PD-ABG-109
52849

USAID FINANCIAL MARKETS PROJECT
Debt Securities Team
Action Plan

by

Michael BeVier and John Biasucci

<u>Draft</u>
May 12, 1993

This is an implementation plan to create a market driven debt securities market in Sri Lanka. It builds upon previous studies of the Sri Lankan capital markets, particularly the World Bank's *Sri Lanka Financial Institutions Study* (February 28, 1991) (Financial Institutions Study or Study) and C. Lucas, *Final Report: Project to Modernize the Sri Lanka Treasury Securities Market* (January 18-29, 1993), by the World Bank and the Government of Sri Lanka (Lucas Report). Both of these we found invaluable as background for our own meetings in Colombo (March 25-April 5, 1993) and sensible in their recommendations, most of which we have incorporated herein.

We have also studied the World Bank's *Staff Appraisal Report: Sri Lanka Private Finance Development Project* (March 19, 1993) (PFDP Report). It details the terms for disbursement over 5 years (ending June 1998) of US$60 million from the International Development Association (IDA) for completion of the Private Finance Development Project (PFDP). It also outlines the purposes of US$7 million from USAID for parallel technical assistance over 3 years (ending December 1996) of which this report is a part. The PFDP is something of a compendium of work on Sri Lanka's financial markets to be carried out by both the World Bank (IDA) and USAID, and describes the way in which these parallel efforts complement each other. In addition it sets forth commitments by the Government of Sri Lanka (GOSL) to various legislative, regulatory, and policy changes designed to accomplish the four objectives of the PFDP:

i. to improve the efficiency of financial intermediation in Sri Lanka by supporting policy and regulatory reforms in the financial sector;

ii. to assist in domestic resource mobilization for long-term investment by stimulating the development of local bond markets;

iii. to enable the private sector to respond to the changing economic environment by providing investment finance; and

iv. to help deepen the financial system and strengthen the key players, including the Central Bank, the Ministry of Finance, the "captive investors",[1] the Institute of Chartered Accountants of Sri Lanka, and certain privately owned financial institutions.[2]

The development of a debt securities market contributes significantly to all four of these objectives. It is therefore critical that the actions recommended herein be carried out in close coordination with the World Bank and that there be a continuing joint review of resource allocation. Implementation of the Lucas recommendations alone, we believe, will require the combined resources of USAID, the World Bank, and the Central Bank, as well as investment by the approved primary dealers (APDs). To the recommendations of the Lucas Report and the Financial Institutions Study we have added additional recommendations and a proposed plan for implementation. We have done this in the context of the commitments already undertaken by the GOSL as a part of the PFDP process. In Appendix A we list the three sets of recommendations and the GOSL commitments with cross references. Our implementation plan is laid out in a Gantt Chart in Appendix B. The result is a somewhat a formidable project, but its accomplishment will result in large and lasting benefits to Sri Lanka's people. It is worth the considerable energy and resources that will be required.

MISSION

To create an efficient, market-driven debt securities market serving both the public and private sectors of the Sri Lankan economy.

RATIONALE

Banks and debt securities comprise the most critical sector of a country's financial markets. Treasury securities are the tools with which any government stabilizes its currency through monetary policy and ensures its own solvency through fiscal policy. Treasuries also provide a foundation for interest rates throughout the economy. An active and efficient Treasury bill (T-bill) market can, for example, reduce volatility in the call money rate, thereby contributing to the stability and profitability of the banking system.[3]

---

[1]"Captive investors" refers to the Employees' Provident Fund, the Employees' Trust Fund, the National Savings Bank, and the Insurance Corporation of Sri Lanka, all of which the *PFDP Report* refers to as "contractual savings institutions".

[2]These are the Participating Credit Institutions (PCIs), principally private banks, to which the GOSL will on-lend the IDA credit proceeds. PCI eligibility is defined in the *PFDP Report*, Annex 4, pp. 50-51.

[3]The effect of the Treasury bill market on the call money rate was suggested to the authors by Hannan Ezekiel of the International Science and Technology Institute (ISTI). Evidence that lifting government controls on T-bills and other money market instruments contributes to more stable (and even lower) call rates is found in Kuo, "Liberalization of the Financial Market in Taiwan" in Rhee and Chang, *Pacific-Basin Capital Markets Research* pp. 7-26 (1990).

Treasuries sold with a range of maturities establish the "risk free" yield curve off which private debt securities of all types can be rationally priced. Together, Treasuries and private debt securities are potentially the largest, most efficient means of intermediation between the country's suppliers and users of capital. Exhibit 1 compares the daily trading volume of equities in New York with that of debt securities, which is some 12 times as great. In Sri Lanka the potential relative size of the debt market is even greater.

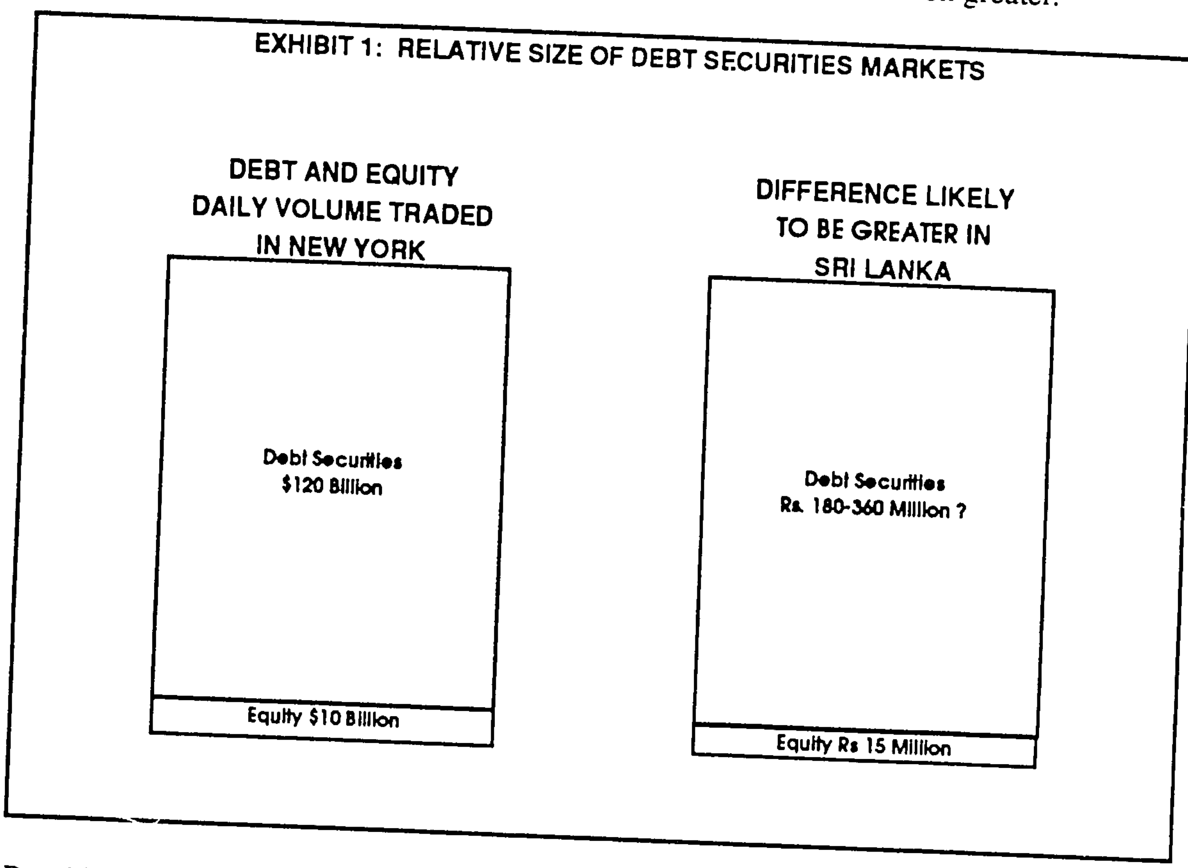


EXHIBIT 1: RELATIVE SIZE OF DEBT SECURITIES MARKETS

But this will not happen unless debt securities, particularly government securities, are freed of their present constraints. Until then, the Government will be crippled in its ability to carry out both monetary and fiscal policies and private business will be deprived of one of its most critical tools for capital development.

More specifically, the actions recommended herein to establish a viable debt securities market in Sri Lanka will:

1. Lower and stabilize the cost of government debt. Various means are currently used to reduce the stated rates paid on Treasury securities, including the force-feeding of Treasury debt into such government-controlled entities as the Employees' Trust Fund (ETF) and the Employees' Provident Fund (EPF). None of these devices actually lowers the real cost of government debt. In the case of the pension funds it merely shifts some amount of cost onto the institutions that are forced to take the securities at below-market rates. Instead of trying to disguise interest costs, the Central Bank can substantially reduce them by creating a stable,

highly competitive market environment for Treasury securities. Since the interest rates on these securities largely reflect the perceived risk of holding them,[4] the Central Bank can minimize costs by increasing the amount and accuracy of statistical information it publicizes, better coordinating its monetary policies, regularizing the periodic issuance of Treasuries over a range of maturities, and encouraging greater liquidity in the secondary market.[5]

2. Safeguard the integrity of government-controlled pension funds and insurance companies. The ETF, the EPF, the Insurance Company of Sri Lanka (ICOSL), and the National Savings Bank (NSB), are "captive investors" investing largely in government securities which are held to maturity. Because many of these securities are forced upon such institutions at below-market rates, they constitute a hidden tax on beneficiaries such as the nation's current and future pensioners. The broad constituencies involved--particularly in the provident funds--cause these taxes to fall heavily upon persons of moderate means.[6] This highly regressive taxation should be removed by allowing such institutions to manage their assets in a rational manner. The secondary effects will be to increase competition among investors, strengthen the secondary market, and minimize the cost of capital for both the Government of Sri Lanka (GOSL) and private issuers.

3. Provide more efficient intermediation of private capital. The Financial Institutions Study detailed a number of inefficiencies and anomalies in Sri Lanka's credit markets. Among these are the large spreads taken by banks, whose interest margins (400-500 basis points) and administrative costs are far above those of neighboring countries such as Indonesia and Bangladesh.[7] These are combined,

---

[4] It is difficult to predict what level of interest rate is appropriate or likely for government debt in a developing country. Significant differences occur even among developed countries with highly liquid Treasury markets; e.g., real returns on long Treasury bonds 1926-1988 averaged .3% in the U.K. and 1.2% in the U.S. P. Wann, *Inside the US Treasury Market*, p. 18 (1989). Sri Lankan rates seem quite high. Inflation in 1991 was 11% with T-bill rates at 18% (secondary market), resulting in real rates of around 7%. This may be the result of strong inflationary expectations. The GOSL has brought inflation down from 22% in 1990. If it can meet its targets of 8% in 1993 and 6% by 1995, this would likely reduce both nominal and real interest rates substantially. See *PFDP Report*, pp. 2,6,12, and Annex 3, p. 49.

[5] Stable macroeconomic conditions will boost investor confidence and create market conditions that are more conducive to selling debt, thus reducing its cost. GOSL's borrowing procedures and techniques will have a major impact on the general structure of the financial system and financial markets. An efficient institutional framework for managing government debt is likely to encourage efficient private financial institutions and markets, and a more competitive structure of interest rates. Promoting secondary markets in government debt increases its liquidity and reduces its cost.
World Bank, *Financial Institutions Study, Vol. III* (February 28, 1991) p. 7 (hereinafter *Study*)

[6] *Lucas Report*, p.4.

[7] Administrative costs of Sri Lanka's commercial banks were found to be an extremely high 4.1% of assets, compared with 2.6% for Indonesia's state banks and 2.4% for Bangladesh's state banks. The cost of this inefficiency was being passed on to borrowers through increasingly high margins. During 1984-89, net interest margins rose to 4.2%, with gross margins (after adding back imputed suspended interest) roughly 5.9%. Id. p. 4.

somewhat paradoxically, with an artificially low cost of bank debt.[8] This is possible because of the extremely low (even negative) rates being paid on deposits and because the banks can hide their operating losses.[9] Development of a debt securities market will gradually place competitive pressure on the banks and force them to become more efficient.[10] The result will be higher returns for investors and a more efficient allocation of capital to credit-worthy borrowers.

4. Increase the level of savings and investment in the economy. The level of savings within a developing country is directly correlated with its rate of growth.[11] Sri Lanka's savings rate has ranged between 12% and 15% of GDP since the mid-

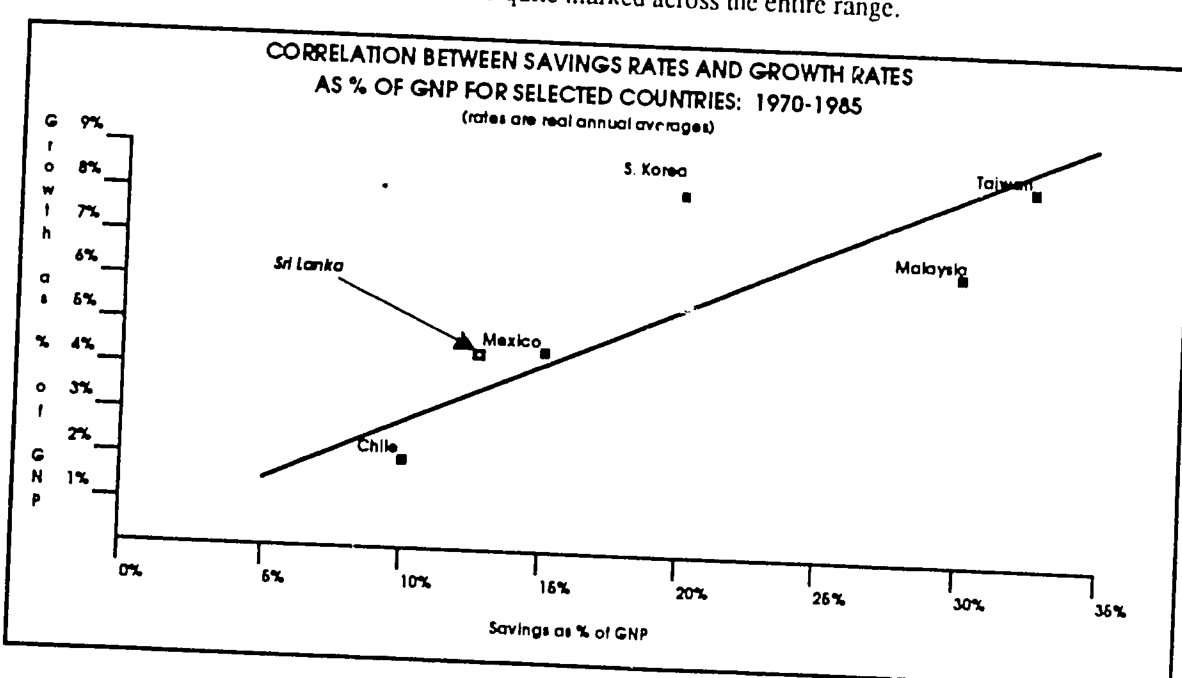
---

[8]"Fundamental distortions and regulatory weaknesses constrain the capital market's role in providing finance for productive projects. *The biggest constraint is the artificially low cost of bank debt...*" (italics supplied) *Study*, Vol. I, p.6

[9]The *Study* found that in December 1990, commercial bank six-month term deposits paid a real rate of *negative 5%*. *Study*, *Vol. III*, p. 3. It also found that "BOC/PB financial statements substantially overstate their financial condition and performance because they do not account appropriately for bad debt. Indeed, with appropriate accounting for bad debt, they would make large losses and have large negative net worth." *Study*, Vol. I, p. 6.

[10]For a discussion of the rate and order of reform measures in a developing debt market and evidence that bank operating efficiency increases see Kuo, "Liberalization of the Financial Market in Taiwan" in Rhee and Chang, *Pacific-Basin Capital Markets Research* pp. 7-26 (1990).

[11]The following chart plots the rate of growth against the rate of savings, both as a % of GNP. These countries were selected because they differ substantially in the composition of their financing and in economic performance. The correlation is quite marked across the entire range.



The chart was prepared by MorBanc from figures in Studien, *Debt versus Equity Finance in Developing Countries* p. 42 (1989). The figures for Taiwan are for 1971-1986. Kuo, "Liberalization of the Financial Market in Taiwan in the 1980's" in Rhee and Chang, *Pacific-Basin Capital Markets Research* p. 8 (1990). "*Sri Lanka*" is in italics because the figures used were not comparable, being the average of years 1982 and 1986-1991. Central Bank of Sri Lanka, *Annual Report: 1991*, Tables 3 and 11 (1992).

1980's, compared with rates of 20% to 30% for countries other Asian countries.[13] The absence of attractive vehicles for fixed-income investment may be in part responsible for this. Interest rates on bank savings accounts and CDs are quite unresponsive to variations in inflation and have been negative for substantial recent periods.[14] Creation of an active debt securities market would greatly increase the range of investment choices available to both individuals and institutions. Market-driven rates and a full range of maturities would create substantial additional incentives to invest.

5. Increase the ability of the government to conduct monetary policy. The Treasury market is critical to the Central Bank's ability to stabilize the Rupee currency through control of the money supply. The more liquid the secondary market, the less costly it will be for the Central Bank to engage in open market transactions. Our recommendations include training for Central Bank personnel, both in the formation of monetary policy, as well as utilizing the Treasury markets more effectively to implement it. Furthermore, the extension of Treasury maturities out to 10 years will shift some of the burden of covering fiscal deficits off of the short end of the market and create less conflict between fiscal and monetary policy.

WORKING PRINCIPLES

- Government debt is the foundation of a debt securities market. It must establish the "risk-free" yield curve off which all private debt securities will be priced. Development must begin with reform of the market for Treasury securities.

- The short-term sector of the debt securities market must be developed first. That will provide a platform for gradually increasing the maturity of debt instruments sold and traded until a full yield curve is established.

- The primary and secondary markets are interdependent and must be developed simultaneously.

- Information is the lifeblood of security markets and the banking system. Development of an efficient debt securities market will take place only in the context of a legislative, regulatory, and technical infrastructure that maximizes the availability of information.

---

[13] In addition to Taiwan and Malaysia shown on the chart in the previous footnote, these include India and Thailand. Id. at p. 2 and Annex 6.1. The *Study* also compares the savings rate to the investment level, concluding that Sri Lanka has a low level of domestic resource mobilization with a savings gap in 1989 of 9.3%. *Study*, Vol. III, p. 1.

[14] *See* Central Bank of Sri Lanka, *Annual Report: 1991*, p. 163 and Table 22; *Study*, Vol. III, page 18 and Annex 6.10.

- Change cannot be imposed successfully from the outside of any organization. Those individuals who will be responsible for administering the organization must be actively involved in the process of change.

WHAT NEEDS TO BE DONE

On April 2, 1993, at the USAID Financial Markets Project Team Planning Meeting in Colombo, we presented a *Summary Workplan*. That plan was organized around six preconditions for an effective debt securities market: (1) Active investors bidding aggressively for securities in the primary market and trading actively in the secondary; (2) a community of dealers with sufficient resources and incentives to maintain tight and orderly markets; (3) a regular flow of new product into the market; (4) adequate financing for dealer and investor positions; (5) a communications system providing timely market information to investors and dealers; and (6) a rapid and reliable system for clearing, transfer, and settlement. While this remains a useful list of where we want to go, we need to focus in this plan on what actions are required in order to get there. To do this, we have broken the project into seven major tasks:

Task 1: Strengthen Central Bank T-Bill Operations

Task 2: Free the Captive Investors

Task 3: Develop a Dealer Network and Central Bank Trading Capability

Task 4: Increase Monetary Policy Capabilities in the Central Bank and Treasury

Task 5: Develop Clearing/Settlement and Communications Infrastructure

Task 6: Begin Regular Issuance and Secondary Trading of Longer Term Coupon Treasury Securities

Task 7: Promote the Issuance and Secondary Trading of Private Debt Securities

The order in which we have put these tasks is somewhat arbitrary, suggesting neither a priority nor order of sequence. The components of a securities market are functionally interdependent. This is suggested occasionally in the commentary below and more specifically by the Gantt chart attached as Appendix B. In order to make cross reference easier, the ID number given to specific action recommendations in the Gantt chart are noted below in the report where commentary pertaining to those recommendations appears.

Task 1: Strengthen Central Bank T-Bill Operations

The T-bill auctions are properly the focal point of the Central Bank's T-bill operations. These are important because they establish the rate at which the government borrows and provide an important baseline rate for all money market instruments. The cost of government borrowing may be currently higher than it needs to be because of three underlying problems. First, current T-bill operations reflect a fear of market interest rates and a belief that the Central Bank can manipulate rates downward and thus lower borrowing costs. We believe the results are perverse, causing mistrust and confusion in the market, increasing the perceived risks of holding T-bills, and resulting in higher, not lower, rates. Second, weekly fluctuations in the amount of T-bills offered are great enough to cause some market disruption, consequent volatility, and the higher rates that attend volatility. Third, there is operational conflict, and perhaps some confusion as well, between fiscal and monetary policy, which interferes with the effective operation of both.

Changes in pre-auction procedures. The Lucas report recommends that the Central Bank begin consultations with APDs approximately a week before the announcement of each auction to obtain estimates of the amount of each maturity that can be sold at various rate levels.[15] It also recommends that the Central Bank maintain its close communication with the APDs up to the business day prior to the announcement in order to set the exact amounts of T-bills of 3, 6, and 12 month maturities which are to be auctioned.[16] In the context of weekly T-bill auctions, the effect of these recommendations would be to have the Central Bank in daily communication with the dealer community. To implement this kind of interaction will, we believe, require a fundamental shift in the way in which the Central Bank conceives of its role and that of the dealer community, as well as the proper relationship between the public and private financial sectors. Such change will require explicit direction from the Central Bank's upper management. The individuals who will be responsible for assessing market conditions and advising the Tender Committee on each auction should be identified as soon as possible and a training program designed that includes observation of desk operations in other central banks, as well as extensive study of the current operations of the Sri Lankan APDs.[17] This close interaction between the Central Bank and the APDs is further elaborated in the section on Task 3, below.

The other key determinant of auction size is the estimates of treasury financing needs provided by the Ministry of Finance (MOF). Cash needs of the government may be expected to fluctuate substantially. It is important to anticipate these changes as far in

---

[15] *Lucas Report*, p. 4.
[16] Id., p. 6.
[17] Efforts should be focused on creating opportunities for key individuals to get first-hand, on-site exposure in operating situations in central and commercial banks who already conduct the specific operations that the individual in question will be asked to perform.... The key activities where such support is most likely to be needed include the recommendations to quickly move to modify existing auction procedures for Treasury bills [and] establish regular contact with APDs for assessing market conditions...
Lucas Report, p. 14.

advance as possible so that financing can be smoothed over time to avoid straining the market during times of heavy cash needs and paying the premium interest rates that such strain provokes. This is particularly important in Sri Lanka where government borrowing so dominates the market for funds that it creates a serious crowding out effect.[18] The Lucas Report recommends a coordinated project between the Treasury and the Central Bank to improve and coordinate cash flow and debt management planning, with detailed cash flow projections prepared in the Treasury for at least a quarter into the future.[19] This would facilitate a smoother pattern of borrowing over the year and the use of longer term Treasury bonds to fund long term deficit financing. Perhaps the Treasury could take steps to smooth the inflow of its revenues by appropriate changes in tax collections to better match the pattern of its liability payments. Training of Treasury personnel to improve cash flow forecasting is detailed under Task 4, below.

Changes in auction procedures. The Lucas Report recommends limiting non-competitive auction tenders to Rs. 1 million, with any bidder limited to a single non-competitive bid.[20] Because a large portion of T-bill auctions are now taken down by captive investors making non-competitive bids, this action is dependent upon completion of Task 2, below, which would free the captive investors to make competitive bids and provide them with the expertise to make those bids intelligently. Non-competitive bids, should be awarded at the rupee-weighted average of all competitive bids accepted at the auction.[21]

Changes in post-auction procedures. According to the Financial Institutions Study, the auction results posted by the Central Bank are artificial and should be changed:

> The CBSL determines the cut-off rates in the auction and takes up any bills left unsold at interest rates of its own choosing. The interest rates publicized after the auction are the averages of the interest rates on the total stock of treasury bills sold--i.e., on the bills sold at the auction, through the tap, and taken up residually by the CBSL. The CBSL varies the interest rate on the bills it takes up to achieve its objective for the publicized treasury bill rates....
>
> The present procedure for calculating the published rates that includes the interest rate on CBSL treasury bill purchases, reduces their role as indicators of market conditions and serves to complicate the rate structure.... The published

---

[18]*See Study*, Vol. II, p 64-65. "Domestic financing of the budget deficit averaged 44 percent of gross national savings in the last five years [1984-1989].... The domestic financing of government fiscal deficits tends either to raise real interest rates, thereby crowding out private sector borrowing or, if financed through money creation, increase inflation." *Study*, Vol. III. , p. 9

[19]*Lucas Report*, p. 13.

[20]Id., p. 8.

[21] "The CBSL has fairly systematically purchased bills at rates below the average rate in the public tender and frequently below the minimum accepted bid. Hence, its purchases have systematically reduced the average published treasury bill rates below the average competitive tender rate, which is itself distorted by the captive bids."
Study, Vol. III, p.14,Vol. III, p. 13-14

interest rates should preferably be the range and average of the rates accepted in the competitive auction.[22]

Publishing an artificially low T-bill rate does not lower interest rates. If anything, the practice may raise rates because it generates confusion in the market, which in turn increases perceived risks. It also damages the credibility of the Central Bank whose effectiveness in carrying out both fiscal and monetary policy depend ultimately upon its ability to oversee a highly liquid market that is stabilized by extremely rapid dissemination of reliable information. Publishing the true auction bill rate is an extension of the reformed auction procedures described above in which all non-competitive bids, including the CBSL's takedown, is done at the competitive average, which should be released along with the amounts bid at each yield level over the entire range of bids. [23]

Finally, the Central Bank currently subscribes to any T-bills not sold at the auction and sells them on tap at a rate based on the average rate at the previous auction. It also stands ready at all times to buy T-bills at a discount rate that is described as penal but is only slightly higher than the market rate. These tap sales make the auctions less effective since buyers know that if they do not win anything at the auction they can obtain product almost immediately at the average auction rate. It also suffocates the private secondary market. Investors do not need to buy from dealers as they can buy from or sell to the Central Bank at any time. Furthermore, this activity hurts the Central Bank by confusing monetary and fiscal policy. The Central Bank apparently sets prices on T-bills at a rate that causes sales to exceed purchases, which suggests that it is using its current window to increase Treasury borrowings. To that extent, however, the window becomes largely ineffective for monetary policy--controlling the money supply by absorbing or adding to liquidity.[24] The Central Bank should make an explicit policy decision to restrict use of its

---

[23]An example of the level of information considered important to the financial community is the weekly summary of Monday's U.S. T-bill auctioned published in the *Wall Street Journal* each Tuesday:

Here are the details of the April 12, 1993 auction by the Treasury of 13-week and 26-week bills:

	13-Week	26-Week
Applications	$45,460,803,000	$44,293,024,000
Accepted bids	$11,093,994,000	$11,055,606,000
Accepted at low price	24%	41%
Accepted noncompetitively	$1,321,495,000	$925,654,000
Average price	99.269	98.483
Average rate	2.89%	3.00%
High price	99.272	98.493
High rate	2.88%	2.98%
Low price	99.267	98.483
Low rate	2.90%	3.00%
Coupon equivalent	2.95%	3.09%

[24]

window for two purposes: One, to buy and sell T-bills in the open market only to the extent that it wishes to engage in open market operations (i.e., to control money supply), and two, to provide last resort liquidity to banks at a discount rate that is truly penal (several percentage points above the market rate).

It must be acknowledged, however, that the Central Bank does not have unlimited capacity to absorb Treasury securities. To the extent it makes substantial net purchases at auction it must engage in sales at some point. This raises the fundamental issue of whether the Central Bank should ever be permitted to make net purchases at auction. Doing so is the equivalent of printing money for the government and depreciates the value of the currency. A sounder policy is for the Central Bank to hold only that inventory of T-bills sufficient for it to engage in monetary operations. Its participation in auctions would then be limited to rolling whatever portion of that inventory matured each week. Net sales by the Treasury would take place at whatever interest rate cleared the market.[25]

Our recommendations for strengthening T-bill operations can be summarized follows:

1. That the Central Bank establish a a trading desk that is in daily communication with the APDs in order to, among other things, begin estimating a week before the announcement of each auction the amount of each T-bill maturity that can be sold at various rate levels so that the announcement can include the exact amounts of 3, 6, 9, and 12 month maturities which are to be auctioned.[26] (IDs 5 and 8)

2. That the Central Bank limit non-competitive auction tenders to Rs. 1 million, with each bidder limited to a single non-competitive bid. (ID 41)

3. That all non-competitive bids and all T-bills taken down by the Central Bank be awarded at the rupee-weighted average of all competitive bids accepted at the auction. (ID 9)

CBSL does not manage financial sector liquidity on a daily basis. It announces daily buying and selling rates for secondary transactions in treasury bills and leaves it to the discretion of the banks whether they utilize the facility. The secondary window rates are adjusted depending on the residual maturity of securities and conditions in the call money market. The interest rate on buying bills from CBSL has normally been set to encourage additional treasury bills sales. Consequently, sales of bills by the CBSL at its secondary window have been consistently much larger than purchases (rediscounts). Although secondary trading in treasury bills outside the CBSL is permitted, it has not developed.

Study, Vol. III, p. 15-16

[25]This was raised with the authors by Hannan Ezekiel (ISTI),. To prevent the U.S. central bank (Fed) from becoming a money-printing machine for the U.S. Treasury, it is largely prohibited from buying new Treasury debt at auction. Its participation in auctions, then, is limited to rolling that portion of its $100 billion T-bills inventory which matures each week. Stigum, *The Money Market* (3rd ed., 1990) p. 657.

[26]This would permit creation among the dealers of a "when issued" secondary market, which would begin at the time of the announcement and continue through the auction until issuance of the bills.

4. That the complete auction results be made public before close of business on the auction day, including the amount applied for in each maturity, the amount awarded in each maturity, the amount accepted noncompetitively, and the high, low, and rupee-weighted average prices (yields). (ID 10)

5. That the Central Bank restrict use of its window to monetary policy and stop pricing T-bills on tap for purposes of raising additional funds. (ID 11)

Task 2: Free the Captive Investors

We define as "captive investors" those institutions which are controlled by the Central Bank or other government agency such that their investment decisions cannot be considered independent. These include the EPF the ETF, the NSB, and the ICOSL. The concern with these and other captive institutions is twofold. First, the size of their portfolios and the amount invested in government securities makes them a critical element in any reform of the Treasury market.[27] Second, the importance of their role--particularly the pension funds--in the lives of their beneficiaries. They are entrusted with managing what for many citizens is the largest asset they will ever possess and upon which those individuals rely to carry them through their non-working years. It is vital that this trust be carried out in a manner consistent with the highest levels of management expertise available. There is great concern now that these institutions are being used largely as a means of funding government deficits and that investment returns are far below what they should be to safeguard the interests of their beneficiaries.[28] A further concern with the pension funds, specifically, is that the combination of investing almost exclusively in government securities and the absence of longer term Treasuries has created an egregious

[27]At the end of 1991, EPF had about Rs. 46 billion in total assets, more than 85% of which were invested in government securities, on which it reported a nominal return of 11.5% (2.5% real). The ETF had some Rs. 6.5 billion in assets by year end 1991, about 90% of which were in government securities, on which it reported a 12.5 % (3.5% real) return in 1991. The NSB had over Rs. 30 billion in assets as of June 1992, most of which is in government securities and on which it earned a return of 15% (6% real) in 1991. The ICOSL is the largest of the five insurance companies operating in Sri Lanka with assets at the end of 1991 of Rs. 5.7 billion invested in T-bills and equities of public sector enterprises. In December 1992 ICOSL was converted into a company operating under the Companies Act with a view to being privatized by December 1993. *PFDP Report*, pp. 15-16. The real rates of return are based upon the December-December change in the Colombo price index. See Central Bank of Sri Lanka, *Annual Report 1991*, Table 22.

[28]For example, the *PFDP Report* describes investment of the some Rs. 46 billion in EPF assets:

> The funds are invested under the direction of the Monetary Board (MB). The investment policies are decided in consultation with the MOF. The MOF reviews the GOSL's requirements for budgetary financing, and requests the MB to invest specified amounts in government securities. Thus, the pressure to reduce interest costs and finance the government deficit has taken precedence over maximizing the return to employees covered under the EPF. *Consequently, the EPF has reported negative real returns to its members over the past few years.* (Emphasis supplied) *PFDP Report*, p. 15.

mismatching of short-term assets with long-term liabilities, resulting in an extremely unstable financial structure.

As Lucas points out, the current system is nothing more than a hidden tax that falls heavily on a broad segment of the population. Most of these individuals are presumably of modest means, which would cause the tax to be highly regressive.[29] The Lucas Report recommends reducing or eliminating the limitations on the investment practices of captive investors with respect to all government securities and adopting a set of fiduciary standards for such institutions that would require them to maximize returns in a manner consistent with normal standards of safety and prudence.[30] Apparently the GOSL agrees with this. According to the PFDP Report, the Ministry of Finance's position on the future of the captive investors is that:

i. they should continue to operate as institutions geared to fulfilling their declared objectives;

ii. they should be a provider of investment funds to the private sector to the extent consistent with their roles;

iii. their charters should be amended to given them more autonomy; and

iv. the institutions should separately develop investment guidelines and portfolio management skills to better fulfill their objectives.[31]

Also, GOSL has committed itself to investing EPF and ETF funds in non-government securities, equal to 5% of monthly inflows in 1993, increasing to 10% by June 1995. The NSB has already begun diversifying its investments and the target is 10% of assets by the end of 1993.[32] These commitments, particularly for EPF/ETF, seem extremely modest. Since the combined EPF/ETF portfolio was about Rs. 52 billion at 1992 year-end and monthly inflows are currently about Rs. 700 million, this would mean that only .7% of the funds assets will be affected by the end of this year. Even if the GOSL jumps immediately from its 5% commitment to 10% in January 1994, by June 1995 it still will have committed only 1.6% of fund assets to non-government securities. This is not nearly enough to protect the beneficiaries interests unless other action is taken. At the very least, the captive investors should be required by the end of the first quarter of 1994 to purchase all of their Treasury securities at market rates. This would result from the recommendations given under both Task 1 and Task 3, under which all investors would be required to bid at Treasury auctions through the APDs. In addition to improving the returns to these funds, this would strengthen both the primary and secondary Treasury markets without decreasing the market for Treasury debt.

---

[29]*Lucas Report*, p. 4.
[30]Id. pp. 4-5.
[31]*PFDP Report*, Annex 11 p. 91.
[32]Id., p. 24 and Annex 2, p. 47.

These changes will require that the captive investors have access to portfolio management expertise. Lucas suggests either providing technical support to in-house investment managers or creating a government investment corporation, as has been done in Singapore where provident fund sources are consolidated and managed in the Government Investment Corporation by a staff that was trained by consultants from abroad.[33] The advantage to the latter is an ability to concentrate available expertise and perhaps achieve some economies of scale, although that may forego the benefits of having separate fund managers for each of the major investors competing against each other. Either one or a combination of these approaches could be used, and there are still other options. One would be for each fund to select two or more private funds managers, perhaps some in Sri Lanka and others from outside and shift the portfolio toward those who demonstrate their capabilities through actual performance. The ETF, for example, has recently decided to appoint three fund managers to manage portfolios of Rs. 100 million each.[34] The PFDP includes terms of reference for a consulting firm to assist in developing portfolio management expertise for the captive investors. Those terms of reference apparently assume that funds management will be performed by contract managers and proceeds to describe the development of in-house expertise necessary to select, direct, compensate, and evaluate outside managers.[35]

Our recommendations for freeing the captive investors are as follows:

6. The Committee on Financial Sector Reforms (CFSR), assisted by the Debt Securities Team, (consisting of the authors of this report and such other research support as may be provided through the International Science and Technology Institute (ISTI)), in consultation with the Central Bank and the Ministry of Finance, will design a funds management system for adoption by specified captive investors, giving close consideration to the PFDP terms of reference for the management of investment portfolios. (ID 16)

7. The CFSR and the Debt Securities Team will also compile a list of specific legislative and/or regulatory changes that must be made, and identify the resources necessary, in order to implement that system. (ID 14)

8. The plan will be discussed with a range of beneficiary groups so they understand the benefits of such change and the safeguards that exist to ensure the continued safety of these funds. (ID 20)

9. The CFSR and the Debt Securities Team will monitor and coordinate the necessary legislative and regulatory changes and assist, to the extent necessary, in actually implementing the training programs and contacting potential fund managers. (IDs 15 and 21)

---

[33]*Lucas Report*, p. 5.
[34]*PFDP Report*, p. 15
[35]*PFDP Report*, Annex 11, pp. 91-93.

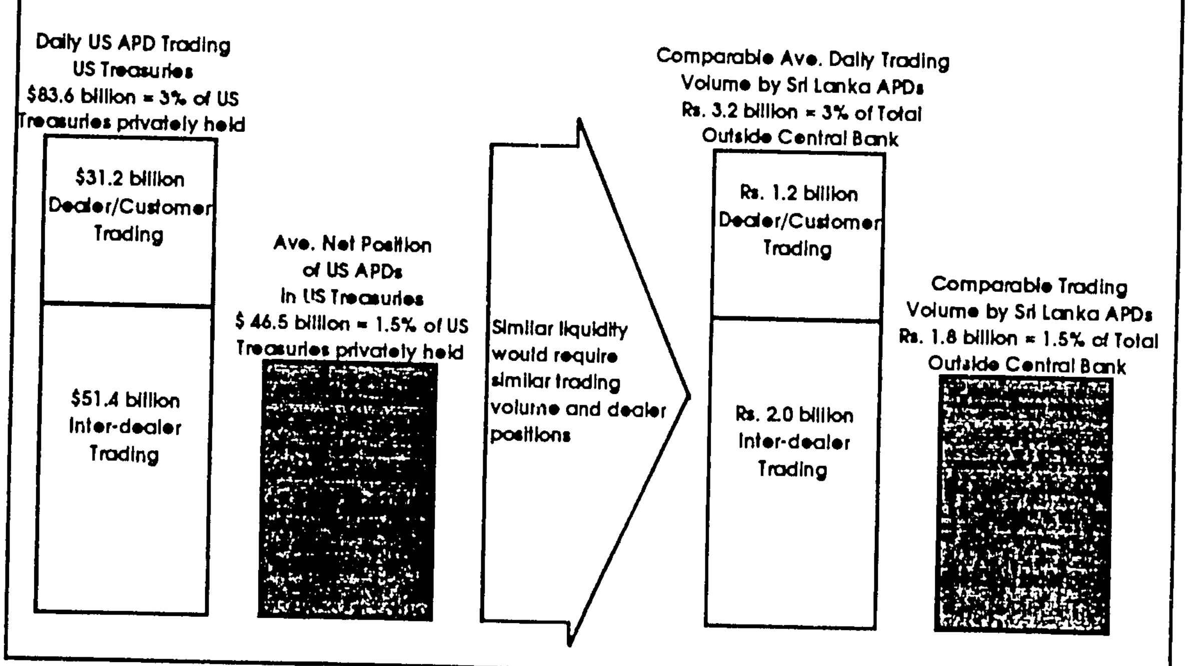
Task 3: Develop a Dealer Network and Central Bank Trading Capacity

In our conversations in Colombo, we found some confusion in terminology. As we use the term here, "dealer" means a firm that purchases securities for its own account, which some in Colombo referred to as a "discount house". This is opposed to what we call a "broker", which acts merely as an intermediary in buying or selling securities on behalf of a third-party investor. The importance of dealers that "position" securities by buying them for their own inventory is that they provide liquidity to the market. Dealers are not investors. They hold "product" (i.e., securities) for the sole purpose of trading and are willing to buy or sell that product at any time at a quoted price.

The extent of dealer participation required to provide a high level of liquidity to a Treasury market is suggested by Exhibit 2, below. On the left side of the figure we show the more than $80 billion of daily trading in Treasuries in the U.S. Note that the amount of trading among dealers is $52 billion, which is 60% of the total, with only 40% being between dealers and their customers. This inter-dealer trading is extremely important to the market's liquidity and is made possible by the large net positions held by the dealers. The right side of the figure shows the comparable trading volume and position size for Sri Lanka. This will not happen right away but is a useful target to approach over time.

[36]

EXHIBIT 2: A LIQUID TREASURY MARKET REQUIRES APDs CAPABLE OF POSITIONING AND TRADING LARGE DAILY VOLUMES



[36] The chart was prepared by MorBanc using figures from Board of Governors of the Federal Reserve, *Federal Reserve Bulletin*, pp. A30, A31 (March 1993) and Central Bank of Sri Lanka, *Annual Report 1991*, p. 129 (1992)

The more dealers there are in a certain type of product, such as T-bills, and the larger the inventory held by each of these dealers, the more liquid the market will be and the tighter will be the "spreads"--i.e., the smaller will be the difference between the bid and the asked price provided by these dealers. The evolution of a secondary market can be tracked by spreads, which will become increasingly tighter as the market becomes more sophisticated and more liquid. For example, in the U.S. 20 years ago a typical spread on T-bills quoted by major dealers to investors buying in volumes over $1 million was 6 basis points (6 one-hundredths of a percent); today that spread is 2 basis points.

Our impression of the Colombo market is that there are no "dealers" in government securities, as we use that term (i.e., firms that inventory or "position" securities for their own account). Non-bank securities firms are brokers only and, although the banks buy Treasuries for their own account, they do so really as investors and not to make an active secondary market. The result of this lack of liquidity in the market is that it is very costly for investors to sell product in the secondary, which increases the risk they bear in buying that product in the first place, which raises interest rates. As the Lucas Report states:

> [M]inimizing the cost of issuance of public debt in the primary market requires an active secondary market. That is, if investors know they have no realistic alternative but to hold securities to maturity, then they will demand higher rates in primary auctions.[37]

Creation of an active dealer network will lower the government's borrowing costs and also facilitate the implementation of monetary policy, which is carried out almost exclusively in the secondary market.

A good secondary market requires dealers. The Lucas Report recognizes the need to provide an environment in which dealers can profit and be used to the benefit of both fiscal and monetary policy. It recommends essentially a complete overhaul of the arrangement between the Central Bank and the APDs.[38] This would include giving them *exclusive* access to all of the Central Bank's primary, secondary, and financing operations,

---

[37] *Lucas Report*, p. 12

[38] The *Financial Institutions Study* supported the need for dealers and was first to make some of the recommendations that appeared in the *Lucas Report* and here.

> "The development of the treasury bill market would be enhanced by establishing market makers or dealers in government securities with certain privileges and obligations. The dealers would be the only entities permitted to bid directly at the auctions, and other investors would have to purchase bills from dealers. The CBSL should be prepared, through a dealer financing facility, to provide for very short-term liquidity to the securities through the market with indirect support from the central bank....
>
> "In return for these privileges, the dealers would be required to make markets in treasury bills by quoting bid/offer prices for minimum volumes of secondary trades in treasury bills." *Study*, Vol. III, p. 14.

Since the *Study* was published, APDs were designated, but the arrangement between them and the Central Bank does not provide sufficient incentives and impose enough responsibility to induce a really effective secondary market.

and requiring even government and semi-government agencies bid in Treasury auctions through APDs.[39] It would also include providing non-bank APDs with clearing accounts at the Central Bank.[40] In exchange for these privileges, the Central Bank would impose specific standards for: (i) the minimum amounts bid in Treasury auctions (at competitive yield/price levels), (ii) the volume of secondary trading done between auctions, and (iii) the amount of useful market information provided to the Central Bank upon request. Those firms that consistently under perform these standards would have their APD status suspended or revoked.[41] The report also recommends that the Central Bank institute the use of repurchase arrangements for carrying out monetary policy as a means of stimulating the development of a "repo" market for financing inventories of government securities.[42]

We see three major obstacles to be overcome in implementing these recommendations. First is the lack of communication between the Central Bank and APDs, which seems to reflect a failure by the Central Bank to understand how useful the APDs could be to it in carrying out its functions. Second, there is understandably a lack of trading expertise in both the Central Bank and in the APDs. Both need to identify individuals in their organizations that potentially have trading skills and assign them to work with experienced traders (necessarily from outside Sri Lanka) for some extended period of time. Third, because dealers require both risk capital and financing to hold inventory for trading, sources of both must be identified and provided the necessary incentives for a commitment to trading operations.[43] In light of these, we recommend the following actions:

10. That the Central Bank adopt an information policy explicitly recognizing the importance of its role in providing a range of data to the financial community as well as its responsibility in communicating with its APDs on a daily basis, both to obtain market intelligence and, without divulging privileged information, to ensure

---

[39] *Lucas Report*, p. 8.

[40] Id.

[41] *Lucas Report*, p. 6 which recommends revocation of APD status for consistent under-participation in auctions. We recommend that this sanction be used more broadly (see Recommendation 12 of this report).

[42] The daily operations should include repurchases and reverse repurchases as well as outright transactions and should include transactions in BAs when these are developed, as well as treasury bills. The use of repurchases would overcome the problems of a lack of bills of appropriate maturity. Also, repurchases have the advantages that financial markets do not need to be developed to undertake these transactions, and repurchases are self-liquidating and can be targeted to temporary fluctuations in bank reserves. They are, therefore, a flexible instrument.
Study, Vol. III, p 17.

[43] The organizational and financial commitment required to set up and operate a government securities operation should not be minimized. One commentator describes what it takes in the U.S. market:

> Setting up a dealership in governments is time-consuming, difficult, and costly. Talented personnel, usually in scarce supply...must be hired and then welded into a team that works. Firms entering the government market normally expect to lose millions before they create an organization capable of producing profits. Stigum, *The Money Market*, p. 639.

that its APDs are adequately prepared to participate in its financing operations. (IDs 30 and 42)

11. That the CFSR and the Debt Securities Team, in cooperation with the Central Bank and its APDs, conduct a series of interviews with the APDs and other interested financial institutions, to determine their current and prospective capabilities as dealers. This would include a survey of potential capital and financing sources for dealer positions and the development of an action plan to institute repurchase financing on government securities. (IDs 26 and 28)

12. That the Central Bank define a new relationship with its APDs by adopting a code of conduct and statement of privileges and responsibilities for APDs, which includes, among other things, the following elements:

    a. Exclusive access to Central Bank market activities, limitation on non-competitive bids, and clearing accounts for non-banks.[44] (IDs 38, 39, and 40)

    b. Specific responsibilities of APDs, including minimum (and maximum) levels of auction participation, as well as minimum levels of average inventory and secondary market activity.[45] (IDs 36 and 37)

    c. General responsibilities of APDs to provide market intelligence on a daily basis to the Central Bank. (ID 43)

13. That the CFSR and the Debt Securities Team, in cooperation with the Central Bank and its APDs, design a training program in which trading personnel of the Central Bank and its APDs would participate *together*. The program will include observation of functioning dealer operations elsewhere (Bombay? Singapore?) as well as intensive in-country instruction by an experienced trader who will assist in designing the trading desks and communications systems. (ID 46-48)

---

[44]There seems to be a difference of opinion between the *Lucas Report* and the *Study* as to whether the Central Bank should provide financing for dealer positions. The *Study* suggests that the Central Bank should provide such a service: "The CBSL should be prepared, through a dealer financing facility, to provide for very short-term liquidity to the securities through the market with indirect support from the central bank. This would typically be done through repurchase agreements on securities, at market-related rates, with access limited to a certain percentage of dealer inventories." *Study, Vol. III*, p. 14. But Lucas explicitly rejects this role for the Central Bank: "[I]t would be helpful to allow non-bank dealers to have accounts at the central bank in order to make clearing and settlement more efficient. However, such accounts should be opened without granting access to any form of central bank credit, which should continue to be regarded as an entirely separate policy issue". *Lucas Report*, p. 7.

[45]"The main responsibilities which go with [the APD's] privileges are that dealers make active secondary and financing markets, act according to a code of conduct with respect to good market practice, bid responsibly and reliably in regular auctions of Treasury securities, and make good markets to the central bank in its open market operations." *Lucas Report*, p. 7

14. That the CFSR, the Debt Securities Team, in consultation with the Central Bank, and the APDs, jointly establish criteria for selecting those individuals who will participate in the training program. (ID 50)

15. That the CFSR and the Debt Securities Team will monitor this joint training program and assist in its implementation wherever possible. (ID 51)

Task 4: Increase Monetary Policy Capabilities in the Central Bank and Treasury

Sri Lanka's macreconomic performance is improving. The deficit has been reduced from 16% of GDP in 1988 to 8.6% in 1992, and with a new system of reserve money management, growth in domestic liquidity has declined, from 22% at year-end 1991 to 10% (annualized) by third quarter 1992.[46] Future objectives are to further restrain deficit spending and continued monetary restraint to reduce inflation to 8% in 1993 and 6% by 1995.[47] This will require not only political will, but increased technical expertise.

In our conversations in Colombo, we found concern, both within the Central Bank and the Ministry of Finance, as well as outside of them, that their technical capabilities for implementing fiscal and monetary policy needed to be strengthened. In Task 3 we addressed the Central Bank's need for a trading desk that can effectively intervene in the markets on a daily basis to implement monetary, as well as fiscal, policy. Here we are concerned with the need of the Monetary Operations Unit and the Research Department to improve their capabilities in developing monetary policy guidelines and providing clear directions to the Central Bank's trading desk that clearly distinguish between fiscal and monetary operations. Concerns about setting and implementing monetary policy were initially addressed in the Financial Institutions Study:

> The procedures for determining the volume of bills to be sold outside the CBSL have been ad hoc in nature and do not provide an adequate basis for monetary management....
>
> ...
>
> Effective monetary management requires strategic planning, frequent updating and assessment of monetary conditions, analysis of policy options, and a framework for arriving at operational decisions for the precise adjustment in policy instruments. Arrangements for monetary management should, therefore, include both research and statistical analysis, and operational experience and up-to-date knowledge on market conditions.
>
> ...
>
> The Monetary Operations Unit should prepare monthly projections of the components of reserve money and the policy options for managing the NDA [net

[46] *PFDP Report*, pp. 1-2, 4. The *PFDP Report* gives a summary of steps taken by the Central Bank to curb monetary expansion. Id., p. 12.
[47] Id., p. 6.

> domestic assets] of the Central Bank consistent with the program targets.... The policy options should include the volume of treasury bill sales outside the CBSL, CBSL refinance and rediscounts, and reserve requirements. The Unit should break down the monthly projections into weekly recommendations for the Tender Committee on the volume of treasury bill sales outside the CBSL and update these recommendations weekly to reflect the latest information on financial sector liquidity and coordinate the auction volumes with CBSL refinance and daily money market intervention.
>
> The Research Department should also develop equations for the demand for currency and bank deposits and provide monthly forecasts of the growth of currency and bank deposits to the Monetary Operations Unit as part of the forecasting exercise. The present Forecasting Committee should be a forum for interaction between the Monetary Operations Unit and the Research Department on the operational and policy advice on interest rates and treasury bill auction volumes that is provided to the Tender Committee.[48]

The Lucas Report focused more on the need for improved forecasting to carry out fiscal policy, and particularly, to permit elimination of the withholding tax on interest (which subject is discussed more fully below):

> The [withholding tax problem] is the more readily solved by use of improved cash flow projections and debt management techniques. At present, treasury cash needs, <u>at a fully detailed level</u>, are projected with a short horizon, and only enough cash is raised to meet immediate needs. Longer term projections made in the central bank focus on broader developments in the economy. These two projections need to be more closely integrated, records developed of revenue and outlay patterns on a daily and weekly basis over the full fiscal year, and borrowing managed so that relatively even amounts are brought to market in each auction.[49]

We recommend:

16. That the CFSR and the Debt Securities Team, in consultation with the Central Bank and the Treasury, design a training program for personnel in the Monetary Operations Unit, the Research Department, and other parts of each organization designed to increase the research and forecasting capabilities that are needed to back up the Central Bank's auction operations and trading desk. This program may include trips out of country, along with intensive in-country training by individuals with extensive experience in conducting research and forecasting for other monetary authorities. (ID 54)

17. That the monetary policy training program be coordinated, to the extent advisable, with the joint dealer training program described in Recommendations 13 and 14, above. (ID 60)

---

[48]*Study, Vol. III*, p. 11-13
[49]*Lucas Report*, p. 12-13

18. That the CFSR and the Debt Securities Team monitor the training program and assist where necessary in ensuring that it is effectively carried out. (ID 56)

Task 5: Develop Clearing/Settlement and Communications Infrastructure

By "infrastructure" we are referring principally to computer hardware, software, systems design, and related training. These are potentially costly elements requiring a particular expertise for implementation. There are two applications for such infrastructure in this project: communication of trade data and the clearing/settlement of trades.

For communication of trade data there are two models. One is open public outcry, such as is used on the Colombo Stock Exchange (CSE), and the other is bilateral negotiation, which occurs in private, either by telephone or through computer facilities. The CSE uses a simple but effective method of communicating trades made on the exchange floor. As trades are recorded on the chalk board, an operator keypunches them into a terminal for confirmation and transmission over network facilities to remote terminals. Bilateral negotiation most commonly takes place by dealers telephoning each other to privately negotiate a transaction. These negotiations are facilitated when the two parties know the price/yield level at which other transactions have recently taken place. Keeping track of "where the market is" may be done most simply by means of a chalk board at each trading firm which shows the level of its most recent trades, as well as bid/offer indications from reliable sources. A step up from this is to have price indications disseminated from a specified source by computer terminal; this is done by services such as Telerate and Reuters. More sophistication can be provided by interdealer brokers who, over proprietary terminals, post actual bids and offers that are "hit" or "lifted" by a phone call to the broker. The most automated type of system is provided by interactive terminals in which the trading is done by direct computer communication between buyers and sellers.

With respect to trading communications, we discussed various options with a number of individuals in Colombo, making specific inquiries about the feasibility of listing and trading Treasury securities on the CSE.[50] That suggestion was greeted favorably by many, but we remain concerned with various policy and practical issues. These range from the limitations of floor space on the CSE to the possible need for a separate class of exchange membership for equity and debt traders, to the need for, and difficulties of, the Central Bank conducting its open market transactions on the exchange. Particularly given the

[50] CSE Rule 1.4-6 states:

> **Listing Governments** - Dealings shall also be permitted in Treasury Bills, Loans, Stock, Bills, Mortgages, and short-term securities of the Government of Sri Lanka or of any local government authority in Sri Lanka or other Securities issued or guaranteed by or on behalf of the Government of Sri Lanka or government sponsored corporations established by or under any statute.

Bishop, *Consolidated Sri Lanka Securities Regulations, Sec. 207*, p. 29 (December 1990).

limited number of securities involved and the small number of active traders in Colombo, we think it may be possible for a robust secondary market in Treasury securities to develop simply through bilateral negotiation among dealers by telephone. If so, we think it is likely that most money market instruments might well trade in this way as well. We envisage that the Central Bank and every dealer would maintain a chalk board on which the prices of last trades for every active security are continually recorded throughout the trading day.[51] Private debt securities could be traded on the CSE, as well as over the counter. We therefore recommend:

19. That the Debt Securities Team survey the Central Bank and at least a substantial portion of the APDs to determine whether they believe an active OTC market in government securities is feasible, without the use of (and investment in) computer-based communication of bid/offers. (ID 64)

20. That the Debt Securities Team discuss with the CSE, the CDS, and the SEC the feasibility of listing and trading private debt securities on the exchange. (ID 69)

21. That the Debt Securities Team, in conjunction with the CFSR, describe in writing a workable trading mechanism for debt securities, including Treasury bills, private money market instruments, Treasury coupon bonds, and private coupon bonds. That this report include a description of any electronic infrastructure and/or technical assistance required to implement the system, along with cost estimates. (IDs 65 and 66)

22. That the Debt Securities Team, in conjunction with the CFSR, work to implement this system and establish an active secondary market in both Treasury and private debt securities. (IDs 65 and 67)

For clearing and settlement there are two models currently in use in Colombo. One is the Central Depository System (CDS), owned by the stock exchange. It was implemented in 1991, made the subject of a critical study in 1992, and is currently being improved and expanded.[52] The system performs several functions, including the computation and

---

[51]The *Lucas Report* points out that, " the over-the-counter (OTC) character of virtually all the world's government securities markets have significantly different essential features than do equities or futures trading on organized exchanges.... [T]his model of secondary market trading for government securities can be expected to develop in Sri Lanka as well." *Lucas Report*, p. 9-10. It is worth noting that the Federal Reserve Bank of New York, which does all the open market operations for the U.S. government, still uses a chalkboard to keep track of the market, and the authors understand from Mr. Lucas that it works very well. It may be helpful for the Central Bank to publish "consensus" price indications at the end of each trading day. For example, the Federal Reserve Bank of New York makes available a list of prices on marketable issues in its *Composite Quotations for U.S. Government Securities* report. These prices are obtained from 5 securities dealers and published in papers such as *The Wall Street Journal*.
[52]A 1992 review of the CDS noted that it was "a good, apparently robust system and an excellent platform for the expansion of the Sri Lanka equity market. Few exchanges have accomplished as much with such modest expenditures". It also stated that, "Notwithstanding these good marks, the CDS has a number of exposures which must be addressed." Gorman, *A System Review of the Colombo Stock Exchange's Central Depository System* (June 22, 1992) One of the principal exposures was the lack of a backup

dissemination of market information and providing surveillance and management information for monitoring and controlling trading activity, as well as serving as depository performing trade clearance and settlement functions. As a depository it immobilizes securities by depositing the securities it receives with the registrar of the company that issued the securities. The deposited shares are transferred in the company's books into CDS's name and CDS's books identify the beneficial owners. When a trade occurs on the floor of the CSE, it is recorded on paper and sent to the computer room for keying. During the trading day, run sheets are printed for each broker for verification. Upon verification, the brokers enter at their floor terminal the identities of the buyers and sellers for each trade. At the end of the trading day final run sheets are delivered to each broker who must complete verification by 2:00 p.m. Upon verification, CDS runs a final posting to update its ledgers and prints out confirmations in triplicate. The verified trading information is then communicated to Grindley's Bank at which all of the brokers have clearing accounts. Grindley's makes net transfers among these accounts by the close of business.

The second clearing system is the Automated Clearing House (SLACH), which was implemented at the Central Bank on March 2, 1988 to clear checks among all Sri Lankan banks. This system is currently being upgraded also. The upgrade includes installation of a backup system and the expansion of its capabilities to become an electronic funds transfer system (EFT) for a range of inter bank transactions. An EFT system moves funds from one account to another without requiring paper confirmation of such transfer. This project is to be implemented in three stages:

Stage I: Off-line system: Completed by end of 1993
Stage II: On-line system: To be studied after implementation of Stage I
Stage III: International link: To be studied after implementation of Stage II

Stage I intends to computerize the following types of transactions:

Direct bank to bank payments
- call money transactions
- foreign exchange settlements
- sales and purchases of government securities
- sending and settlement of refinance facilities
- other type of transactions

Interbank transaction involving customer accounts
- standing orders
- insurance payments
- other types of transactions

---

system which has since been designed and is expected to be installed by the fall of 1993. The exact configuration of the system enhancements has not been determined as of this writing, but a review of the alternatives was made in a presentation for the USAID Financial Markets Project Team Planning Meeting, dated March 31, 1993.

Interbank transactions carried out by institutions and customers

- payroll
- utility bills
- pension payments
- Employees Provident Fund
- other types of transactions

The off-line system will require all banks to create a single magnetic tape or diskette each day on which all transactions in the above categories have been made by all branches. Upon receipt, SLACH will read this information from the tapes/diskettes and make the appropriate net transfers in the accounts the banks have at the Central Bank.[53] Currently, SLACH provides next-day settlement for checks. Same day settlement is available for large sums under special arrangements, and apparently for some money market transactions, including secondary Treasury trades.[54] We believe that, with the planned enhancements to SLACH, next-day settlement will be routine for all Treasury security transactions.

The terms of reference to which the Lucas Report responded inferred that the CDS would be expanded to incorporate government securities.[55] A substantial portion of the Lucas Report was devoted to this issue. While acknowledging that expansion of the existing CDS to handle government securities would have important practical advantages, it pointed out that such an add-on would accomplish only part of the automation infrastructure development needed to create a truly efficient government securities market. The CDS, system, for example, does not contain any mechanism to accomplish settlement of cash nor does it provide for Central Bank accounts for settling member firms, nor accommodate financing transactions. The Lucas Report emphasized that "great importance should be placed on development of sound, automated, electronic mechanisms for settlement of cash amounts associated with auction and secondary market trading of government securities" and that the cash settlement mechanism should be linked to the depository. Furthermore,

> Because of the intrinsic nature of government securities, and their role in open market operations of the central bank, large amount of cash are settled between

[53] Conversation between the authors and S.N. Fernando, Manager/SLACH and Justin Wickremasinghe, Senior Operations Manager/SLACH on March 30, 1993. It is interesting to note that the Financial Institutions *Study* had hopes that computerization of bank accounts could provide more accurate and timely information to the Monetary Operations Unit regarding "foreign exchange cash flow, CBSL's spot and forward foreign exchange transactions, refinance approvals and utilization, primary and secondary treasury bills outstanding, and reserve account of commercial banks." *Study*, Vol. III, p. 12-13. Whether the current SLACH upgrade could assist in meeting the objectives of Task 4 remains to be explored.

[54] "A next-day-settlement system for checks is used by banks in Colombo. Very large sums--around Rs 100 million--can be cleared on the same day under special arrangements. Money market transactions involving trading in secondary treasury bills or interbank funds are also settled the same day." *Study*, Vol III, p. 17.

[55] *PFDP Report*, Annex 13, pp. 99.

> banks, private entities, and large government entities, on the one hand and, on the other, both the central bank and the government. The government also accomplishes much of its routine cash receipts and payments through the central bank acting as fiscal agent. The implication of these facts is that the central bank must be electronically connected to the payments mechanism settling government securities. In order to accomplish this objective, it is necessary to ensure that automated accounts systems of the central bank have sufficient capacity and reliability to provide continuous electronic access to accounts for the government, banks, and all APDs.[56]

The report goes on then to consider the SLACH system as a second alternative, saying that: "If the decision as to precisely how to develop the government securities depository were to be made according to conventional approaches world wide, then it would be clear that preference should be given to following the second model [ACH]..."[57]

We agree with this preference for using SLACH to clear government securities and recommend the following:

23. That the CFSR and Debt Securities Team, in cooperation with the Central Bank, undertake a study of using the SLACH to accommodate clearing and transfer of all government security trades. Strong consideration should be given to sending SLACH personnel back to Singapore to observe the way in which the monetary authority (MAS) has implemented government security transfer and settlement. Such study will consider the clearing of certificate-based securities and explore creation of a scriptless system. The report would include an estimate of cost, including hardware, software, and training and include a proposed timetable for implementation.[58] (ID 73)

---

[56]*Lucas Report*, p. 10

[57]Id., p. 11.

[58]The desirability of scriptless government securities was first suggested by the Financial Institutions *Study*:

> Treasury bills continue to be handled (and signed) manually in the CBSL. Given the large volume of bills now outstanding, this imposes a heavy administrative burden on the CBSL staff. As treasury bills are now subject to withholding tax, there appear to be few advantages in allowing them to be transacted as physical bearer instruments rather than in an electronic book-entry form. The CBSL has a new, and as yet substantially unutilized, mainframe computer and the development of the necessary codes, documents and software to operate an electronic book-entry system would not be especially difficult. If security dealers are established, CBSL could maintain book-entry accounts for the dealers, who would, in turn, maintain book-entry accounts for their clients. *Study*, Vol. III, p. 14.

The *Lucas Report* agrees: "Integrity of the securities depository and tax compliance can be maximized if new Treasury securities are issued from the outset in scriptless form". p. 2. However there remains some resistance to book entry as evidenced by comments made by the representative of a private brokerage firm at the USAID Financial Markets Project Team Planning Meeting on April 1, 1993.

24. That the CFSR and Debt Securities Team assist SLACH, where possible, in implementing a clearing and transfer system for all government securities. (ID 75)

25. That the CFSR and Debt Securities Team, in cooperation with the CDS, undertake a study of expanding that system to accommodate private debt securities. The report would include an estimate of cost for implementing such changes and include a proposed timetable for implementation. (ID 77)

26. That the CFSR and Debt Securities Team assist the CDS, where possible, in implementing a clearing and transfer system for private debt securities. (ID 78)

We note that a valid concern with the SLACH system is its present location in the Central Bank. Once the system is operating smoothly, we believe that strong consideration should be given to spinning it off into some kind of a cooperative arrangement among the banks.[59]

Task 6: Establish Regular Issuance and Secondary Trading of Longer Term Coupon Treasury Securities

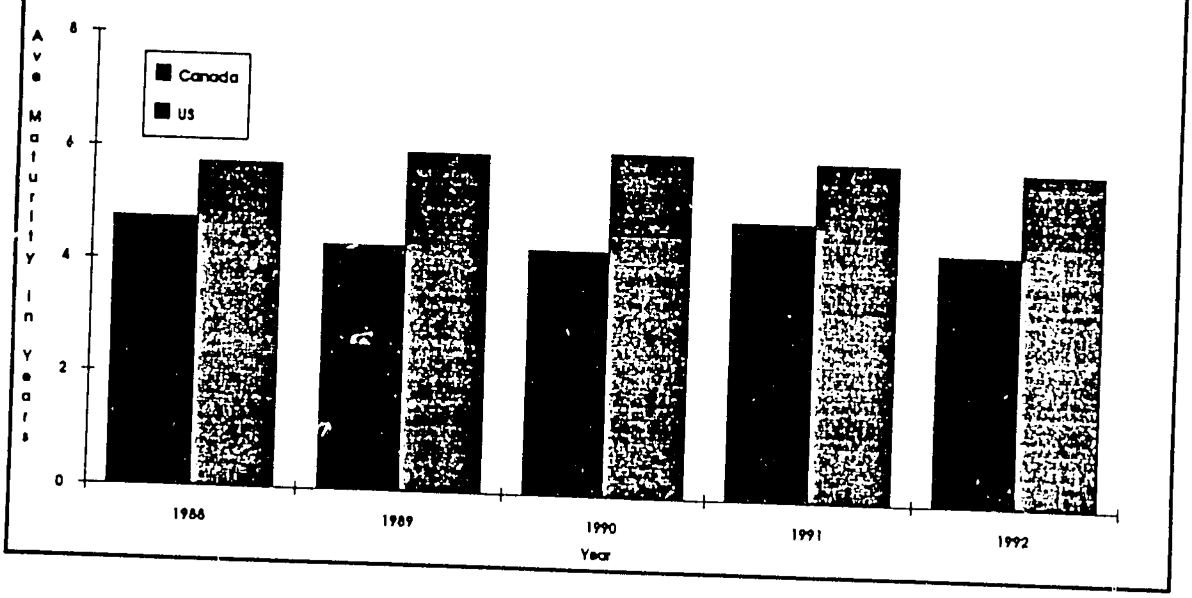
The fact that the government does not issue longer term coupon securities is a widespread concern.[60] There are several types of damage caused by the government's reliance upon short-term T-bills. First, because short-term debt is continually rolled over at current short-term rates, it creates the maximum amount of interest cost volatility, exacerbating the already difficult task of projecting funding needs. Second, the concentration of debt issues in such a limited maturity range raises interest costs of the government which it might lower by issuing a broader range of maturities that more closely matches investors' maturity preferences. Third, the absence of longer-term securities leaves the debt securities market without a yield curve base off which to price private debt securities and thereby inhibits the development of this market. Fourth, the unavailability of long-term debt security investments in Sri Lanka results in severe maturity mismatches in institutional portfolios. This is particularly true of institutions, such as the pension funds, which are required to hold most of their assets in the form of government securities.[61]

We do not specify what Sri Lanka's maturity mix should be. It may be possible, however, to estimate medium and long term financing needs that should be funded with

[59]The SLACH system was originally conceived as a cooperative venture of the banks, acting through the Sri Lanka Bankers Association. Apparently there continues to be active interest by the banks in owning and operating the system. Conversation between the authors S.N. Fernando, Manager/SLACH and Justin Wickremasinghe, Senior Operations Manager/SLACH on March 30, 1993.
[60]E.g. see *Study*, Vol. I, p. 1; Vol. III, p. 8; *Lucas Report*, pp. 4,6,7; Conversations between the authors and Hannan Ezekiel (ISTI). This concern was expressed by a number of individuals in both the public and private sector during the authors' trip to Colombo, March 25 through April 5, 1993.
[61]See the discussion under Task 2, above.

bonds of similar maturities, as opposed to short-term liquidity requirements that are appropriately met with T-bills. The maturity mix in developed economies shows wide divergence among countries and over time. Exhibit 2, below, shows the US and Canadian average maturity of privately held government securities over the past several years. Since 1988 Canada has averaged between 4 and 5 years with the US about 6 years. By contrast, the UK has an average maturity of around 11 years.[62] In the past 50 years the US figure has ranged from a high of 10 years 5 months in 1947 to a low of 2 years 5 months in 1975. The low average maturity in the mid-1970's alarmed both the central bank of the U.S. (the Federal Reserve or "Fed"), which feared loss of control of monetary policy, as well as the Treasury whose plans to sell additional debt to finance rising budget deficits were [64]threatened by market congestion at the low end of the yield curve.[63]

EXHIBIT 3: AVERAGE MATURITY OF PRIVATELY HELD GOVERNMENT SECURITIES IN CANADA AND US: 1988-92



The Lucas Report recommends that the Treasury limit T-bills to a maximum of 1 year maturity and commence issuance of coupon securities, beginning with a 2 year and moving gradually out to 10 years.[65] It also recommends a quarterly cycle of coupon security auctions such that there is an outstanding coupon security which matures on each successive quarterly refunding date for the 10 years following the most recent auction.[66]

---

[62]Wann, *Inside the US Treasury Market*, p. 18 (1989)
[63]Id. p. 5
[64]Exhibit 2 was prepared by MorBanc from statistics in Bank of Canada, *Bank of Canada Review: Winter 1992-1993* and Dept. of the Treasury, *Treasury Bulletin* (March 1993).
[65]*Lucas Report*, pp. 6-7
[66]Id. The terms of reference to which the *Lucas Report* responded referred specifically to the issuance of floating rate securities, but the *Lucas Report* states: "It is strongly recommended that all efforts be concentrated on development of conventional government securities market before introduction of special purpose issues." We interpret this as limiting Treasury bonds, at least initially, to fixed rate coupons.

Under the PFDP, the GOSL has committed itself to increasing the maturity structure of its competitively priced debt securities in a manner that will result in at least Rs. 4 billion to be issued in 1994 and Rs. 10 billion by June 1996.[67] This seems a very modest commitment against the Rs. 152 billion in outstanding debt at the end of 1991.[68]

In November 1992, the GOSL modified the legislation governing Rupee Securities to allow issuance of coupon Treasuries through competitive procedures and additional legislative changes are expected by July 1993.[69] Once the legislative obstacles are overcome, the principal obstacle to successful issuance of longer term securities is the current lack of a secondary market. This should be largely cured by implementation of the recommendations under Task 3, above, which will establish a secondary market for T-bills. Trading of coupon securities with maturities over one year should be a logical extension of T-bill trading. The Lucas Report, however, was concerned that the withholding tax on interest imposes a major impediment to secondary trading of coupon securities:

> [I]t should be an objective of the Government of Sri Lanka to eliminate the withholding tax at the earliest possible occasion, since its presence distorts the market determination of interest returns on government securities, and severely limits development of secondary market trading. There simply is no practical way to establish an efficient primary or secondary market which includes both taxable and tax-exempt investors, and where taxable investors are subject to differing tax rates. Even well developed government securities markets in industrialized nations have experienced severe loss of liquidity and capital flight when such taxes were introduced, necessitating their withdrawal. I am not aware of any example in which an emerging market economy succeeded in development of active trading in government securities in the face of such a tax.[70]

As the report recognizes, there may be resistance to repeal of this tax because it would involve a one-time backward shift in the timing of tax collections.[71] This could be dealt with, however, simply through improved cash flow projections, which are necessary for other reasons already discussed and the subject of Recommendations 16-19, above. With

---

Floating rate securities do not overcome some of the principle concerns that would be addressed by fixed rate securities since they continually reprice in much the same manner as rolling short term debt.

[67] *PFDP Report*, p. 14. See also, Id. pp. 39 and Annex 2, p. 46.

[68] Central Bank of Sri Lanka, *Annual Report 1991*, Table 70 (1992).

[69] Id., p. 14. It is not clear what these additional legislative changes include.

[70] *Lucas Report*, p. 12. Lucas does not describe exactly how the problem arises. The authors did not have the opportunity to interview persons at Inland Revenue, but presume that the amount of tax withheld assumes that every holder is in the same tax bracket and requiring any actual holder who is in a lower bracket (or is tax exempt) to file for a refund. If this is so, then there would arise a multi-tiered pricing structure, with a different value for each possible tax bracket and this value differential would increase each day during the period between coupon payments. The complexity of such a pricing system could indeed deter development of a secondary market. However, additional research needs to be done to determine precisely how the incidence of this tax would be triggered on actively traded securities.

[71] The *Lucas Report* also mentions as a problem the higher risk of tax evasion. In the absence of discussions with Inland Revenue, it is not clear to the authors how great a risk this creates.

better projections the government could anticipate this one-time cash short-fall and fund it with T-bills of appropriate maturities. The GOSL has committed itself to "modernizing the system for generating tax data for use by Inland Revenue and phasing out the current system of withholding taxes on debt instruments."[72] The question is when.

The other problem, which to some extent extends throughout this project, is the interdependent nature of securities markets. It is not possible to have an efficient primary market without a secondary market, but the secondary market cannot exist until some critical mass of securities has been issued. We expect, therefore, that the initial issuances of coupon securities may require some premium in yield, until an active secondary develops. The cost of this we believe will be small compared with the benefits derived from a full yield curve and can be minimized by doing everything possible to ease development of the secondary market at the short end of the curve and then extending the maturity spectrum gradually from 2 years out to at least 10 years. We recommend the following:

27. That all of the recommendations under Task 1 through Task 5 which serve to create an environment in which a secondary market can develop be started before the Treasury begins to issue coupon bonds, and in particular, that the Central Bank and Treasury develop a cash forecasting ability that would allow them to reliably fund the tax shortfall resulting from a repeal of the withholding tax.[73] (ID 51)

28. That Treasury and Central Bank place themselves in a position to recommend--and that they do recommend--specific legislation repealing the withholding tax. (ID 51 and 83)

29. That the Treasury and Central Bank, with assistance from the Debt Securities Team, design a Treasury coupon security, an auction procedure for primary sale of such securities, and a schedule for periodic issuance of coupon securities with maturities from 2 to 10 years.[74] (ID 85)

---

[72]*PFDP Report*, p. 24 and Annex 2, p. 46.

[73]This includes most of the recommendations made to this point. It is difficult within the text to specify the extent to which various recommendations are dependent upon each other. However, these dependencies have been included in the Gantt Chart in Appendix A.

[74]One example of a regular issuance schedule is the following, used by the U.S. Federal Reserve:

U.S. T-NOTE AND T-BOND AUCTION SCHEDULE

Security	Frequency	Announcement	Auction Date	Issue Date	Maturity Date
2-year/5-year	Monthly	Wed, week of 20th	Following Wed	Last calendar day of month	Last calendar day of month
7-year T-note	Quarterly	1st mon of qtr with 2-yr	Following Wed	15th of Jan, Apr, Jul, Oct	15th of Jan, Apr, Jul, Oct,
3 yr/10 yr/30 yr	Quarterly	1st Wed of mid-mon of qtr	Tues, Wed, Thur of week before settlement	15th of Feb, May, Aug, Nov	15th of Feb, May, Aug, Nov

Jones and Fabozzi, *The International Government Bond Markets*, p.31.

30. That the Treasury begin issuing coupon securities pursuant to the agreed schedule. (IDs 87-92)

Task 7: Promote the Issuance and Secondary Trading of Private Debt Securities

Private debt securities include both money market instruments, such as commercial paper and banker acceptances, as well as asset-backed securities and the more conventional coupon bonds.[75] The Lucas Report did not discuss private securities, but we understand from conversations with the World Bank that it is vitally interested in this market.

The Financial Institutions Study does not deal with private securities in much depth,[76] but it does suggest two major impediments to their development. First is the artificially low cost of longer term debt. This is apparently due to the failure by the state-controlled banks (SCBs), Bank of Ceylon (BOC) and People's Bank (PB) to rationally price their lending risks[77] and to government-controlled non-bank lenders (e.g., the National Development Bank and the Development Financial Corporation of Ceylon) seeing themselves as instruments of development and not being required to issue financial statements that reflect their true condition.[78] The SCB's dominate Sri Lanka's banking community, though their market share is declining. Because of their government

---

[75]Asset-backed securities, which involve the "securitization" of various kinds of cash flow assets can be expected to be a large part of the private securities market.

> "One of the most important financial innovations of our times is the securitization of assets. It has far reaching implications for finance not only in North America but worldwide. Securitization involves taking an illiquid asset, such as a residential mortgage, packaging it into a pool of like assets, and then issuing securities backed by the pool. An illiquid asset thereby is transformed into a capital market instrument.... Investors are protected against credit losses by the separate legal entity of the asset pool, together with a host of credit enhancement devices including guarantees, overcollateralization, reserve accounts, and recourse arrangements.

Van Horne, "Changing World and Asian Financial Markets, in Rhee and Chang, *Pacific-Basin Capital Markets Research*, p. 70-71. We understand that an asset-backed security representing interests in a pool of leases may be issued in Sri Lanka sometime this summer. Authors' interview with Manohan Nanayakkara on March 30, 1993. The benefits of such innovations in the debt securities markets are apparently becoming recognized in Sri Lanka. See, e.g., V.M. Fernando, "Financial Innovations: The Experience of Sri Lanka", *The Island*, April 25, 1993.

[76]*Study, Vol. I*, p. 23, Vol. III, pp. 3, 49, 55, 59, 63, 67.

[77]

> A recently completed external audit of the financial condition of PB and BOC revealed that both institutions incurred large operating losses and, as of December 1991, were technically bankrupt. A capital infusion of more than Rs. 24 billion is required to recapitalize these banks to internationally accepted (BIS) standards... The banks, in effect, are being used to funnel off-budget subsidies to the sectors of the economy that are commercially non-viable. *PFDP Report*, p. 19

[78]*Study*, Vol. III, p. 48, 59

ownership they are prohibited from participating in the PFDP and a large portion of IDA's technical assistance funds are allocated to their restructuring.[79]

Second is the inadequacy of debt recovery legislation, under which a bank lender requires 3 to 10 years to gain control over assets.[80] Although debt recovery legislation was strengthened by amendments enacted in March 1990, the laws are still too weak, particularly with respect to the execution of writs, which was not affected by the amendments at all.[81] More recently, a committee to examine the debt recovery law and procedure was appointed by the Cabinet Subcommittee on Monetary Affairs. This committee submitted its recommendations in October 1992 and new legislation is expected by August 1993. Until additional effective reforms are made this will remain an impediment to the bond market as well. Whether the lender be a bank or a bondholder, you cannot have efficient debt markets of any kind unless and until lenders are able efficiently to recover pledged collateral of bankrupt borrowers. The PFDP is supporting debt recovery reform with technical assistance from the IDA.[82]

We consider the development of a private debt securities market to be of the highest concern.[83] The considerable work outlined in this report to establish a viable government securities market contributes also to the development of non-government bond issues. Some additional steps can be taken, however, to directly promote the issuance and trading of corporate and asset-backed securities. We recommend the following:

31. That the CFSR, with the assistance of the Debt Securities Team, survey potential issuers and underwriters of private debt securities to determine what impediments there may be to developing this market and prepare a set of recommendations for overcoming those obstacles. (ID 95)

32. That the Debt Securities Team, with the assistance of the CFSR, develop an action plan to overcome the obstacles identified. (ID 96)

33. That the Debt Securities Team, with the assistance of the CFSR, implement the action plan. (ID 97)

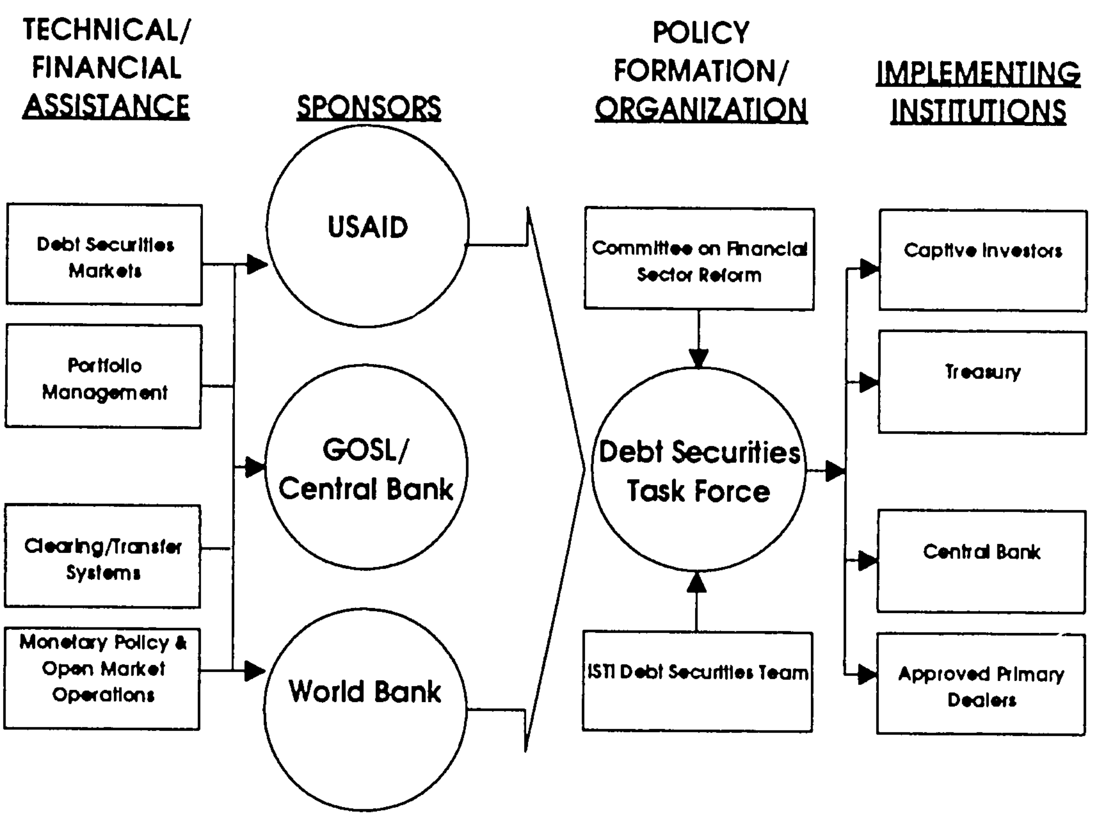
---

79 *PFDP Report*, Annex 2, p. 45; Annex 7, pp. 66-71.
80 Id., p. 58
81 Amendments to the debt recovery laws were proposed by a Committee on Debt Recovery, appointed by the Ministry of Justice in January 1985. The committee issued its report, along with proposed legislation in July 1985. The legislation passed in March 1990 was based upon the committee's recommendations, but was significantly weakened in committee. NU Jayawardena, "Some Aspects of Credit and Financial Markets in Sri Lanka" (Address before the Royal Asiatic Society on November 30, 1992). Most recently, a committee to examine the debt recovery law and procedure was appointed by the Cabinet Subcommittee on Monetary Affairs. This committee, chaired by Mr. Herat, submitted its recommendations on October 19, 1992 and new legislation is expected by August 1993. *PFDP Report*, p. 20.
82 See *PFDP Report*, pp. 20, Annex 2, p. 48,.
83 The potential importance of a debt securities market to any economy is suggested by its importance to the U.S. economy, where the amount of corporate bonds outstanding ($1.7 trillion) is almost equal to the total amount of bank loans ($1.8 trillion, excluding interbank loans). Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*, pp. A29, A42 (March 1993).

WHAT IS REQUIRED

Together, the 33 recommendations constitute a highly complex undertaking. In Exhibit 3, below, are diagrammed the four things needed to accomplish it. First, is technical assistance in four different areas: Debt securities markets, portfolio management, clearing/transfer systems, and monetary policy/open market operations. Second, are sponsors able and willing to provide financial assistance. The resources required are likely to exceed USAID's commitment to the Financial Markets Project and help will therefore be required by both GOSL/Central Bank, and the World Bank. Third, is an organizational framework that can direct the assistance being provided and ensure the cooperation of the affected institutions. For this we suggest the creation of a Debt Securities Task Force, which would have approximately six to eight members, including representatives from the CFSR, the Debt Securities Team and the major financial institutions, both public and private. Fourth, and perhaps most important, is the active and willing participation of the affected institutions which must actually implement the necessary reforms.

EXHIBIT 4: COORDINATION OF RESOURCES

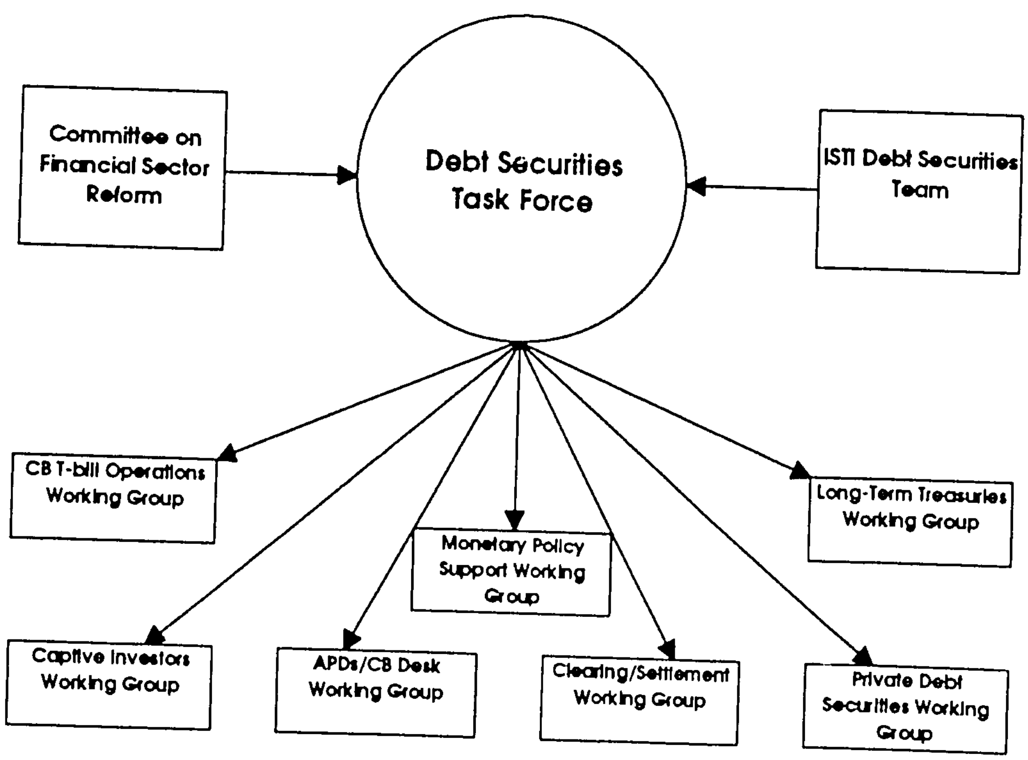


IMPLEMENTING ORGANIZATION

The most critical part of this project, without which it will certainly fail, is the willingness of the affected institutions--the Central Bank, the Treasury, the captive investors, and the APDs--to accomplish these changes. In some cases, this willingness has already been indicated; some of our recommendations are embraced in whole or in part by commitments made by the GOSL in the context of the PFDP. Many of the recommendations, however, deal with areas in which there has been no acknowledgment that change is needed or there has been demonstrated resistance to the kind of action we propose. With respect to these latter cases, this project carries its heaviest burden. To be successful will require concerted and coordinated efforts to explain, to persuade, in some sense to "sell" these recommendations.

One of the working principles set forth at the beginning of this report is that change cannot be imposed from the outside of an organization. The process must actively involve those individuals who will ultimately be responsible for administering those changes within the affected institution. Exhibit 4, below, diagrams a suggested structure through which this can be accomplished. We propose that each of the seven tasks, around which we have organized the project, has its own working group of five to eight individuals. These would include members of the Debt Securities Team and/or the CFSR, along with persons from the affected institutions who are directly responsible for those areas which the proposed reforms will affect. These groups will report individually to the Debt Securities Task Force, which will serve as a kind of board of directors for the project overall, with administrative and technical assistance from the CFSR and the Debt Securities Team.

EXHIBIT 5: WORKING ORGANIZATION



WHO PAYS FOR WHAT

It is not yet possible to quantify with any precision the cost of carrying out this project, and because of this we do not include a proposed budget as part of this report. However, two major cost items which we assumed would have to be undertaken almost immediately, may not be necessary. One of those was either an additional computer system, or a substantial upgrade to an existing system, for the purpose of accommodating an adequate clearing and transfer mechanism. Additional research is still necessary, but the SLACH system as it is currently being upgraded may have sufficient capacity to accommodate "next day" clearing of government securities without additional hardware and only modest software changes.[84] Also, the CDS system, after completion of the budgeted upgrade, should be robust enough to handle clearing of private debt securities and require only moderate software changes.[85]

The other major item was a trade communications system to transmit pricing information on Treasury securities among the Central Bank and a private dealer network. Such communication might have been accommodated within the CDS system, to the extent that Treasuries were traded on the CSE, but we were concerned that OTC trading might be the better alternative and that this would require a completely new computer system. We now think that OTC trading might be accommodated adequately by telephone, with chalkboards maintained throughout the trading day at the Central Bank and active dealers.

If we can avoid significant outlays for electronic infrastructure, then the principal cost will be for training with the amounts required depending upon specific program design. This will not be cheap. We believe that the success of the project is dependent upon how effectively it can provide training to a critical mass of individuals who will make up the debt security trading community. It will require bringing some very talented traders and portfolio managers to Colombo for periods of at least several weeks and will also require international travel by the trainees to allow them to observe functioning trading and portfolio management operations.

The following is a breakdown of the technical assistance pledged to the PFDP by IDA and USAID:

---

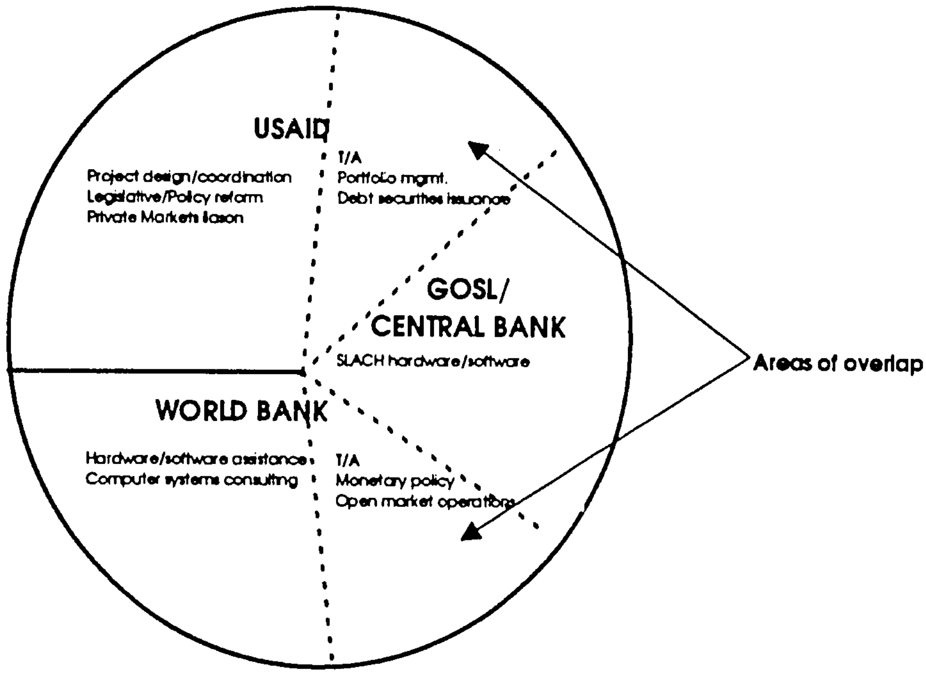
[84]Conversation between the authors, S.N. Fernando, Manager/SLACH, and Justin Wickremasinghe, Senior Operations Manager/SLACH on March 30, 1993. It should be noted that clearing government securities was not discussed at this meeting in detail, and several issues concerning timeliness and delivery-versus-payment (DVP) safeguards must be researched before we can confirm that the upgraded SLACH system will be adequate.

[85]Various conversations with Satyajit Seneviratne, CSE Systems Analyst and Bill Gorman, USAID consultant, March 29-April 3, 1993.

TECHNICAL ASSISTANCE	USAID (US$ '000)	IDA (US$ '000)
PCI Training		$500
Strengthen bank supervision/restructure state banks/improve debt recovery		$1,400
Clearing/settlement of debt securities	$843	
Dealer/investor training	$124	
Develop long-term Treasury market	$222	$500
Strengthen CSE regulation	$547	
Develop portfolio management capacity for EPF, ETF, NSB, and ICSL	$395	
Accounting and auditing	$711	$100
CFA program & other activities	$2,244	
Program management/evaluation	$1,289	
Contingency (15%)	$625	
TOTAL	$7,000	$2,500

In Exhibit 5, below, we suggest a rough breakdown of resource responsibility. We have USAID supporting the Debt Securities Team, which will provide overall project direction and general policy research, coordinate technical assistance, assist the CFSR in selling policy reforms among affected institutions, and provide some specialized training. The dotted lines indicate potential cooperation with the GOSL and the Central Bank on funding technical assistance in the area of portfolio management. Either or both of the two overlapping sponsors may provide funding, depending upon the eventual cost of their primary area of responsibility. The GOSL and the Central Bank may have to accommodate clearing/transfer of government securities within SLACH and co-sponsoring technical training in portfolio management with USAID, on the one hand, and co-sponsoring technical training in monetary policy and open market operations with the World Bank, on the other.

EXHIBIT 6: CO-SPONSOR RESOURCE RESPONSIBILITY

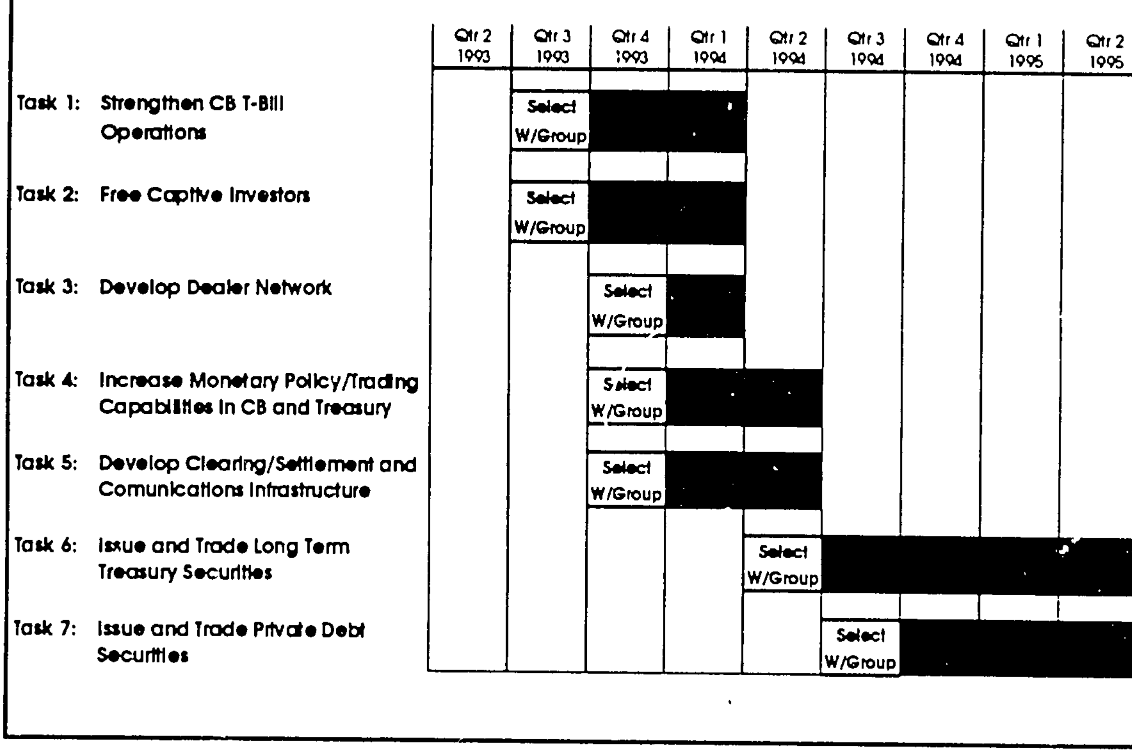


TIMING

We have said that markets are by their nature interdependent. If one part is not in place or is in some way dysfunctional, it not only degrades the functioning of every other part, it may keep the entire structure from working at all. At the same time, with a problem of this size and complexity, it is not possible to attack every aspect of it simultaneously. This makes the sequencing of tasks especially difficult and quite crucial to the success of the undertaking.

Exhibit 6, below, summarizes our suggested time frame, a more detailed version of which is given in the Gantt chart in Appendix B. In it we have adhered to our working principles, which require starting with reform of the short end of the government market (T-bills) and working toward the issuance of longer term government securities and privately issued bonds. In the case of each major task, the process of change begins with selection of the working group. As described above, those individuals who are or will be responsible for administering the reforms undertaken at the Central Bank, the Treasury, the Ministry of Finance, the captive investors, and the APDs must be part of designing and implementing those changes. The function of each working group is to create a vehicle for that involvement. Each task force may vary in size, but will attempt to balance the benefits of the broadest possible representation with the need for a group that can work together effectively and decisively.

EXHIBIT 7: SUMMARY TIME FRAME



CONCLUSION

We commend the World Bank. The Financial Institutions Study, the Lucas Report, and the PFDP Report have substantiated the critical need for development of Sri Lanka's debt securities markets and defined the essential elements of change. To actually bring about that change will now require three things. First, the dedication of individuals with expertise in debt securities markets so exemplified by the efforts of Charles Lucas over the past 15 years. Second, the financial resources of USAID, the World Bank, and the Central Bank in sponsoring technical assistance and acquiring some amount of hardware and software. Third, a willingness--no, more--an eagerness, on the part of Sri Lanka's most powerful and influential financial institutions to lead their country in creating a robust, market-driven debt securities market which will become the foundation of both the private and public capital markets for decades to come.[86]

---

[86]The D.B. Wijetunge has certainly indicated a willingness to provide whatever support the GOSL can to development of Sri Lanka's capital markets.

> [T]he ability of the capital market to channel savings into investment will become of overriding importance to the economy's future. I can assure you that the government is keen to develop an environment conducive to achieving this goal and will always be willing to provide the necessary support.

Speech delivered at the Regional Conference of Emerging Securities Markets of South and South East Asia in Colombo, September 30-October 3, 1992.

The ultimate success in creating an efficient, market-driven debt securities market rests with the will and determination of decision makers and leaders of the financial markets in Sri Lanka. Their commitment to bringing about desired change, and their constancy in pursuing this objective, are the most essential ingredients to creating a new era in Sri Lankan financial markets.

APPENDIX A

RECOMMENDED ACTION	Lucas Report (page)	Fin Inst Study (Vol. page)	PFPD Report (page)
1. That the Central Bank establish a trading desk in daily communication with the APDs to begin estimating a week before each the announcement of each auction the amount of each T-bill maturity that can be sold at various rate levels so the announcement can include the exact amounts of 3, 6, 9, and 12 month maturities to be auctioned.	4,6		98-99
2. That the Central Bank limit non-competitive auction tenders to Rs. 1 million, with each bidder limited to a single non-competitive bid.	8		
3. That all non-competitive bids and all T-bills taken down by the Central Bank be awarded at the rupee-weighted average of all competitive bids accepted at the auction.		III: 14	
4. That complete auction results be made public before close of business on the auction day, including the amount applied for and awarded in each maturity, the amount accepted non-competitively, and the high, low, and rupee-weighted average prices (yields).		I: 17	
5. That the Central Bank restrict use of its window to monetary policy and stop pricing T-bills on tap for purposes of raising additional funds.	8	I: 19-20	99
6. The Committee on Financial Sector Reforms (CFSR), assisted by the Debt Securities Team, (consisting of the authors of this report and such other research support as may be provided through the International Science and Technology Institute), in consultation with the Central Bank and the Ministry of Finance, will design a funds management system for adoption by specified captive investors, giving close consideration to the PFDP terms of reference for management of investment portfolios.	4-5	II: 73, 75 76	13,14,17, 24-25, 35 46-47, 88 91-93
7. The CFSR and the Debt Securities Team will also compile a list of specific legislative and/or regulatory changes that must be made, and identify the resources necessary, in order to implement that system.	4-5		23-24 91-93

RECOMMENDED ACTION	Lucas Report (page)	Fin Inst Study (Vol page)	PFDP Report (page)
8. The pla' will be discussed with a range of beneficiary groups so they understand the benefits of such change and the safeguards that exist to ensure the continued safety of these funds.			
9. The CFSR and the Debt Securities Team will monitor and coordinate the necessary legislative and regulatory changes and assist, if necessary, in actually implementing the training programs and contacting potential fund managers.	4-5		24, 92-93
10. That the Central Bank adopt an information policy explicitly recognizing the importance of providing data to the financial community as well as its responsibility in communicating with its APDs on a daily basis, both to obtain market intelligence and, without divulging privileged information, to ensure that its APDs are adequately prepared to participate in its financing operations.	3-4, 6		
11. That the CFSR and the Debt Securities Team, in cooperation with the Central Bank and its APDs, conduct a series of interviews with the APDs and other interested financial institutions, to determine their current and prospective capabilities as dealers. This would include a survey of potential capital and financing sources for dealer positions and, specifically, the development of an action plan to institute repurchase financing on government securities.	7-8	III: 14	14, 86
12. That the Central Bank define a new relationship with its APDs by adopting a code of conduct and statement of privileges and responsibilities for APDs, which includes, among other things, the following elements:	6,7	III: 14	
a. Exclusive access to Central Bank market activities, limitation on non-competitive bids, and clearing accounts for non-banks.	7-8		
b. Specific responsibilities of APDs, including minimum (and maximum) levels of auction participation, as well as minimum levels of average inventory and secondary market activity.	6,7		
c. General responsibilities of APDs to provide market intelligence on a daily basis to the Central Bank.	6		

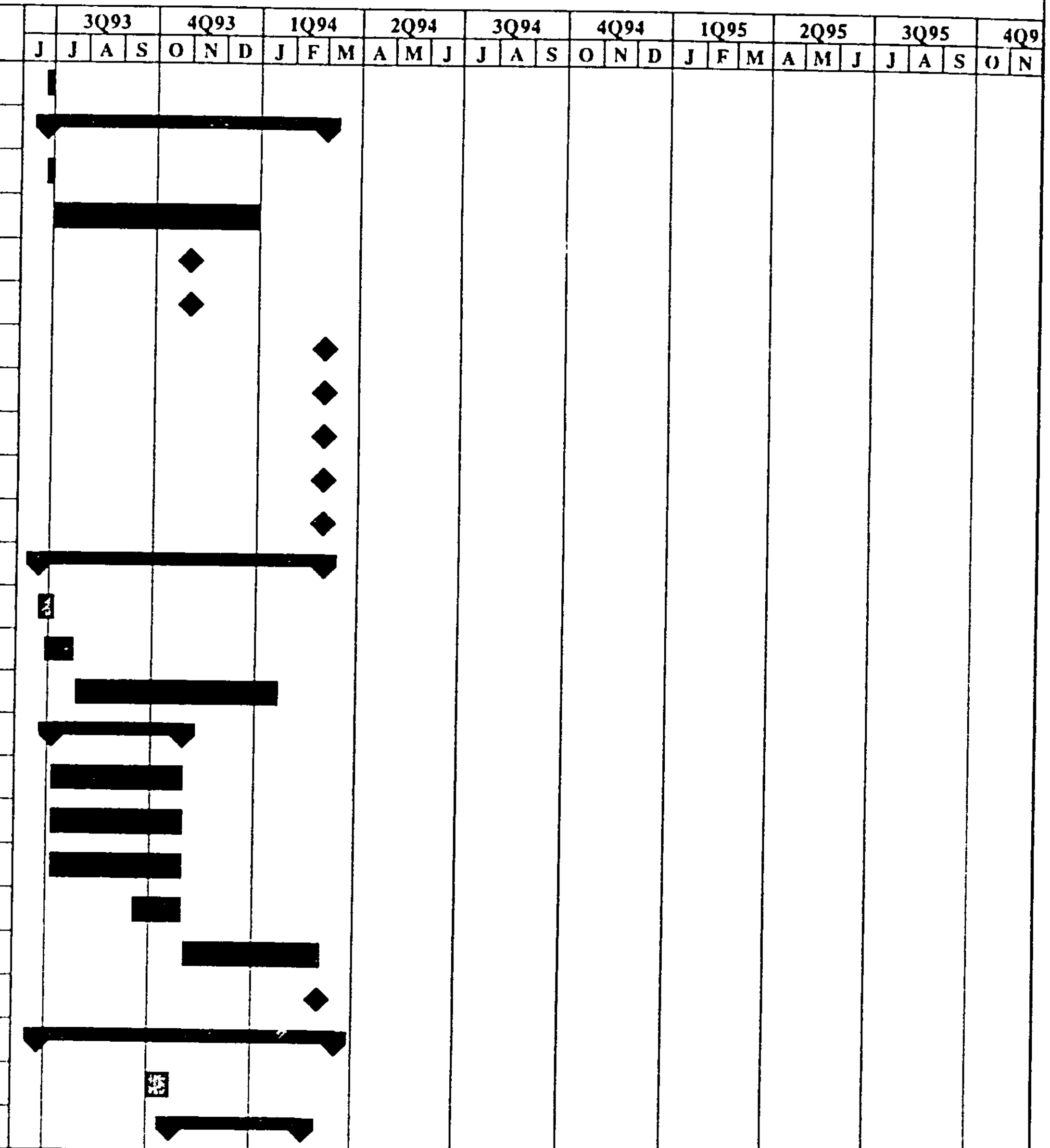
RECOMMENDED ACTION	Lucas Report (page)	Fin Inst Study (Vol page)	PFPD Report (page)
13. That the CFSR and the Debt Securities Team, in cooperation with the Central Bank and its APDs, design a training program in which trading personnel of the Central Bank and its APDs would participate together. The program will include observation of functioning dealer operation elsewhere (Bombay? Singapore?) as well as intensive in-country instruction by an experienced trader who will help design the trading floor and communications system.			35
14. That the CFSR and the Debt Securities Team, in consultation with the Central Bank and the APDs, jointly establish criteria for selecting those persons who will participate in the training program.			
15. That the CFSR, the Debt Securities Team, the Central Bank, and the APDs, jointly establish criteria for selecting those persons who will participate in the training program.			
16. That the CFSR and the Debt Securities Team, in consultation with the Central Bank and the Treasury, design a training program for personnel in the Monetary Operations Unit, the Research Department, and elsewhere which will increase the research and forecasting capabilities needed to back up the Central Bank's auction operations and trading desk. This program may include trips out of the country, along with in-country training by individuals with extensive experience in conducting research and forecasting for other monetary authorities.	12-13	I: 19 III: 11-12	86
17. That the monetary policy training program be coordinated, to the extent advisable, with the joint dealer training program described in Recommendations 13 and 14, above.			
18. That the CFSR and the Debt Securities Team monitor the training program and assist where necessary in ensuring that it is effectively carried out.			
19. That the Debt Securities Team survey the Central Bank and at least a substantial portion of the APDs to determine whether they believe an active OTC market in government securities is feasible, without the	9-10		

RECOMMENDED ACTION	Lucas Report (page)	Fin Inst Study (Vol: page)	PFPD Report (page)
use of (and investment in) computer-based communication of bid/offers			
20. That the Debt Securities Team discuss with the CSE, and CDS, and the SEC the feasibility of listing and trading private debt securities on the exchange.	9-10		
21. That the Debt Securities Team, in conjunction with the CFSR, describe in writing a workable trading mechanism for debt securities, including Treasury bills, private money market instruments, Treasury coupon bonds, and private coupon bonds That this report include a description of any electronic infrastructure and/or technical assistance required to implement the system, along with cost estimates.			
22. That the Debt Securities Team, in conjunction with the CFSR, work to implement this system and establish an active secondary market in both Treasury and private debt securities.			
23. That the CFSR and Debt Securities Team, in cooperation with the Central Bank, undertake a study of using the SLACH to accommodate clearing and transfer of all government security trades. would include as estimate of cost, including hardware, software, and Strong consideration should be given to sending SLACH personnel back to Singapore to observe the way in which the monetary authority (MAS) has implemented government security transfer and settlement. Such study will consider the clearing of certificate-based securities and explore creation of a scriptless system. The report would include an estimate of cost, including hardware, software, and training, and include a proposed timetable for implementation.	10-11	III: 14 III: 17	14, 35
24. That the CFSR and Debt Securities Team assist SLACH, where possible in implementing a clearing and transfer system for all government security trades.			
25. That the CFSR and Debt Securities Team, in cooperation with the CDS, undertake a study of expanding that system to accommodate private debt securities. The report would include an estimate of cost			

RECOMMENDED ACTION	Lucas Report (page)	Fin Inst Study (Vol: page)	PFPD Report (page)
for implementing such changes and include a proposed timetable for implementation.			
26. That the CFSR and Debt Securities Team, assist the CDS, where possible, in implementing a clearing and transfer system for non-government debt securities.	10		
27. That all of the recommendations under Task 1 through Task 5 which serve to create an environment in which a secondary market can develop be started before the Treasury begins to issue coupon bonds, and in particular, that the Central Bank and Treasury develop a cash forecasting ability that would allow them to reliably fund the tax shortfall resulting from a repeal of the withholding tax.			
28. That the Treasury and Central Bank place themselves in a position to recommend--and that they do recommend--specific legislation repealing the withholding tax.	12-13		14, 46
29. That the Treasury and Central Bank, with assistance from the Debt Securities Team, design a Treasury coupon security, an auction procedure for primary sale of such securities, and a schedule for periodic issuance of coupon securities with maturities from 2 to 10	6-7	III: 8	13-14
years.	6-7	III: 8	13-14
30. That the Treasury begin issuing coupons securities pursuant to the agreed schedule.			
31. That the CFSR, with the assistance of the Debt Securities Team, survey potential issuers and underwriters of private debt securities to determine what impediments there may be developing this market and prepare a set of recommendations for overcoming those obstacles.		III: 62,63, 67	7, 13
32. That the Debt Securities Team, with the assistance of the CFSR, develop an action plan to overcome the obstacles identified.			46
33. That the Debt Securities Team, with the assistance of the CFSR, implement the action plan.			

APPENDIX B

ID	Name
1	APPOINT DEBT SECURITIES TASK FORCE
2	TASK 1: STRENGTHEN CENTRAL BANK T-BILL OPERATIONS
3	Appoint CB T-bill Operations Working Group
4	Develop & implement auction reform program
5	CB begins canvassing APDs regularly to assess mkt
6	CB begins providing detailed auction information to public
7	CB begins auctioning only 3/6/9/12 mo T-bills
8	CB specifies exact auction amounts on announcement day
9	Non-comp bids, including bills taken by CB, awarded at true avg
10	CB publishes accurate, detailed auction results
11	CB restricts tap sales/secondary window operations
12	TASK 2: FREE CAPTIVE INVESTORS
13	Appoint Captive Investors Working Group
14	Compile list of legislative/regulatory changes needed to implement
15	Effect legislative/regulatory changes
16	Design funds mgt system for captive investors
17	Design system for mgt oversight
18	Draft code of fiduciary standards
19	Develop guidelines for training in-house/hiring outside mgrs
20	Discuss plan with beneficiary groups
21	Train in-house mgrs or hire outside mgrs
22	Captive investors start implementing new funds mgt system
23	TASK 3: DEVELOP DEALER NETWORK & CB TRADING CAPABILITY
24	Appoint APD/CB Desk Working Group
25	Design & undertake dealer development plan

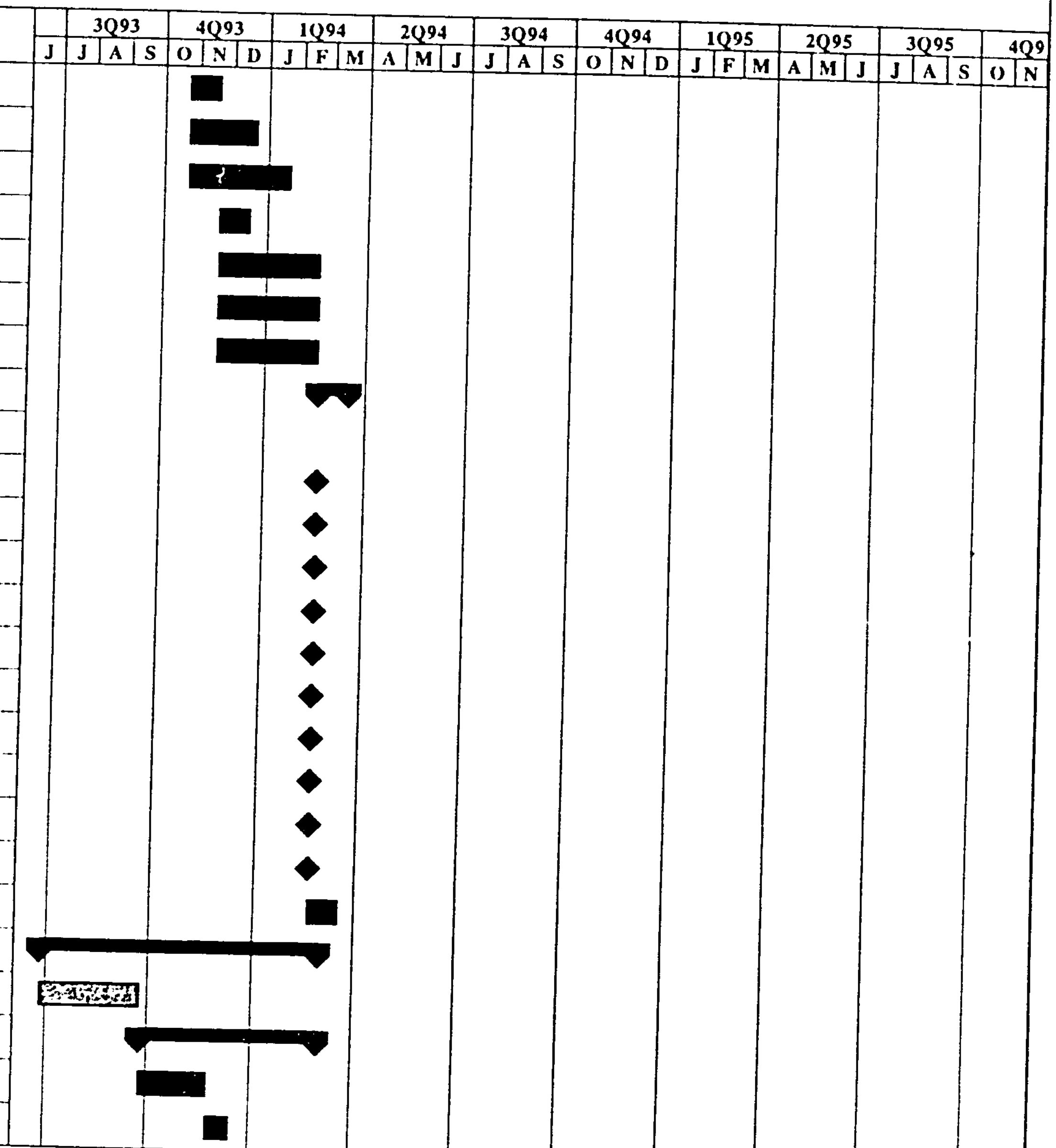


Project: Sri Lanka Workplan - draft 1
Date: 5/12/93

Critical | Progress | Summary
Noncritical | Milestone | Rolled Up

APPENDIX B

ID	Name
26	Identify dealers willing and able to take positions, make mkt, etc.
27	Study existing clearing/settlement practices
28	Survey & develop dealer financing sources
29	Investigate use of clearing accounts for non-bank dealers
30	Develop information exchange policy between CB & APDs
31	Develop code of conduct/statmt of priv/respons for APDs
32	Design other terms of restructured deal between CB & APDs
33	Restructure arrangement between CB & APDs/ Reestablish APD group
34	Announce terms of restructured arrangement
35	CB limits amounts an APD can purchase at one auction
36	Each APD to bid specified minimum, etc., to retain status
37	Estab. code of conduct/statemt of priv/respons for APDs
38	Establish clearing accts for non-bank dealers
39	All primary, 2ndary & financ opers conducted thru APDs
40	Gov & semi-gov agencies directed to bid thru APDs
41	Non-comp. tenders limited to Rs. 1 million, one per bidder
42	CB adopts explicit information policy
43	Estab. gen'l responsiblity of APDs to provide mkt info daily to CB
44	Revised CB secondary window operations, if necessary
45	Sign up new group of APDs willing to accept restructured deal
46	Strengthen CB trading capabilities
47	Determine CB trading needs, design trading desk, designate personnel
48	Joint training program for CB & APD trading personnel
49	Design joint training program
50	Designate personnel to be trained

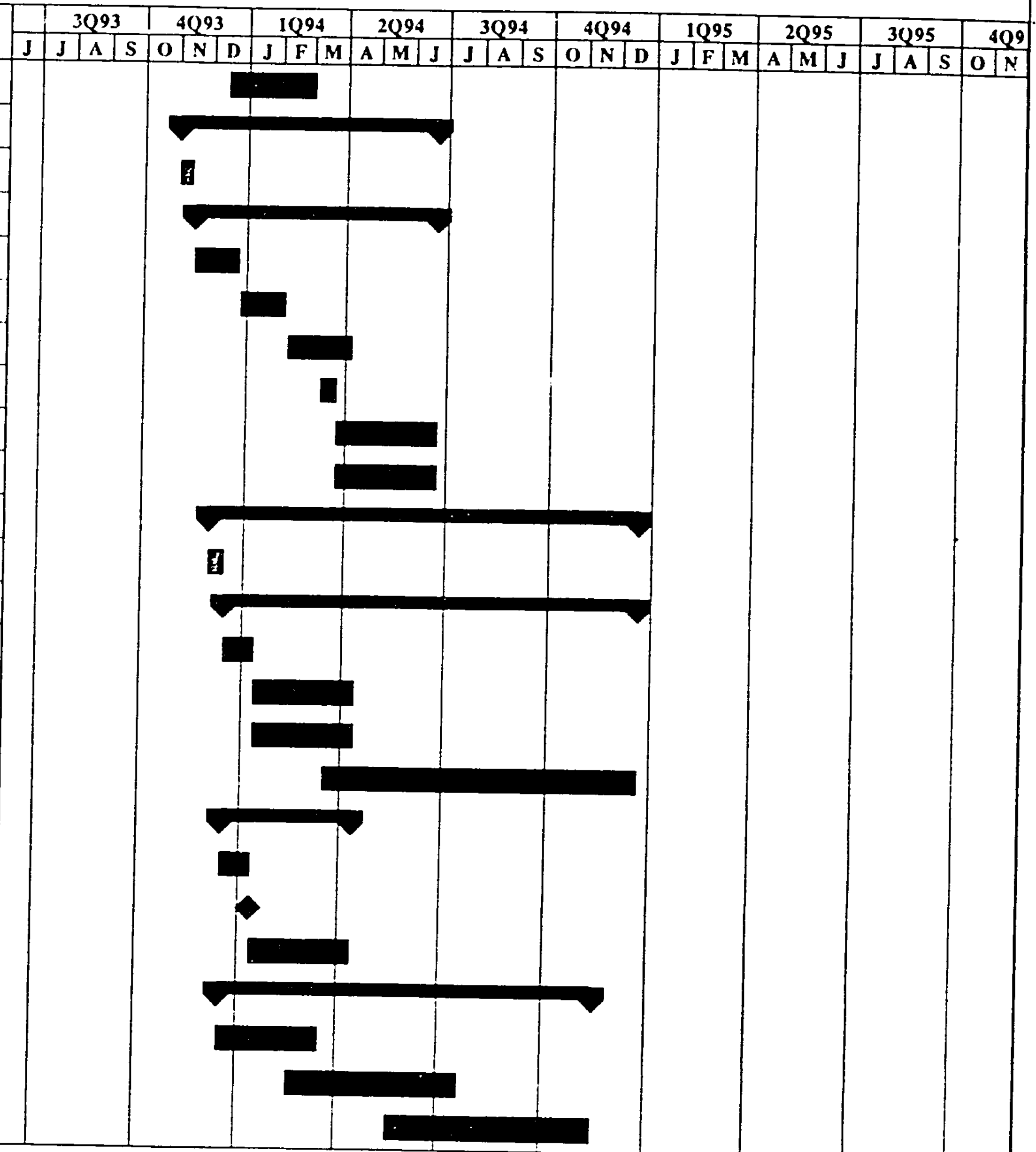


Project: Sri Lanka Workplan - draft 1
Date: 5/12/93

Critical | Progress | Summary
Noncritical | Milestone | Rolled Up

APPENDIX B

ID	Name
51	Carry out and monitor training program
52	TASK 4: INCREASE MONETARY POLICY & TRADING CAPABILITIES
53	Appoint Monetary Policy Support Working Group
54	Strengthen monetary capabilities
55	Determine any shortcomings in monetary capabilities, forecasting, etc.
56	Design revisions, improvements to correct shortcomings
57	Design monetary training program
58	Designate personnel to receive training
59	Carry out monetary training program
60	Coordinate with joint training program
61	TASK 5: CLEARING/SETTLMNT & COMMUNICATION INFRASTRUCTURE
62	Appoint Electronic Infrastructure Working Group
63	Develop & implement trading system for gov't debt securities
64	Determine feasibility of OTC mkt using chalk bd/telephone system
65	Assuming feasible, design, describe & coordinate initiation of system
66	If not feasible, explore CSE listing & other alternatives
67	Work to implement system & establish active 2dary mkt
68	Develop & implement trading system for private debt securities
69	Explore listing of private debt secs on CSE as main approach
70	If CSE approach satisfactory, begin encouraging listing of debt secs
71	If CSE approach not satisfactory, explore other alternatives
72	Develop & install clearing & settlement system for gov't debt securities
73	Study use of ACH & preliminary design of c/s system
74	Detailed design of c/s system using SLACH
75	Installation & startup of c/s system using SLACH

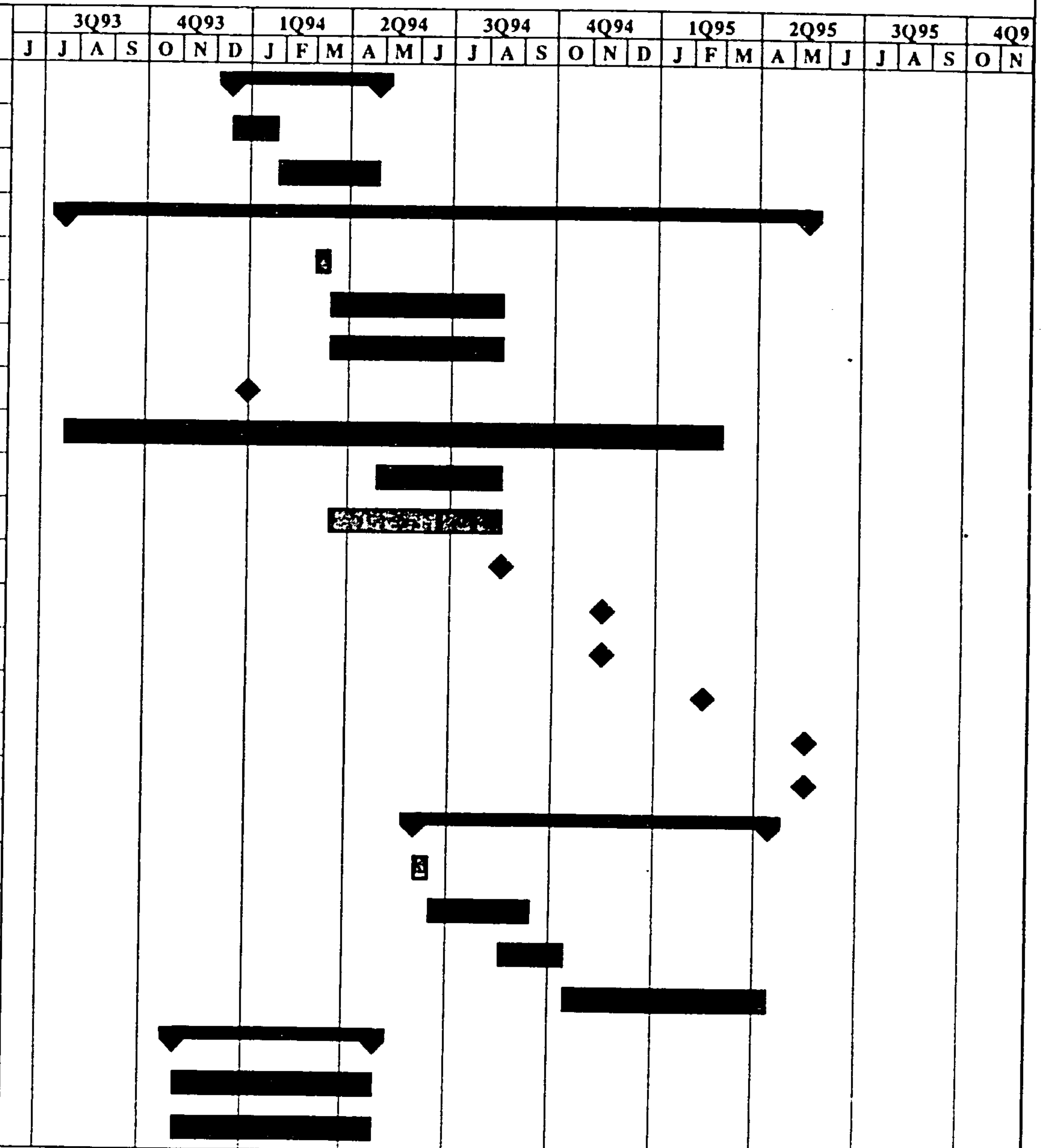


Project: Sri Lanka Workplan - draft 1
Date: 5/12/93

Critical | Progress | Summary
Noncritical | Milestone | Rolled Up

APPENDIX B

ID	Name
76	Develop & install clearing & settlement system for private debt securities
77	Determine changes needed in CDS
78	Make changes needed in CDS
79	TASK 6: ISSUANCE/TRADING OF LONGER TERM TREAS SECURITIES
80	Appoint Long-Term Treasuries Working Group
81	Amend law to permit auction of longer-term coupon secs.
82	Super Pub Debt prepares language for fixed rate coupon secs
83	Treasury & CB recommend repeal of withholding tax
84	Withholding tax is repealed
85	Design coup sec, auction procedure, schedule, etc.
86	CB develops ability to gauge demand & coupon level
87	CB begins periodic auction of 2-year T-Notes
88	CB begins periodic auction of 3-year T-Notes
89	Dealers begin to make active 2dary mkt in T-notes
90	CB begins periodic auction of 4-year T-Notes
91	CB begins periodic auction of 5-year T-Notes
92	CB introduces schedule for issuing up to 10 yr T-notes
93	TASK 7: PROMOTE ISSUANCE/TRADING OF PRIVATE DEBT SECURITIES
94	Appoint Private Debt Securities Working Group
95	Survey potential issuers/underwriters to determine impediments
96	Prepare recommendations for overcoming impediments
97	Implement recommendations
98	MISCELLANEOUS TASKS
99	Further improvement of debt recovery laws
100	Treas/Inland Rev develop records & audit criteria for CSD/EFT



Project: Sri Lanka Workplan - draft 1
Date: 5/12/93

Critical | Progress | Summary
Noncritical | Milestone | Rolled Up