage loans which they refinance with the Central Bank. The sub-apex lenders can also make wholesale loans to other lenders (primary lenders) that do not qualify as approved credit institutions. The following illustration depicts the program structure:



C. Achievements to Date

The following table depicts the details of the HG loan program through February 1994:

[1]Approved credit institution is a financial institution chartered under the Monetary Act and coming under the supervision of the CBSL.

Sub-Apex Lender	Number of Loans Made	Total Loans Made (Rs.)	Average Loan Size (Rs.)	Average Hshld. Income (Rs./mo)
Bank of Ceylon	27,427	200,040,800	7,294	1,256
People's Bank	2,120	46,268,500	21,825	2,889
SMIB	321	15,309,075	47,692	3,447
HDFC	260	14,479,500	55,690	3,642
Seylan Bank	24	2,015,000	83,958	3,679
Hatton Natl. Bank	278	5,019,000	18,053	2,632
Commercial Bank	18	922,000	51,222	3,658
RRDBs	292	8,322,000	28,500	2,973
TOTALS	30,740	292,375,875	9,511	1,462

Source: Central Bank of Sri Lanka

This volume of lending is approximately US$6.0 million and was accomplished from October 1992 through February 1994, a period of 17 months. The NHDA, over the same period of time, made in excess of US$4 million in grants to low-income families. The majority of the funds were used to improve existing dwelling units (as opposed to new construction or the purchase of an existing dwelling unit). And the improvements were concentrated in sanitary facilities or infrastructure, such as electrification or water supply.[2]

Only one primary lender participated in the program, the NHDA. Bank of Ceylon wholesaled all loans to the NHDA which outpaced all other originators combined. The HDFC, while not an approved credit institution, was given an exemption by the GSL to act as a sub-apex lender due to cost factors.

III. Justification for a new PDP for the 383-HG-004 project

The current program has certainly achieved positive results. Over 30,000 loans have been made to low-income families. A mechanism has been established, in the form of the CBSL refinance window, to channel capital to private and public sector entities. The concept of mortgage loans as a long-term instrument is now more widely accepted.

Yet, the program is falling short in one key area: involvement of the private sector. The lack of a meaningful participation by private sector lenders has also allowed the NHDA to fill that void. This event was not planned and did not further the objective of rationalizing the public sector's role in provision of housing finance.

In review, private lenders played a minor role in the HG program for two reasons:

- Liquidity risk: lending in Sri Lanka is typically short-term-- 3-5 years. It became apparent as the program progressed that the corporate lending philosophy of the private banks is to avoid long-term instruments (even if they were matched on the liability side) and *the maintenance of illiquid assets* on their books (a certain fear of interest rate risk also played a factor in their strategy.)

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[2]Note: for a more complete description of the achievements of the first phase of 383-HG-004 see the Low-Income Housing Program Progress Report, April 1994.

- Credit risk: low-income borrowers are not the bread and butter clients of private banks in Sri Lanka. The banks maintain a perception that low-income families are poor credit risks and that the small loan sizes that characterize low-income borrowing are inefficient when loan collection costs are factored in.[3]

Thus, the challenge continues to find a method by which private sector capital can be infused in the mortgage market. ***Evidence suggests that the best way to achieve this is through long-term debt instruments that are liquid-- that is, that can be easily sold or traded in a secondary market.***

Thus, rather than promoting integration by involving private investors in the loan origination process, it appears that the course of action with the greatest potential for success is one that: 1) supports institutions desiring to originate mortgage loans, 2) taps the capital markets with new forms of long-term debt instruments backed by mortgages, and 3) seeks to attract new originators through the virtue of access to the long-term debt market.

This new direction is compatible with the Mission's current strategic objective *#1: Broad-based economic growth--increased opportunity for people to participate in, and benefit from, a growing market-oriented economy.* At this time, one of the key objectives of the Financial Markets component of the Private Sector Policy Support project is the development of a long-term debt market (maturities in excess of 7 years). The availability of long-term debt is critical to the financing of large infrastructure projects needed to support economic growth. Indeed, long-term debt adds to the breadth and depth of capital markets that, in turn, makes them more resilient and stable. The introduction and development of a mortgage-backed securities market can help meet this critical Mission objective.

The development of a secondary mortgage market using long-term debt instruments goes to the heart of efforts to strengthen markets, create efficiency, encourage broader participation and reduce poverty, all current USAID objectives.

IV. Description of the New Program Delivery Plan (PDP)

The GSL has recently gone to market in the U.S. to borrow $10 million out of the $25 million authorized in this project. The remaining $15 million will be utilized to fund low-income housing loans and develop a market for long-term debt backed by mortgages.

The project's goal, purpose and objectives will remain unchanged.

A. New project description

1. Overview

The second tranche of the housing program will be implemented in two-parts:

- **Mortgage Originations**: the SMIB and the HDFC and other lending institutions chartered under the Monetary Act and maintaining minimum standards as to loan

[3]In many respects, this latter case is true. Certainly, the average loan size made by the NHDA (Rs.7,200 or $140) is not efficient. It may not even be profitable.

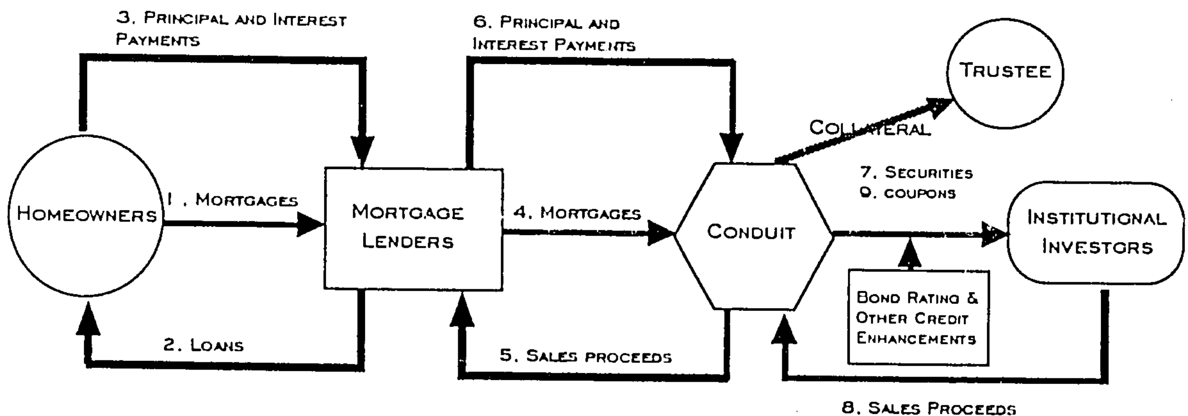
collections and capital requirements, will originate qualifying[4] home loans secured by first mortgages. All loans will be underwritten on conforming documentation and forms (loan application, note, mortgage and closing documents.)

The HDFC and SMIB maintain a series of agents throughout the island who originate loans on their behalf, much as a mortgage broker would. This aspect of their program serves both urban and rural communities. The People's Bank also has a fairly extensive rural presence.

Title problems will be resolved prior to closing any loans. The HDFC maintains a program for low-income borrowers that provides *pro bono* legal assistance to borrowers seeking to clear their title problems. The outside costs (stamp tax, direct expenses, etc.) are totaled and added to the loan amount. This program will be put in place for other lenders as a stopgap until the GSL can take more appropriate steps through the policy agenda to address the land tenure and title registration problems in Sri Lanka.

Mortgage Sales/Debt Issues: from time to time, mortgage originators participating in the program sell mortgages to a "mortgage conduit" (conduit). The conduit, established with this program, will, in turn, securitize the mortgages it buys and issue long-term debt backed by the securitized collateral. In effect, the conduit will be a secondary mortgage market institution, similar to the FHLMC or the FNMA in the U.S., providing liquidity to the primary market and tapping the capital markets for its source of funds. The conduit will be the borrower of the HG resources.

The following schematic illustrates, in principle, the process of selling mortgages into the capital market through a conduit:



The HDFC, SMIB and other originators already have sizeable mortgage loan portfolios. The initial pool of mortgages to be sold to the conduit may come from existing portfolio loans. Subsequent pools should be comprised of mortgages originated after the project start date.

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[4]Qualifying loans include those made for the purchase of land upon which will be built a primary dwelling , the purchase of a primary dwelling or the improvement of a primary dwelling (i.e., electrification, installation of a sanitary latrine, expansion, roof, etc.)

2. Originators

The loan originators will be the SMIB, HDFC, Hatton Natl. Bank, Seylan Bank, People's Bank, the National Savings Bank and other lenders that can make mortgage loans using approved forms, documentation and underwriting criteria. Additionally, originators must maintain loan collection rates in excess of 85% to qualify for the program.

The NHDA will not participate in this program for a number of reasons. First, the NHDA rarely makes mortgage loans; their average loan size is extremely small and inefficient. Secondly, until the NHDA can bring their performance standards up to private sector levels, their debt issues will not achieve satisfactory ratings. For example, loan collection rates of 50-60% are unsuitable for structuring a collateralized debt instrument.

3. Key Players and responsibilities

The Conduit

The project will entail the creation of two separate and important entities. First, a **mortgage conduit facility will be formed**. This firm will be a secondary market operation and will be responsible for establishing standards for mortgage originations, purchasing mortgages from originators and using them to back (or collateralize) long-term debt issues in the capital market. The firm will be owned by equity partners representing broad backgrounds who will contribute varying degrees of technical know-how, international and local knowledge as well as influence in the private and public sectors. At this stage of conceptualization, it's possible for the ownership to be divided between the Central Bank of Sri Lanka (CBSL), a private local investor (bank or merchant bank), an international finance agency (IFC or ADB) and an investment banking firm with expertise and an international presence (e.g., a large U.S. investment bank).

To address the issue of credit risks, the conduit will provide *mortgage* and *securities insurance* to the program. The mortgage insurance will insure originators and subsequent owners of record against losses in the event of foreclosure and property disposition. This mortgage insurance will be offered to all originators as a matter of practice. It will however, be **mandatory** on any mortgages purchased by the conduit.

The securities insurance will be a form of credit enhancement made on all debt issues and is critical to the success of this program as it will serve in lieu of a government guarantee that up until now was necessary to create sufficient investor interest and keep coupon rates at affordable levels for the issuer. This insurance will either insure against default of a portion of the principal of the debt offering (i.e., 20% of the principal balance remaining at the time of default) or insure against cash flow or coupon interruption.

This conduit will be capitalized with the entire $15 million in HG resources. Up to $5 million in HG resources may be used to capitalize the insurance operation. The remaining $10 million will be used as working capital with which to purchase mortgages.

The HG resources will be restricted to use on low-income mortgages. In other words, working capital will only be used to purchase low income mortgages. Likewise, mortgage insurance backed by HG resources may only insure low-income loans and securities insurance backed by HG funds can only be used to insure debt that is backed by low-income mortgages.

However, it should be noted that the conduit will be free to purchase all types of mortgage loans, not just low-income loans. However, capital to do so will have to come from the equity partners. Also, the conduit will establish a parallel mortgage insurance and securities insurance operation that will cater to mortgages and long-term debt that is unrelated to low-

income housing. But, as before, capital with which to undertake that venture must come from the equity partners.

A Debt Rater

An **independent debt rating firm** will be made operational during the program to give potential investors a basis for measuring the quality of debt issues. This is important not just for investor confidence, but because a debt rating is a key factor in determining the cost/yield of the issue. The creation of this firm is compatible with the objectives of the Mission's Financial Markets project and all work in this regard will be conducted through and with this project team. This debt rating firm *must* be an independent agency with absolutely no ties to the issuers or the investment community. It is preferable that this firm be private.

It should be noted that the HG program will not be responsible for establishing this firm, but will make efforts to encourage its development. And it may be possible that existing debt rating firms with Asian experience could desire to establish an office in Sri Lanka (e.g., an Indian debt rating agency). For a more detailed discussion of the importance and the role of a debt rating agency, see Appendix D.

Other participants will play important roles in the overall process:

A **trustee** will be selected to act as fiduciary for the investors. The trustee will be responsible for holding the actual mortgage collateral and monitoring the repayment to investors. The trustee will need adequate computer capacity for record-keeping and investor reporting.

An investment banker, or **merchant banker**, will be selected to place the issue with investors. This will include, assisting in the selection of the mortgages collateralizing the issue, assisting in preparing the pay-out schedules for investors (computer programs), coordinating with the conduit and trustee, securing the rating, preparing the prospectus, negotiating the credit enhancements and marketing. At times, the investment banker may go "at risk", that is, will actually purchase or underwrite the issue and be responsible for making a market.

The following table summarizes key players and their responsibilities:

Function	Name of Organization	Responsibilities
GSL Counterpart	Secretary to the HFSC and Director of Dept. of Natl. Planning, MPPI	Oversight; monitoring policy reforms; conduit for decision making.
Borrower	Ministry of Finance	Onlender of funds; guaranty to the USG.
Conduit	To be formed	Ultimate borrower of HG funds. Program implementer; purchase mortgages; sell securities.
Participating credit institutions	SMIB, HDFC and other approved credit institutions	Lending to homeowners; selling mortgages to conduit.
Securities Insurance	To be formed by the Conduit	Credit enhancement for low-income portion of debt issues.
Mortgage Insurance	To be formed by the Conduit	Insure owners of mortgages against default by homeowner.

Merchant Banker	Any of the merchant banks	Underwriter; investor or broker.
Debt rating agency	To be formed or imported	Credit enhancement for debt issues.
Trustee	Commercial Bank or qualified law firm	Fiduciary for investors.

4. Other details

- Interest rates: interest rates will be set by each participating institution at market levels needed to be profitable. Unlike the first phase of 383-HG-004, there will be no minimum interest rate.

- Debt issues and low-income loans: Debt issues can be comprised of any kind or mix of mortgage loans held in the conduit's portfolio, provided that during any 12 months of operation, at least 25% of the debt issues (rupee value) be backed by low-income mortgages. Low-income loans are anticipated to average at least Rs. 50,000 each, about 25% of the size of a typical middle-income loan. Requiring that 25% of the rupee value of the issue be comprised of low-income loans should tend to equalize the *number* of loans that comprise the pool backing the issue.

- Credit enhancements: apart from the credit ratings bond insurance scheme, debt issues may require overcollateralization to assure adequate cash flow coverage to service bond coupons. This means that a Rs.100 million issue may require Rs.125 million in mortgages as collateral (25% overcollateralization.) The trustee will ensure that this ratio is maintained throughout the life of the bonds. As the bond issue will probably amortize more quickly (not mature, but amortize) because it will carry a lower coupon than the nominal rates in the mortgage pool, the trustee will be required to release mortgage collateral back to the conduit from time to time. Another form of credit enhancement may be to mix seasoned loans (e.g., loans 2 or more years old) into the mortgage pool. Seasoned loans are generally considered more stable and less a credit risk than newly originated loans. Other forms of credit enhancements should be studied and applied where appropriate.

B. Leveraging additional loans with the use of HG resources

The new program design anticipates using up to $5 million of the HG loan to capitalize the securities insurance and mortgage insurance company. The $5 million could be split equally as capitalization for each insurance fund.

Mortgage insurance will be used as the incentive for originators to make low-income mortgages. HG resources will be used to provide the insurance coverage at no charge to the homeowner/borrower or the originator. The insurance coverage will extend to only a portion of the principal balance of the loan being insured (e.g., the first 10% of the loan). Future increases in the insurance capitalization for low-income loans will have to come from the GSL equity partner. The idea of providing mortgage insurance at no cost is a very important concept for this program. In a sense it rationalizes the GSL's role in the provision of mortgage credit, because rather than lend money (ineffectively) as it has done in the past, the GSL will now provide the incentive for the financial markets to make the loans. The cost to the GSL will be far less than before.

Securities insurance, as explained previously, is viewed as an important credit enhancement needed to attract investors who normally would demand a government guarantee. The securities insurance scheme also will play another important role, that of leveraging

additional funds. If, for example, the insurance coverage extends to 10% of the principal balance of defaulted securities, and that coverage were adequate to attract investors at the right price, then it can be expected that the $2.5 million in capitalization for the securities insurance fund could leverage $25 million (Rs. 1.225 billion) in securities issues. Applying the rule that 25% of issues must be constituted with low-income loans, the $5 million should leverage over Rs. 306 million in low-income loans; over 6,000 loans assuming Rs. 50,000 per loan. Premium income and retained earnings will allow the leverage effect to continue growing.[5]

C. Incentive to Originate Low-Income Mortgages

The conduit will provide a powerful incentive to originators to make low-income mortgages. First, originators can secure no-cost insurance coverage against default through the mortgage insurance scheme, thus eliminating the credit risk obstacle. Secondly, the originator can generate profits off low-income loans by selling them to the conduit-- the income comes in the form of the discount on the sale of the loans. Additionally, the originator will enjoy a servicing fee on all loans it sells to the conduit.

D. Policy Agenda

The revised Housing program will introduce a new policy agenda for the GSL to address constraining conditions in a number of areas. The policy agenda should be ratified and proposed by the Housing Finance Steering Committee (HFSC). Some notional agenda items include:

1. Address Land tenure issues: because mortgage loans will be required for the program, problems in land registration and access to clear title by landowners must be addressed by the GSL. This problem is particularly acute for poor people, most of which live in rural areas. The procedure currently employed by the HDFC to clear title prior to loan closing should be employed at the outset of the program. However, the major obstacles to land tenure regularization must be dealt with. These include confusing and competing land title registration systems; allowing old, unsettled claims to remain on the records; and overly cautious title insurance search criteria.[6]

2. Remove statutory barriers to investments in long-term debt instruments: some current statutes constitute a disincentive to investments in long-term debt. The current stamp duty of 25 basis points on the value of every security trade is onerous and should be either greatly reduced or eliminated. Insurance company investment regulations require some form of commercial bank "guarantee" on investments in debt instruments. This simply adds to the costs of debt issues without analyzing the credit merits of the debt issues themselves.

3. Eliminate Rent Control Laws: Rent control laws in Sri Lanka have effectively stopped investment in multi-family real estate development. Studies have shown that rent controls hurt poor people the most and the GSL should work towards recognizing this and making appropriate changes.

4. Reduce Mortgage Transaction Costs: documentary stamps and other legal charges

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[5]Note that these capitalization numbers and estimated leverage effects are estimates and may vary as more detailed studies conclude otherwise.

[6]See John Miller, Sri Lanka: The Land Tenure Problem as a Constraint to Housing Finance, (Abt Associates, March 1993) for a complete analysis and recommendations with respect to this subject. Miller's recommendations could form the basis for a policy agenda item.

on the mortgage instrument often makes the mortgage process an expensive and onerous one, especially for the poor. Methods to reduce these costs to acceptable levels must be put into place.

Achievement of the above policy agenda items will have far reaching effects on the capital and real estate markets in Sri Lanka and will have a tremendous beneficial impact on the lives of poor families. However, a final policy agenda will require some further study as to completeness and feasibility, particularly as it relates to the contentious issue of land tenure.

E. Expected Outputs

By the end of FY96, the following achievements are expected to be in place:

- Approximately Rs.490 million ($10 million) in HG loans to low-income families.
- At least Rs. 600 million in long-term (7 or more years) mortgage-backed debt issued by a secondary market conduit of which at least 25% of the collateral is comprised of low-income loans.
- A functioning securities insurance facility adding credit enhancements to long-term debt issues.
- A functioning mortgage insurance facility indemnifying originators and owners of mortgages.
- A functioning debt rating agency adding credibility to debt issues.
- Evidence of progress in the GSL's efforts to remove barriers and disincentives to investments in long term debt and real estate.
- Evidence of progress in the GSL's efforts to regularize land tenure problems in Sri Lanka.
- New long-term debt issues entering the market in competition with mortgage-backed securities.

F. USAID Project management

USAID project management can be accomplished by one full-time FSN Housing Advisor and a USPSC devoting 30-40% of his/her time to the project. The Housing Advisor would be responsible for implementation issues, procurement and contracting of TA and related activities. The Housing Advisor would supervise the work of the USPSC who will work with the GSL Counterpart, participating originators, merchant banks, the conduit, institutional investors and appropriate regulatory agencies in identifying and delivering technical assistance as needed.

G. Cost estimates and financial plan

1. Originations, HG borrowings and Bond Issues

Based on past performance by participating institutions and valid assumptions as to future performance, the following monthly volume of originations was estimated. This table illustrates the minimum expected takedown every month.

Lender	Avg. Loan Size in Rs. 1/93-5/94	Anticipated # of loans per month	Monthly Volume Rs.
SMIB	Rs75,000	100	7,500,000
HDFC	55,690	175	9,745,750
People's Bank	22,250	200	4,450,000

Natl. Savings Bank*	85,000	35	2,975,000
Seylan, Hatton and Commercial Banks	75,000	30	2,250,000
Totals		540	26,920,750

*Note: National Savings Bank would be a new participant to the program. Amounts are based on discussions with the Chairman and CFO.

The table below projects these estimates over a timeline and describes expected HG borrowing dates.

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Mtgs. Made (Rs. Millions)	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	621
HG Borr'ws (US$ Mill)									10*										5					15
Bond Issues			100		100		100		100		100		100		100		100		100		100		100	1,100

*Note: Includes the $5 million needed to capitalize the insurance company. Also, note that bond issues will likely contain middle-income loans as well as low-income loans, thus the large amounts of the issues.

2. Grant resource requirements

Approximately $832,800 in grant resources to fund technical assistance and training will be sourced from the Mission's Policy Reform Support project (PRS). The technical assistance and training will be needed in the following areas:

PDP Amendment and Policy Agenda

Beneficiaries: USAID. Assistance to help USAID amend the current PDP and develop the final policy agenda. Also, assistance to better define needed TA and training and draft appropriate Scopes of Work. **Level of effort:** 1 person month

Housing Finance Steering Committee

Beneficiaries: HFSC. Funding to staff the Housing Finance Steering Committee plus train staff member through the Fels Center course (University of Pennsylvania.) It is anticipated that one local-hire professional will fill this position.

Legal and Regulatory Constraints

Beneficiaries: GSL. Broad-reach technical assistance to draft a GSL action plan to: eliminate disincentives for the trading and investment in long-term debt securities; phase out rent controls and other disincentives to multi-family housing investments; and, develop a commitment and a calendar for the regularization of land tenure in Sri Lanka (includes work with Title Insurance companies). **Level of effort:** 4 person months

Conduit Establishment and Start-up

Beneficiaries: the Conduit. TA and training from an institution such as the FNMA to help write workplan, establish capitalization requirements, develop operating guidelines and marketing plans. **Level of effort:** 3 person months.

Securities Insurance Facility

Beneficiaries: The Conduit. Technical assistance and training to recruit qualified personnel, establish claims procedures, determine premium adequacy, develop investment plans, etc. **Level of effort**: 3 person months

Mortgage Insurance Facility

Beneficiaries: the Conduit. technical assistance to the conduit to help operationalize a mortgage insurance scheme. Determine loss rates, premium structure, recapitalization schedules. **Level of effort**: 3 person months

Loan Securitization Documentation and Processing

Beneficiaries: Originators/issuers and trustees. This is a broad area to cover. Items to be included are loan documentation (application forms, closing documents, note, mortgage, etc.) conformity, conformity in accounting treatments and amortization techniques,detailed procedures for managing a pipeline, warehousing loans, pooling mortgages, computerization, investor reporting and management reporting. **Level of effort**: 3 person months

Managing Reinvestment Risk

Beneficiaries: Originators/issuers and merchant banks. Issuers of mortgage-backed bonds that are not pure pass-through instruments face the risk of not being able to reinvest principal repayments at a yield sufficient to cover bond coupons at future dates. This training will cover methods with which to mitigate that risk. **Level of effort**: 1 person month

The following table summarizes estimates of the TA and training resources needed for implementing this project. (A short -term TA person month is estimated to cost $32,000; long-term PSC at $20,800 per month.)

Technical Assistance	LOE	FY95	FY96	Totals
USPSC Technical Advisor	4 person months/yr	$82,000	$82,000	$164,000
Short-term TA and Training	18 person months	576,000	0	576,000
HFSC Staffing & Training	na	24,400	4,400	28,800
Annual Evaluation of Policy Agenda	2 person months	32,000	32,000	64,000
TOTALS		$714,400	$118,400	$832,800

3. Implementation plan

a. Implementation schedule

The new PDP and Implementation Agreement should be completed by October 1994. Formalization with the GSL should be accomplished by November 1994. Project implementation would begin in December 1994 and extend through November 1996 which is the new PACD.

b. Monitoring and evaluation

An annual evaluation of the project and policy agenda is recommended.

V. Administrative analysis

A. Borrower of HG resources

The Ministry of Finance will be the borrower of record for HG loans on behalf of the GSL. The GSL will provide its sovereign guarantee to the USG and will agree to borrow up to $15 million in HG-backed loans over the next two years on terms and conditions outlined in the loan agreement, and to onlend the local currency equivalent to the conduit to purchase and insure low-income housing loans and long-term debt issues.

B. Manager of local currency on-lent from the HG loan

The conduit will function as the project implementing institution, purchasing mortgage loans from participating financial institutions and issuing long-term debt.

Annex A. Constraints to Long-term lending.

The following is reprinted from the Concept Paper: HG Amendment to the PPI Project Paper (May 25, 1993) and this piece's principal author was Mr. Brad Warner, ISTI.

Sri Lanka's financial institutions are relatively diverse. They are capable of providing private borrowers with at least short term working capital.

A host of policy and institutional problems, however, make longer term financing virtually impossible to provide from local sources. Some interest rates are controlled and the use of market based monetary instruments is limited. The development of Sri Lanka's financial institutions is also impeded by serious debt recovery problems, insufficiently rigorous central bank supervision, and inadequate accounting and auditing.

Discussions with local financial institutions indicate that the maximum amount of capital that could be raised for a BOO/BOT project would be about $10 million, repayable in 3 to 5 years. This amount and tenor is too little and too short for most BOO/BOT projects.

I. The Debt Market

The local debt market is dominated by issues of short maturities, primarily government treasure bills. No long term government bonds are outstanding and the corporate bond market, at least until recently, has been moribund.

The two state owned banks, the Bank of Ceylon and the People's Bank, own more than 60% of the commercial bank assets, but are technically insolvent when internationally accepted provisioning for bad debts is taken. As advocated by the World Bank, these banks need to be restructured after appropriate provisioning and recapitalization is completed. In particular, the two state owned banks need to be commercialized to improve the competitive environment of the sector, and the Bank of Ceylon needs to be privatized.

Local pension funds and insurance companies have successfully raised large pools of long term capital. However, government policy currently requires this money to be invested in short term government securities.

The two development banks, The National Development Bank (NDB) and the Development Finance Corporation of Ceylon (DFCC), while relatively sound and well managed, are unable to mobilize long term local currency funds for onlending. Instead, they have to rely on IBRD and ADB loans for long term local currency onlending.

Institutional investors such as insurance companies and pension funds are essentially captive institutions for government securities.

Limited domestic savings and the underdeveloped state of its financial markets implies that Sri Lanka will require foreign capital to finance large infrastructure projects.

Foreign Commercial Debt - This is normally a very important source of financing for private sector infrastructure projects, which by nature are fairly highly geared. The scope for private foreign debt financing of BOO/BOT projects is limited by Sri Lanka's high levels of foreign debt (over $7 billion) and the reluctance of foreign commercial banks to take project risk in Sri Lanka.

External Debt Outstanding by Type of Creditor (1992)
(in US$ Million)

Commercial Banks	$747.4
Supplier Credits	18.9
Multilateral Donors	2,787.9
Bilateral Donors	3,403.5
Private Non-Guaranteed	179.9
TOTAL	$7,137.5

Source: The World Bank

Direct Foreign and Portfolio Investment - Foreign equity in the form of direct investment can be attracted, depending on the structure of the particular project.

Considerable interest exists among foreign portfolio investors for share ownership in Sri Lanka companies. This demand for shares can support infrastructure projects indirectly when Sri Lanka companies come to market to raise equity capital related to BOO/BOT projects. As a part of its privatization program, the GSL was able to sell majority ownership, primarily to foreign investors, in a number of companies through open bidding on the stock exchange.

Despite low wages and a strategic location, Sri Lanka has remained a marginal recipient of foreign direct investment. During the last 12 years, Sri Lanka has received an annual average of US$ 40 million direct foreign investment. This amount has been declining in recent years due to the perception of increased country risk as a result of the ongoing civil conflict. Uncoordinated policies and the discretionary nature of approval procedures have also hindered foreign direct investments.

Debt for Equity Swaps - A debt for equity swap is a mechanism for financing equity from foreign commercial bank debt. Debt for equity swaps have featured prominently in a number of privatizations and restructuring and could be of value in securing equity for BOO/BOT projects, but at the present time Sri Lanka does not have a debt for equity program in place.

II. The Equity Market

The Colombo Stock Exchange (CSE) has evolved substantially during the last two years. While it can play a potential role in infrastructure project financing, the plausible amounts that could be raised remains small in relation to estimated needs. But, with development, over time the CSE could over grow as a source of finance for environmental infrastructure projects.

The Colombo Stock Exchange (CSE) Prior to 1990 - To better appreciate the remarkable transformation that has occurred at the CSE, one should consider its condition prior to 1990. In 1985, the perennially moribund stock market was reorganized. In 1987, the Securities Council Act created, for the first time, a regulatory body charged with ensuring orderly markets and protecting buyers of listed equity and debt securities. The Security Council (now called the Securities and Exchange Commission or SEC) also advises the government on the development of the capital markets.

Operations on the CSE were initially slow and cumbersome, mainly because they were manual and paper based. This limited the efficiency and timeliness of share transfers. Even before the recent rise in trading in 1990 and 1991, the CSE experienced settlement difficulties.

Other, more daunting, problems were of a structural nature. Many local companies were unwilling to list, thus limiting the supply of shares on the market and reducing liquidity. Interest rate and tax policies actually encouraged companies to favor debt over equity financing. Most of the companies which did list did not trade actively, and there was little float in the market. None of the brokers operated outside Colombo, and the services they provided to clients were limited. Investment research and portfolio management skills were virtually non-existent.

The demand for shares was also severely limited. The public was generally unaware of the potential benefits of investing in shares. Those who were aware of the potential benefits, frequently lacked confidence in the market, and tended to favor less risky, albeit lower yield, bank deposits. Institutional investors, which should have been a significant source of demand, were typically government owned, and served as captives for low yield (in real terms) government debt. Foreign portfolio investment was effectively eliminated by a 100% tax on purchased shares.

The CSE after 1990 - Since then, the changes at the CSE have been dramatic, both technically and in terms of trading activity. In other areas, particularly with respect to regulatory and institutional development, the process has necessarily been more evolutionary. In 1990, the CSE was the second best performer in the world after Venezuela and has continued to appreciate strongly since then.

Several government decisions were vital to the market's "takeoff." The most important of these occurred in 1990. In June of that year the government liberalized foreign portfolio investment by abolishing the 100 percent tax on share purchases by foreigners (subject to the limitation that their aggregate share holding not exceed 40 percent of the issued holding).

Almost immediately, this triggered a surge in foreign interest in the market. This captured the attention of the CSE, the brokerage firms and the Sri Lankan investing public, and led to a rapid rise in shares that had previously been undervalued. Officials at the CSE report that there are now over fifty foreign funds approved to invest in the market.

The government implemented other supportive measures as well. For example, it revised the capital gains tax on listed shares, abolished the ad-valorem stamp duty on shares, withdrew the withholding tax of 15 percent on dividends, and withdrew the wealth tax on listed company shares.

Progress on the regulatory front was substantial during 1991, though more remains to be done. The key amendments to the Securities Act include the following:

- The SEC was given responsibility for regulating unit trusts.

- Responsibility for insider trading was put under the SEC. Previously, this area was addressed in the Companies Act.

- A takeovers and mergers code has been drafted, approved by the MOF and the FTC, and is being reviewed by the Legal Draftsman. It is expected to help reduce instances of "creeping" takeover abuses.

Domestic Securities Firms - Brokers and others readily admit that corporate finance is still not well developed in Sri Lanka, but are interested in exploring its potential further. Essentially, securities firms earn all of their revenues from brokerage. In response to the rising trading volume, these firms expanded rapidly during 1991 in terms of staff, business volume

and number of offices. This would be the ideal way of addressing the problem of distributing shares outside of Colombo and is bound to stimulate more activity in the stock market.

Technical Developments - The Central Depository System (CDS) went into operation on September 2, 1991. The share prices of all companies can be readily viewed on any of several terminals. The system also provides investors with monthly account statements and information generated by the CDS is sent to individual companies on an as-needed basis, for example, when dividends need to be paid. Moreover, because the CDS records the time sequence of trades as well as the identity of which brokers are transacting those trades, the CSE has unprecedented ability to monitor insider trading.

Supply of Shares - While demand for shares in Sri Lanka has grown steadily, the supply, with the exception of those created through privatization, has lagged. The CSE is attempting to encourage as many new companies as possible to list.
As in other markets, Sri Lankan companies in deciding whether to list or not, must consider the benefits and costs. There is a direct fiscal incentive to list, namely, the corporate tax rate in Sri Lanka is only 40 percent for listed companies as compared with 50 percent for private companies.

The difficulties in getting companies to list in other emerging markets have been well documented. Generally, there is widespread reluctance to widen the ownership of family owned and run companies for fear of loss of control. Certain firms also fear the disclosure requirements of being listed, especially in instances where they have a history of underpaying their tax obligations. In Sri Lanka as elsewhere these concerns have limited new company listings and the availability for sale of shares held by family members in existing listed companies.

Another significant problem in Sri Lanka is the relative cost of debt and equity finance. After allowing for inflation, the net-of-tax real cost of debt has often been negative. (The easy availability of debt and poor debt recovery legislation are additional factors favoring debt financing by firms.) Equity financing, on the other hand, can be quite expensive.

As other countries have demonstrated, some of the reasons for reluctance begin to ease once prices on the stock market begin to increase. However, an additional constraint is often that the corporate finance skills needed to take a company public are as yet poorly developed. Many companies are still poorly informed about both the process and possibilities.

Demand for Shares - Domestic brokers generally contend that foreign investors have been the driving force behind the exchange during the last year. They describe their domestic clients as "speculative." That is, they do not invest on the basis of the fundamental value or earnings potential of a firm. Thus, to date they have seen little need to undertake research on the market. The result is that, with the exception of John Keells, Forbes and Walker, and the Merchant Bank of Sri Lanka, local research is still not available. However, given the strong foreign interest in the market, there is a growing incentive for local brokerage firms to develop these capabilities. And gradually that seems to be happening. The main constraint at this point is a severe storage of trained securities analysts.

Institutional Investors - Still missing from the demand side of shares are domestic institutional investors. The largest pension funds in the country are the Employees Provident Fund (EPF) and the Employees Trust Fund (ETF). These are still captive instruments of government policy. EPF is by far the larger of the two. The labor commissioner estimates that

the EPF collects roughly 400 million rupees per month. Currently, both EPF and ETF invest all their funds in either treasury bills or government owned corporations.

Although technically these funds could diversity, both are subject to directives from the Ministry of Finance which basically determines investment policy. To give an idea of how dependent the government is on the EPF, its director estimates that the EPF funds 60 percent of the government deficit. In that light, it seems unlikely that the investment policy will be allowed to change soon. Unfortunately, both funds earn a negative real return on their investments. Obviously, this is unfair to the beneficiaries of these funds and ironically, the directors of both funds readily acknowledge that the situation should change.

There are some provident funds that pre-date the ETF and EPF, but compared to the EPF they are very small. Although there are about 150 accounts in total, the aggregate inflow of funds per month is less than 100 million rupees. Unlike the EPF, these funds can invest in high yield securities but there are caveats to this. Every year, for example, the labor commissioner must approve the accounts to ensure they are sound investments. He notes that in the past there have been instances where funds have been mismanaged.

The government has begun to address the Exchange's obvious need for greater institutional participation, by recently passing legislation which permits the formation of unit trust, which are expected to play an important role in generating demand. Several firms, including the DFCC and Capital Development and Investment Corporation, Ltd. (CDIC), are applying for licenses to set up unit trusts. The incentives offered under the legislation include a five year tax holiday, no capital gains tax and no withholding tax.

Private insurance companies are just beginning to invest in the CSE but they are still small and subject to limitations on the percentage of paid in capital they are allowed to commit to equity. Meanwhile, the two largest insurers remain state owned and, like the state pension funds, are captives of government policy with respect to their investment decisions.

Clearly, rules governing the investments of private sector insurance companies need to be adjusted to allow more equity investment. Public insurance companies can be privatized, and the investment policies can also be changed to permit greater equity in their portfolio.

Annex B. Financial Summaries of the SMIB and the HDFC.

1. The State Mortgage and Investment Bank

The State Mortgage and Investment Bank (SMIB) was created in 1979 with the merger of the Ceylon State Mortgage Bank and the Agricultural & Industrial Credit Corporation. It is chartered under the Monetary Act. It is the largest mortgage lender in Sri Lanka.

The SMIB's assets have grown from Rs. 0.6 billion at the end of 1984 to over Rs. 3.2 billion by the end of 1993 reflecting a compounded annual growth rate of 20.4%. Growth slowed in the late 80s as the bank experienced a severe liquidity crisis when the GSL intervened in the SMIB's traditional source of long-term debt (the ETF.) Compounding problems for the SMIB at that time was a worsening loan collection rate (36% in 1990). Since 1991, the SMIB has been the recipient of a sizeable Asian Development Bank program of technical assistance and grants designed to increase cost recoveries and create more efficient operations. Results have been impressive, with the collection rate improving each year to just below 90% at the end of 1993. The liquidity crisis was averted by expanding it's branch system for accepting deposits, through improved recovery rates and through the USAID and an ADB housing loan program.

Currently, the SMIB is closing (originating) 350 loans per month for an average value of Rs. 40 million. This translates to an average loan size of Rs. 115,000 (US$2,340). The SMIB reports that 30% of its originations are to low-income families. This implies that approximately Rs. 12 million in low-income loans are made each month.

The State Mortgage & Investment Bank

All amounts in Rupees
as of 12/31

Assets	1989	1990	1991	1992	1993
Current Assets	262,921,271	240,850,395	611,318,339	433,072,648	385,546,050
Housing Loans	2,241,969,119	2,322,179,456	2,355,162,535	2,407,285,926	2,634,073,509
Other Loans	79,430,820	90,495,189	95,506,739	95,583,536	121,862,014
Total Loans	2,321,399,939	2,412,674,645	2,450,669,274	2,502,869,462	2,755,935,523
Other Assets	36,506,693	36,800,474	43,049,081	63,843,716	90,494,228
Total Assets	2,620,827,903	2,690,325,514	3,105,036,694	2,999,785,826	3,231,975,801
Liabilities and Equity					
Deposits					
Borrowings	2,239,048,707	1,985,275,178	2,291,372,034	2,078,054,673	2,204,307,638
Other Liabilities	4,040,484	5,067,558	7,455,724	8,711,621	10,682,126
Capital & Reserves	377,738,712	699,982,778	806,208,936	913,019,532	1,016,986,037
Total Libilities and Equity	2,620,827,903	2,690,325,514	3,105,036,694	2,999,785,826	3,231,975,801
Income Statement					
Interest Income	308,266,683	345,787,775	407,483,548	455,416,575	461,508,129
less: Interest Expense	253,867,454	285,363,341	267,772,198	318,679,262	306,634,276
Non-Interest Income	7,685,309	35,796,771	832,328	1,425,658	1,008,828
Net Operating Income	62,084,538	96,221,205	140,543,678	138,162,971	155,882,681
less: G&A Expenses	32,602,791	37,292,178	49,611,416	54,924,666	62,436,219
Loan Losses	0	0	0	17,576,600	0
Other Expenses	335,435	364,974	559,292	945,237	2,688,335
Net Income before taxes	29,146,312	58,564,053	90,372,970	64,716,468	90,758,127
Performance Indicators					
Equity Ratio		20.29%	25.99%	28.16%	30.97%
Net Income to Average Equity		10.87%	12.00%	7.53%	9.40%
Gross Income to Average Working Assets		16.12%	16.79%	18.45%	17.59%
Cost of Funds		10.75%	9.24%	10.44%	9.84%
G&A Expenses to Average Assets		1.40%	1.71%	1.80%	2.00%
Net Banking Income to Average Assets		2.21%	3.12%	2.12%	2.91%
Break-even Yield (BEY)		12.12%	13.02%	15.03%	14.00%
Maximum Income Ratio (IR)		30%	30%	30%	40%
Maximum Loan-to-Value Ratio (LTV)		75%	75%	75%	75%
Maximum loan term (yrs)		20	15	15	15
Minimum home loan interest rate		20.50%	20.50%	20.50%	18.50%
Housing share of Portfolio		86.32%	75.85%	80.25%	81.50%
Housing Loan Recovery Rate		n/a	36.89%	80.00%	87.50%
Portfolio Default Rate (6 mo +)		n/a	0.73%	0.73%	0.67%
Percent of portfolio in ARMs		0.00%	0.00%	0.00%	0.00%

Note: The accounts are been expressed in a format more in use in the United States.

2. The Housing Development Finance Corporation

The HDFC was created in 1979, with USAID assistance, as a building society and is chartered under the Companies Act. From its inception until 1990, the HDFC performed poorly with few mortgages originated, low recovery rates and severe liquidity shortages. A reorganization in 1990 however, brought in new management and reforms which have yielded positive results. Since the end of 1989, the HDFC has grown from Rs.191.4 million to Rs.483.1 million, an annual compounded growth rate of 26%. Housing loans as a share of assets grew from 78% to over 91% during the same period. The HDFC has not solved its liquidity problems as mortgage demand continues to exceed the HDFC's ability to fund. Currently the HDFC is originating 300 loans per month for a total of Rs. 20 million (US$408,000). Demand is Rs. 40 million per month. Of the Rs. 20 million per month, approximately 60%, or Rs. 12 million, consists of low-income lending.

Housing Development Finance Corporation (HDFC)

Amounts expressed in Rupees
1992 and 1993 as of 12/31 ; all others as of 3/31

Assets	1989	1990	1991	1992	1993
Current Assets	22,876,478	42,784,216	17,329,984	17,062,252	32,096,653
Housing Loans	167,801,508	165,171,401	189,568,199	264,182,986	441,227,358
Other Loans					
Total Loans	167,801,508	165,171,401	189,568,199	264,182,986	441,227,358
Other Assets	755,141	3,663,680	5,077,595	[illegible],259,374	9,825,907
Total Assets	191,433,127	211,619,297	211,975,778	287,504,612	483,149,918
Liabilities and Equity					
Deposits	15,741,386	17,083,883	13,683,712	12,839,972	16,208,645
Borrowings	136,564,128	133,506,129	151,698,032	220,798,879	410,000,246
Other Liabilities	8,596,876	25,353,601	12,208,068	19,554,867	28,453,651
Capital & Reserves	30,530,737	35,675,684	34,385,966	34,310,894	28,487,376
Total Libilities and Equity	191,433,127	211,619,297	211,975,778	287,504,612	483,149,918
Income Statement					
Interest Income			21,364,630	20,204,832	44,465,146
less: Interest Expense			12,190,267	8,337,867	25,427,162
Non-Interest Income			1,638,452	2,403,278	4,381,767
Net Operating Income			10,812,815	14,270,243	23,419,751
less: G&A Expenses			10,143,303	9,590,415	18,401,181
Loan Losses			1,226,451	1,669,439	1,940,534
Other Expenses			1,096,911	971,189	2,472,090
Net Income	9,734,830	3,236,803	(1,653,850)	2,039,200	605,946
Performance Indicators					
Equity Ratio		n/a	16.54%	13.75%	8.15%
Net Income to Average Equity		n/a	-4.72%	5.94%	1.93%
Gross Income to Average Working Assets		n/a	12.97%	9.96%	13.85%
Cost of Funds		n/a	5.76%	3.34%	6.60%
G&A Expenses to Average Assets		n/a	4.79%	3.84%	4.78%
Net Banking Income to Average Assets		n/a	-0.78%	0.82%	0.16%
Break-even Yield (BEY)		n/a	11.67%	6.84%	11.18%
Maximum Income Ratio (IR)		30%	30%	30%	30%
Maximum Loan-to-Value Ratio (LTV)		75%	75%	75%	75%
Maximum loan term (yrs)		20	20	20	20
Minimum home loan interest rate			17.00%	17.00%	17.00%
Housing share of Portfolio		78.05%	89.43%	91.89%	91.32%
Housing Loan Recovery Rate		73%	93%	93%	94%
Portfolio Default Rate (6 mo +)		n/a	0.64%	0.63%	0.44%
Percent of portfolio in ARMs		n/a	2%	2%	4%

Annex C. Mortgage-backed Securities and the Institutional Perspective

The following is an article from Savings Institutions (Sept. 1984) ,the monthly publication of the United States League of Savings Institutions. The authors, James W. Christian and Howard W. Kane were, at the time, the Chief Economist and Director of the Economics Dept. and the Deputy Director of the Economics Dept., respectively.

REVVING UP THE CMO CAN MAKE LOW-RATE LOANS A BLESSING

Back in the day of hot rodding, one of the favorite combinations was putting a souped-up engine on a Model-T frame.

With the development of the collateralized mortgage obligation, mortgage finance entered its own hot rodding era with a CMO "power plant" on a fixed rate mortgage chassis.

Only a few months ago, when savings institutions had their Formula I adjustable rate mortgages on the drawing board, the CMO hot rod looked formidable enough to prevent ARMs from ever making it to the test tract. That threat has now passed, and although ARMs can still use some fine tuning, they have clearly won their racing stripes. But, so have CMOs.

Savings institutions have always led the field in the past and their Formula I ARMs are doing so again today. There are cars for courses, though: When and if interest rates ever decline to sensible levels, fixed rate mortgages will be back on the tract - with that new CMO engine giving them twice as much horsepower as before. To continue leading the pack throughout the interest rate cycle, savings institutions may have to bring the CMO under their colors.

The technology to make this happen exists and savings institutions enjoy some advantages in this process that can keep them in the drive's seat. To see how this might come about, let's take a look at the fundamentals.

MARKET EFFICIENCY

A financial market is said to be efficient then it is characterized by "depth, breadth and resiliency" - depth meaning a large number of people trading the security, breadth meaning a wide variety of people trading and resiliency meaning that the market stabilizes quickly after a lock. Efficiency then means least cost because liquidity and risk premiums are minimized.

The market for short-term U.S. government securities is a good example of an efficient financial market. By contrast, the fixed rate mortgage market is still a long way from being efficient in these terms.

All of the techniques used by secondary mortgage market institutions up to the time of the introduction of the CMO improved market efficiency but still left mortgages in second-class status compared with bonds. To see how the CMO makes a giant step in this direction, we first have to see what bonds have that pass-throughs don't.

First of all, bonds do not amortize. They yield interest payments, usually at six-month intervals, and pay principal at maturity. These qualities produce cash flow predictability, a feature that makes them attractive to institutional investors.

Cash flow predictability is enhanced by"call protection" provisions written into most bonds. U.S.

government bonds, for example, cannot be prepaid before their stated maturity; they have 100% call protection. Corporate bonds frequently contain a five-year or 10-year no-call provision; maturity might be 20 or 30 years. Call protection assures the investor that he will not face the risk of having to reinvest principal at a low yield during a specified period of time. Moreover, bonds can be written in a wide spectrum of maturities to appeal to a wide range of investors.

None of these features attach to mortgage-backed securities when they are structured as pass-through instruments. A dribble of principal that must be reinvested flows through to the investor in every monthly payment. Larger chunks of principal materialize without warning when mortgages in the pool prepay; there is no call protection.

The reinvestment risk to which investors are exposed is both real and costly. Mortgage prepayments tend to rise when interest rates fall as borrowers either re-finance or sell their homes to buy new or different ones, thus satisfying their old mortgages and writing new ones. The investor is then forced to reinvest at a lower rate. Prepayments aside, the monthly flow of principal payments is also a reinvestment nuisance that adds to administrative cost even though the investor may have roughly an equal opportunity to reinvest at higher as well as at lower interest rates.

These are the unattractive aspects of mortgages that CMOs attempt to remedy. Moreover, to the extent that the CMO resolves these difficulties, it makes available to the market a security with some qualities that are superior to other bonds.

For example, a mortgage pool that is structured with regional diversity and combines seasoned loans with new originations should have lower credit risk that the bond issue of a single corporation, no matter how large or how solvent it is at the time the bond is issued. Conceivably, a highly developed, securitized mortgage market could be more efficient, that is, trade at lower yields, than the corporate bond market.

THE CMO SOLUTION

The key to the structure of the CMO is its use of the total cash flow of a mortgage pool as collateral rather than the principal balances of the underlying mortgages. It is through this device that the CMO achieves different maturities to appeal to a broader range of investors and a high degree of call protection. Here's how.

A pool of fixed rate mortgages is assembled. Whatever the average yield and average maturity of the pool, it produces a cash flow consisting of principal and interest payments. This cash flow can be structured to produce near equivalents of bonds in several maturities (see chart above), even though the underlying mortgages might all have scheduled 30 year terms. This characteristic of the CMO allows long-term mortgages to be funded, in large part, by investors whose preferred maturities are much shorter than the mortgages. The CMO thus broadens and deepens the mortgage market. Other features of the CMO create degree of call protection to enhance the investment quality of the security. Structured into four maturities (also known as classes or tranches), the shortest (say, three-year term) maturity of a CMO has no call protection and both principal and interest pass through to the investor but at six-month intervals rather than monthly. The second tranche of a CMO may have a five-year maturity with approximately three years of call protection. The third tranche may have a 10-year maturity with call protection in force for five years. The final tranches will be a modified zero-coupon security with a maturity of, say, 20 years.

Note that the tranches are structured in such a way that principal payments can always be made to one tranche and that the call protection on the next longest tranche extends only until the preceding tranche has been satisfied. While call protection on a give tranche lasts, however, semiannual interest only is paid, just like a bond.

For example, the call protection on the second tranche holds only until the first tranche, the three-year

maturity, has been satisfied. Depending upon the flow of prepayments during the first three years, the first tranche may actually mature in less that three years. In this case, call protection on the second tranche expires and it begins to receive principal payments. Similarly, the third tranche may have a scheduled maturity of 10 years, with call protection for five years, or until the second tranche has been satisfied. Similarly, the zero-coupon, or accrual, period for the final tranche lasts only until the preceding tranche has been satisfied. Interest and principal payments will then be applied to this tranche of the CMO until it, too, has been satisfied.

Clearly, the call protection afforded by the CMO isn't as airtight as a Treasury security or even a corporate bond, but the yield - often 50 basis points to 100 basis points higher than comparable maturity Treasuries - is apparently sufficient to compensate many investors for the reinvestment risk they are assuming. In 1983, when the CMO was introduced, $54 million of these securities were issued. Through the first seven months of 1984, $7.4 billion of CMOs have been issued.

Virtually all of these issues have been structured on new mortgage originations that may exhibit prepayment experience significantly different from past performance. This fact makes the CMO call protection more uncertain than it would be if seasoned loans were blended into the pools.

CMO issuance has also been limited in recent months by the success of the ARM and the rise of interest rates on fixed rate mortgages; CMO issuers are having a difficult time generating enough fixed rate mortgages to fill up the pools.

Guess who's sitting on a mountain of seasoned, fixed rate mortgages?

NEW OPPORTUNITY

If a seasoned loan is defined as one having five or more years of payment experience, then savings institutions currently hold between $200 billion and $300 billion of seasoned, fixed rate mortgage loans. Such loans, of course, were originated before and during 1979. As far as savings institutions are concerned, these loans are "underwater" at current interest rates because their coupons are 10% or less while market rates are far higher.

Savings institutions might like to get these loans off their books and use the proceeds of the sale to originate ARMs that are a better match for their deposit liabilities. But most institutions have already sold as many of them as their depleted net worth positions will allow. Of course, institutions using Regulatory Accounting Practices can amortize discount losses over a 30-year period. But even under RAP, a loss is a loss that will put a drag on profitability for many years to come. And institutions using Generally Accepted Accounting Principles must recognize the discount loss on a sale of assets in the year the loss occurs. No help there.

But, lo, a ray of light shines through! Three steps, one of which involves the CMO, could turn those underwater loans into sunken treasure.

First, those seasoned loans exhibit low credit risk and good call protection, features that would significantly improve the investment quality of CMOs.

Second, the CMO is debt, not a sale of assets. Thus, the only loss that a savings institution issuing a CMO would have to book would be the negative spread that would be locked in between the yield on the seasoned loans that made up part of the mortgage pool for the CMO and the cost of the CMO. Properly structured, this loss would be similar to the amortized losses from a sale of the mortgages allowed under RAP. A savings institution issuing a CMO partially secured by seasoned (currently underwater) mortgages could therefore apply RAP-type loss treatments while still operating under GAAP.

Moreover, the issuer of the CMO does not lose the full value of the mortgages should they prepay.

In a sale of assets, the loans are discounted to market value; any rights to the full face value of the mortgages are surrendered by the seller. By contrast, the issuer, not the bondholder, receives face value when the mortgages prepay.

But, third, in order to achieve the size of a CMO issue that will be attractive to institutional investors, it is likely that more than one savings institution has to participate. The minimum size of a CMO issue packaged for the institutional market is about $75 million. Most savings institutions would be hard pressed to place the proceeds of so large an issue even if they could assemble the mortgages.

To achieve the minimum CMO issue size, several savings institutions would have to establish a network (or conduit) and, as an intermediate step, issue another instrument that hasn't yet been discussed.

If you've followed us this far, understanding the new instrument will be a piece of cake. It's a pay-through bond.

Secured by the cash flow of a pool of mortgages, the pay-through bond has a single maturity and is retired on a standard amortization schedule; bondholders receive semiannual payments of principal and interest. Unscheduled payments of principal, that is, prepayments, are prorated among the bondholders, allocated by lot or according to predetermined bondholder preferences with regard to early retirement of the debt (a queuing system). In practice, pay-through bonds are structured for sale to individuals in small denominations (for example, $1,000) and to small institutions. But they can also be used as security for a CMO.

It is exactly this system that is used by the consortium of home builders that have established American Southwest. Taking maximum advantage of the tax treatment accorded builder bonds, the builders originate fixed rate mortgages on new developments, use these mortgages to secure issues of pay-through bonds in favor of their own conduit (American Southwest), which then uses these bonds as the security for the simultaneous issue of a CMO.

If builders can pull this off, surely savings institutions can, too.

STRATEGIC CONSIDERATIONS

Of course, just because savings institutions could be a force in the CMO market doesn't also mean that they should be. That issue hinges on whether savings institutions can use long-term funds profitably. The more opportunity savings institutions have for placing long-term money, the greater their stake in improving the efficiency of the secondary mortgage market to lower the cost of those funds. If savings institutions decide to take a hand, the second mortgage loan portfolio that has given them so much grief over the last few years will finally prove to be a blessing.

Strategically, if we assume that closing funding gaps is a part of every institution's game plan, two issues deserve consideration in deciding whether to bring the CMO hot rod into the savings institution racing lineup. One of these is re-building net worth; the other is asset composition.

If funding gaps are to be closed primarily by shortening the maturity of the asset side to match the short maturities of retail deposits on the liability side, the old mortgage portfolio should probably be liquidated and replaced with ARMs, and consumer, construction and commercial loans. In this approach, everyone worries about "taking the hit" to net worth. And the only way to avoid the hit is to wait for interest rates to recede to put the old mortgages above water. Even under RAP accounting, losses on loan sales are locked in for years to come. The alternative is to maintain a long-term lending position in, say, commercial real estate and joint ventures with builders that would match long-term funds raised through CMO issuance. The "hit" to net worth in this kind of restructuring would be a lot lighter and, even under RAP, loan losses would not be locked in.

Annex D. Mortgage Securities and Credit Rating Agencies

A credit rating is the end result of a process that has a credible, objective analyst determine the quality of a securities issue based on a consistent and well-known set(s) of standards. Generally, a credit rating is in the form of letter symbols such as AAA, which represents the highest credit quality. These ratings assist investors in making informed investment decisions in securities and companies that may be otherwise unknown. In the United States, for example, credit ratings play a very important role in facilitating the sale or trading of bonds in the capital markets.[7]

The desirability of having credit ratings applied to mortgage securities is no different. What is different are the criteria applied by rating agencies with respect to different forms of mortgage securities. What follows then, is a summary of descriptions of various types of mortgage-backed securities along with the factors usually considered in the rating process for each type of security. Note that these criteria are in use in the United States and may or may not be fully transferable to the Sri Lankan environment. They are presented however, so that the reader can better understand the structure and risks associated with various classes of securities.

Generally, mortgage securities can be placed into one of three categories:

1. Pass-through Certificate

A pass-through certificate represents a sale of assets of the issuing institution. It represents an undivided ownership interest in a pool of mortgages backing the certificates. As principal and interest are paid by the mortgages in the pool, those payments are passed on to the certificate holders in amounts sufficient to cover interest at the pass-through rate, plus corresponding principal and prepayments. Because these certificates are a sale of assets, they do not represent a general obligation of the issuer.

In the United States, one of the best known pass-through certificates is the Federal Home Loan Mortgage Corporation's (FHLMC or "Freddie Mac") *participation certificate* or "PC". Freddie Mac is a conduit institution that purchases mortgages from originators and issues mortgage-backed debt as a source of funds. Freddie Mac perfected a technique known as a "swap". In this case, originators would "swap" a pool of mortgages for Freddie Mac PCs representing the entire interest in that pool. The PCs would earn interest at a lower rate than earned by the mortgage pool, but the advantage for the originator was that he now had a highly tradeable, rated security in his portfolio instead of whole loans. His ability to buy and sell into the market in reaction to interest rate changes is much more flexible and he has the benefit of earning a fee for the loans that he continues servicing.

2. Mortgage-backed Bonds

Mortgage-backed bonds, or MBBs, are general obligations of the issuer. A trustee is appointed to hold the collateral as security for the bonds, and in the event of a default, the trustee liquidates the mortgages to pay the bondholders in full. The value of the mortgage pool is the security for the bondholders, and as interest rates fluctuate, that value may rise and fall. Thus, the trustee may require more collateral be placed into the pool as interest rates rise.

3. Mortgage Pay-through Bonds

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[7] James J. O'Meara and David D. Tibbals, The Role of Rating Agencies: A Standard and Poor's Perspective, The Handbook of Mortgage Banking (Dow Jones-Irwin, 1985), p. 97.

Mortgage Pay-through Bonds (MPBs) are similar to pay-through certificates in that the bond is structured so that the cash flows generated by the mortgage pool are sufficient to pay the bonds. Thus, it is the cash flows of the mortgage pool, not the pool's value, that collateralizes this type of issue. Unlike PCs, MPBs are not a sale of assets, but a debt issue. Often, PCs are used as the collateral for the MPBs. The collateralized mortgage obligation (CMO) is a very common form of MPB that creates a variety of bond payment and maturity classes from the cash flows of the mortgage pool (see appendix C).

The following table summarizes the factors usually considered by credit rating agencies when assessing the credit quality of different types of mortgage securities:

Security Type	Rating Factors	Explanation
Pass-through Certificate	1. Credit Quality of Loan Pool and Amount of Loss protection.	Is loss protection (mortgage insurance) sufficient to cover the estimate of potential losses in a worst case scenario?
	2. The financial strength of the mortgage insurer or of the source providing the loss protection.	a. Track record b. Good geographic business spread. c. Prudent investment philosophy. d. Strong capital position. e. Favorable underwriting experience. f. Capable management team.
	3. The cash advance capability of the loan servicer	Is loan servicer willing and capable to make cash advances to the certificate holders during periods of collection problems/foreclosures. Sometimes use servicer performance bonds to insure this feature.
Mortgage-backed Bonds	1. The quality of collateral.	Percentage of pool comprised of prime mortgages (low loan-to value ratios, owner-occupied, geographically dispersed pool, age of mortgages).
	2. The quantity of collateral.	Ability of issuer to maintain contractual collateral market value is rated against three factors: a. credit risk of the pool b. prepayment risk of the pool c. interest rate risk of the pool
	3. The creditworthiness of the issuer.	Analysis covers profitability, market position, asset & liability management, liquidity, asset quality, capital adequacy and quality of management.

Mortgage-Pay Through Bonds	1. The credit risk in the collateral.	Same as pay-through certificates
	2. The reinvestment risk due to prepayments and foreclosure recoveries.	Quantify loss potential based on several factors: a. Interest rate of bonds b. Coupon frequency c. Forecast of percentage of mortgages that will prepay. d. Timing of prepayments e. Minimum assumed reinvestment risk.
	3. Collateral cash flow coverage of scheduled bond payments.	Are overcollateralization requirements of the pool sufficient to cover bond coupons in the event of worsening delinquency rates.
	4. Legal structure of the issuer in event of insolvency.	Structure issue so that bankruptcy and legal system cannot disrupt the collateral pool and payments to bondholders.

As can be seen, the credit rating process is extremely detailed and exhaustive. It does for investors what investors often can't or don't do. The rating criteria summarized herein are also very topical and somewhat dated; as the markets in the United States have evolved, rating factors have expanded. Certainly, the criteria that may be brought to bear for a credit rating agency in Sri Lanka will be different from the above and will reflect investor sophistication and needs from the local economy. But it should be kept in mind that issuing mortgage securities, no matter what type, is not a simple process; all forms of risks are present, for both issuer and investor, and the degree to which those risks are mitigated during the structuring process will eventually be reflected in the cost to the issuer.

Annex E. Housing and Economic Data

In Sri Lanka, housing's share of the investment pool has been on a steady decline. In 1982 for example, total investment in housing represented 3.4% of the gross domestic product (GDP). By 1993, that share had slipped to 2.5% whereas in other developing nations housing tends to absorb about 6-8% of GDP. Indeed, between 1989 and 1993, Sri Lanka's GDP experienced an annual compound growth rate of 7.40%, but total investment in housing grew at only 1.71%.

	1982	1988	1989	1990	1991	1992	1993
Housing Invest (Current prices)	3,250	5,250	5,850	7,138	8,130	9,146	10,344
Constant (1982) Prices	3,250	3,603	3,650	3,705	3,761	3,795	3,841
GDP at Constant Prices	94,679	119,050	121,729	129,244	135,204	140,960	150,783
% of GDP at Constant Prices	3.4%	3.0%	3.0%	2.9%	2.8%	2.7%	2.5%

Note: Amounts above expressed in millions.

This decline in housing investment is beginning to have some effects. Between 1981 and 1992 the population of the country grew over 16%, about 1.4% per year. The stock of housing however, grew by only 11.7%, or 1% per year. In 1981, the overcrowding ratio was estimated about 10.7%. In 1992, that ratio was put at 8.7% due in large part to an increase in the size of the average household. Had household size remained static over this period, overcrowding would have risen to 16.1% in 1992. Sub-standard housing is not estimated in national data, thus it is entirely plausible that the housing shortage is more severe than believed.

	1981	1992	Δ %	Gr. Rate
Population (mm)	14.8	17.2	16.2%	1.4%
Households (mm)	3.1	3.4	9.7%	0.8%
Persons/hshld	4.8	5.1	6.0%	0.5%
Housing stock (mm)	2.8	3.1	11.7%	1.0%
Overcrowding	10.7%	8.7%	-18.8%	

In the past, Sri Lanka has relied almost entirely on GSL budget allocations to provide capital for housing. The principal implementer of housing policy has been the National Housing Development Authority (NHDA) which has been responsible for the a multitude of housing programs since the late 1970s, the most recent of which is the One Point Five Million Houses Program (OPFMHP). The NHDA has a poor record as a lender; collection rates have fallen as low as 20% some years. As such, the NHDA can best be looked at as a grantor organization for housing as opposed to an investor in housing. Given the government's expensive commitment to the war in the north and east, the NHDA's continued role as a consumer of scarce government resources can be ill-afforded. This has become evident in the mortgage market share between the public and private sector. In 1989, public sector institutions accounted for 78% of origination value. By 1992, that number had dropped to 52.0% and the figure for 1993 is expected to be even lower. Sadly, this comes in the face of the fact that private sector banks are not primary mortgage credit institutions: they generally only finance mortgages to their employees and preferred customers.

		Loans Granted (Rs. mill)				
		1989	1990	1991	1992	1993
Housing Lenders	NSB	51.9	70.0	66.0	105.0	156.0
Housing Lenders	SMIB	444.9	234.0	196.0	302.0	674.0
Housing Lenders	HDFC	0.0	10.0	26.0	108.0	192.0
Housing Lenders	NHDA	380.0	356.0	555.0	297.0	755.0
Housing Lenders	ICSL	95.5	20.0	25.0	0.0	0.0
Comm. Banks	Govnt.	777.7	954.2	1,011.0	1,224.0	1369.0
Comm. Banks	Private	506.6	1274.9	1,086.1	1,891.0	n/a
	TOTAL	2,256.6	2,919.1	2,965.1	3,927.0	
Priv. bank share of total		22.4%	43.7%	36.6%	48.2%	

The informal sector accounts for a large portion of housing credit in Sri Lanka. The Cooperative Rural Banks (CRBs) and the Thrift and Credit Cooperative Societies (TCCSs) have the

greatest presence in the rural sector where they are capable of generating in excess of Rs. 500 million in housing credit each year. Unfortunately, due to a chronic land title problem in Sri Lanka (clear title to property is difficult to achieve) and because of the informal lending methods employed in the rural areas, almost all housing loans are not secured by mortgages. Instead, jewelry or other valuables serve as collateral and in many cases, personal guarantees suffice. Additionally, informal sector lending is extremely short-term (2-3 years) and at high rates of interest (25%+). While no data exist to corroborate, it is felt that a huge amount of loan demand goes unfulfilled in the rural areas due to these factors.

Housing and Housing Related Loans in Rural Sector
(Rs in Millions)

	Loans Granted				
	1989	1990	1991	1992	1993
CRBs	137	215	237	256	264
BOC Ag Serv.	0.598	0.312	n/a	6	0
RRDBs	0	0	0	0	0
TCCSs	n/a	153	153	249	76
Total	137.6	368.312	390	511	340

The shortage of housing funds in Sri Lanka is underscored with the next table. This table shows mortgage data for state-owned mortgage providers. The difference between loans approved and loans disbursed is the shortfall for that year. In 1992, the shortfall was Rs. 323 million (or about 3,230 houses that would be affordable by families earning the median income). The aggregate shortfall since 1989 amounts to over Rs. 515 million, or about 5,150 houses affordable by median income buyers. Remember, these shortfall estimates are off of available data showing the differences between loans approved and loans granted. They do not include loans that are declined because of clouded land title and do not include shortfalls from the rural areas where the majority of lending activity would take place. Given the urbanization rate in Sri Lanka of 21%, it's conceivable that the actual aggregate shortfall for housing capital is Rs. 2.5 billion or more.

	Loans Approved					Loans Granted				
	1989	1990	1991	1992	1993	1989	1990	1991	1992	1993
NSB	51.9	70.0	66.0	105.0	105.0	51.9	70.0	66.0	105.0	156.0
SMIB	334.2	232.0	252.0	322.0	884.0	444.9	234.0	196.0	302.0	674.0
HDFC	11.0	14.0	52.0	108.0	192.0	0.0	10.0	26.0	108.0	249.0
NHDA	472.0	314.0	617.0	391.0	755.0	380.0	356.0	555.0	297.0	534.0
ICSL	75.5	21.0	26.0	0.0	0.0	95.5	20.0	25.0	0.0	0.0
	944.6	651.0	1,013.0	926.0	1,936.0	972.3	690.0	868.0	812.0	1,613.0

Can the private sector be expected to help make up the shortfall in *originations*? The answer is probably no for a host of reasons. First, there is little attraction for banks to establish expensive origination and servicing operations in a field in which they have no experience. Secondly, banks perceive low-income borrowers as a credit risk; most of the shortfall in mortgage credit is from low-income families. Third, banks would like a steady source of long-term debt with which to fund long-term mortgages. At present, long-term debt is non-existent other than the USAID and ADB loan programs.

Can the private sector be expected to help make up the shortfall in *capital*? The answer is probably yes given some important caveats. Private sector lenders will be willing to invest in housing provided that the investment vehicle is liquid; that is, can be easily traded on a secondary market. Private bankers take comfort in the ability to move in and out of investments as economic and financial conditions dictate. To this end, it becomes imperative then, that efforts be made to develop long-term debt instruments, germane to the mortgage market, that would find appeal within the Sri Lankan financial community, not only as an investment vehicle, but as a source of long-term credit.