PN-ACB-446
95473

A Review of the Operational Impediments of the Debt Market in India

January 15, 1996

Financial Institutions Reform and Expansion (FIRE) Project
US Agency for International Development (USAID/India)
Contract #386-0531-C-00-5010-00
Project #386-0531-3-30069

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LIST OF ABBREVIATIONS

BOI	Bank of India
BOLT	Bombay Stock Exchange On Line Trading System
BSE	Bombay Stock Exchange
CARE	Credit Analysis and Research
CCI	Controller of Capital Issue
CD	Certificate of Deposit
CMIE	Centre for Monitoring Indian Economy
CP	Commercial Paper
CRISIL	Credit Rating Information and Services of India, Ltd.
Crore	Rs. 10 million
CRR	Cash Reserve Ratio
DFHI	Discount & Finance House of India
DVP	Delivery versus Payment
ECB	Euro-Convertible Bond
FCD	Fully Convertible Debenture
FDI	Foreign Direct Investment
FERA	Foreign Exchange Regulation Act
FI	Financial Institution
FII	Foreign Institutional Investor
FRB	Floating Rate Bond
GDP	Gross Domestic Product
GDR	Global Depository Receipt
GIC	General Insurance Corporation
GoI	Government of India
IBCM	Interbank Call Money
ICA	Institute of Chartered Accountants
ICICI	Industrial Credit and Investment Corporation of India
ICRA	Investment Information & Credit Rating Agency
Lakh	Rs. 100,000.00
LAR	Liquid Asset Ratio
LIC	Life Insurance Corporation
MF	Mutual Fund
MoF	Ministry of Finance
NBFC	Non Banking Finance Companies
NCD	Non Convertible Debenture
NDTL	Net Demand and Time Liabilities
NRI	Non Resident Indian
NSE	National Stock Exchange
OMO	Open Market Operations
OTC	Over The Counter
PAD	Public Accounts Department
PCD	Partially Convertible Debenture
PD	Primary Dealer
PDO	Public Debt Office
PSU	Public Sector Undertaking

RBI	Reserve Bank of India
Repo	Repurchase Agreement
SBI	State Bank of India
SEBI	Securities and Exchange Board of India
SGL	Subsidiary General Ledger
SHCIL	Stock Holding Corporation of India Ltd.
SLR	Statutory Liquidity Ratio
STCI	Securities Trading Corporation of India Ltd.
UTI	Unit Trust of India

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I. EXECUTIVE SUMMARY

This paper identifies operational impediments to the development of the Indian debt market. The purpose is to create a framework upon which to base discussions of specific reform measures that can be implemented by the market participants. The constituencies concerned are the Reserve Bank of India (RBI), the Ministry of Finance (MoF), issuers, exchanges, brokers/dealers, banks, insurance companies, other financial institutions and credit rating agencies.

Information was gathered through extensive interviews with regulators, brokers and investors. Appendix A provides a complete list of those interviewed. Recommendations have been made keeping in mind the needs of the market participants and the constraints of the RBI and the Government of India (GoI).

A. Portfolio Managers Should Employ Modern Portfolio Management Techniques

1. Findings

Security selection by Indian portfolio managers has traditionally been made on the basis of current yield. This is an overly simplistic approach that only looks at a crude measure of return without weighing attendant risk. Given an illiquid debt market with static interest rates, this form of portfolio management may have been innocuous in the past. However, in the current environment interest rates are deregulated and dynamic and long term interest rate volatility is rising.

2. Recommendations

Like contemporary fixed income portfolio managers in advanced markets, Indian managers should emphasize total return rather than current yield. Risk control techniques which measure portfolio duration and convexity should be employed.

Convexity is the rate of change of duration (the second derivative of the price/yield equation). Duration and convexity are standard measures used for evaluating the risk characteristics of an individual bond or an entire portfolio. These measures are particularly useful when there are large interest rate fluctuations as there are in India.

B. Repurchase Agreements

1. Findings

The lack of repurchase agreements (repos) prohibit dealers from taking positions, holding large inventories and offering two way trades.

2. Recommendation

The RBI should reintroduce the repo for all markets players, define the instrument and establish broad guidelines for its use.

C. Limitations on Broker Activity

1. Findings

The RBI has imposed a five percent limit on transactions between a bank and a broker.

The RBI does not allow a broker to net his position in a particular security the same day. This restrictive rule, combined with the lack of alternate sources of financing, precludes dealers from being able to offer two-way quotes that provide liquidity to the market.

2. Recommendations

The five percent limit on transactions between a bank and a broker should be lifted.

Brokers should be allowed to net their positions in a particular security the same day.

D. Delivery Versus Payment

1. Findings

The current delivery versus payment (DVP) system is limited to GoI securities. This restriction impedes the flow of money across instruments (GoI securities, PSU bonds, corporate debentures) and across markets (debt, equity, money) because of the mismatch between cash flows in the different markets.

Presently, the DVP system planned by the RBI is not designed be a fully automated process for checking if there are sufficient funds or securities in the account or securities in the Subsidiary General Ledger (SGL).

2. Recommendations

The RBI should fully automate the process to enable on-line monitoring of trade activity and trade settlement.

A central depository should provide a book entry system for all debt instruments to facilitate inter-segmental flows and standardize settlement and clearance procedures for all debt instruments and players.

Although the DVP system at the RBI is a gross system, when two or three banks are appointed as clearing banks and allowed to maintain their own SGLs for their clients, they should offer their clients a net settlement system by charging interest on overdrafts. This would provide banks' clients intra day flexibility and banks could limit their counter party risk by setting a cap for each client.

E. Primary Dealer Network

1. Findings

As proposed, the primary dealer will have to play a major role in the development of the secondary market and give it depth in terms of increasing the number of players. The financing of the dealers though has been an issue of contention. Market perception is that in the near-term the Primary Dealer (PD) privileges would be on par with the banks, but the duties would be far more onerous.

Major criticisms include the lack of both operational flexibility and financing for dealers, constraints which force primary dealers to act as long term investors rather than traders of government debt. The lack of hedging tools available in India the system makes the PD more of an investor than a market maker. Securities Trading Corporation of India Ltd. (STCI), in spite of its large capital base of Rs. 500 crores, has only recently begun making two way markets in some GoI securities, demonstrating that capital alone is not sufficient for successful market making.

2. Recommendations

The RBI should lift the restrictions on repo transactions and allow access to financing.

PDs should form an inter–dealer network whereby any PD could source securities it did not hold from another PD. This would allow PDs to quote for all securities.

PDs should be offered more intra day flexibility to enhance their market making activities by giving their current accounts at the RBI a value date rather than a value time. Under the value time method, when a trade is processed at the RBI, a clerk checks the current accounts of the counter parties to confirm each has the cash and securities at the time of the trade before the trade can settle. With a value date, the PD current accounts would only be required to balance at the end of the day rather than at each and every transaction throughout the day.

F. Hedging

1. Findings

With the deregulation of interest, hedging instruments are a necessity. Hedging vehicles and techniques used around the world for managing interest rate risk include floating rate issues,

futures, options, swaps and short selling. In the absence of such hedging instruments, it is difficult for any player to take a position since unforeseen circumstances could have adverse consequences to their portfolios.

2. *Recommendation*

Short selling should be allowed in the Indian markets.

Introduce futures and options to create liquidity, reduce the volatility of underlying instruments, and reduce ancillary financial risks such as interest rate movements and foreign currency fluctuations.

G. Bond Indices

1. *Findings*

ICICI Securities and the State Bank of India Capital Markets have launched sovereign bond indices that measure the performance of a government securities portfolio and create a uniform platform and standard for bridging several market segments. The problems faced at the moment, however, in the composition and valuation of indices are the absence of sufficient activity in the secondary markets and a meaningful yield curve extending beyond three years.

2. *Recommendation*

The need for a benchmark would be addressed by the development of a representative bond index. This, however, has been hampered by the inconsistencies in terms of trades in the Indian market. The bond index must serve as a credible benchmark for floating rate bonds and provide objective benchmarks for comparing portfolio performance of non-bank investment institutions such as mutual funds and unit trusts. This index would emphasize total return, not just yield, and elevate the performance objectives for all debt investors.

H. Interbank Call Money Market Reference Rate

1. *Findings*

An interbank reference rate is required for a strong debt market to develop. In India there is only an overnight interbank market and no term market. The overnight rates, which can range from 10 to 60 percent, are too volatile to use as a reference rate.

2. *Recommendation*

A term money market of more than six months must be developed which will provide a meaningful reference rate.

I. Valuation Methods

1. Findings

Historical cost valuation creates a "buy-hold" mentality. Portfolio managers focus on yield rather than total value which considers yield and capital appreciation. In the current market of dynamic interest rates and increasing long term interest rate volatility, historical cost valuation is inappropriate. From 1985 to present, interest rates on 10 year GoI securities have risen from approximately 10 percent to 14 percent representing a 22 percent decline in value of the securities.

2. Recommendation

Periodic revaluation of debt assets in response to changes in market conditions would enable investors to recognize capital losses sooner and provide incentive to take early corrective action.

J. Trade/Price Reporting

1. Findings

The SGL reports the size of the transaction on settlement date, not trade date. Since settlement terms on the SGL range from trade day to trade day plus thirteen days, the price reported for a particular security transaction in the newspaper the following day could be from a day to two weeks old. National Stock Exchange (NSE) trade reporting reflects trades, not settlements, of the previous day. Settlement terms on the NSE are available for trade day through trade plus five days. There is no reporting structure in place for direct delivery and spot delivery transactions nor for the CDs where the deals are arranged by an inter-broker network.

Net instead of gross trade prices are reported which means that reported trade prices are not indicative of the instruments actual market price.

2. Recommendations

The SGL reported in the paper should reflect transactions as of trade date not settlement date.

As the PD network becomes operational, it would be helpful for all investors if a composite of closing bid/ask prices and yields for all GoI securities provided by the PDs was published in the newspaper each day.

In order to introduce uniformity in the system of price quotation, all investors should adopt a practice of quoting prices on a "gross" basis inclusive of withholding taxes.

K. Market Rates for Government Debt

1. Fact

Government debt is not issued at market rates although the GoI is moving that way. Market driven government rates are essential because they provide the reference rate upon which to set pricing of other debt instruments.

2. Recommendation

Price and coupons of government debt should reflect market prices. Once the coupon payment is set, the price the issue sells for should be at a discount or premium to par value based on market conditions at the time of issue.

L. Credit Ratings

1. Findings

a. Use of Credit Ratings by Investors

Indian investors do not use credit ratings to arrive at pricing differentials on debt instruments. This has prevented the emergence of interest rate bands for certain ratings of securities implying that the market does not accurately price the differential credit risk of the instruments.

There are mandatory ratings of fixed deposits of companies, commercial paper and long term debentures making the ratings industry more driven by the issuers' requirements than investors' demands for information.

b. Disclosure

There is a need for better disclosure requirements of the information that companies provide to credit agencies. The issuer provides the credit rating agency with the information used in the rating process and the credit rating agency focuses on the ability of the issuer to service the debt. The information required to arrive at a rating include: cash flows, profits, asset quality, resource pattern, business risk and other associated factors. The rating is generally instrument specific, but companies are also rated on the whole for their ability to service debt. The rating agencies conduct reviews every three months to access the effect of changes in the market on the company.

Disclosures made by companies can be suspect as the concept of an audit in India is statutory, not proprietary, and there have been several cases of material non-disclosure. Diversified companies are not required to disclose financial information by business line requiring that rating agencies reconstruct income statements and balance sheets.

Issuers can play rating agencies against each other in an attempt to receive higher ratings. Issuers pay the rating agencies in advance but have the right to accept or reject the rating of the agency. The rating may only be subsequently published if the issuer accepts it. This process does not provide complete disclosure as the issuer can choose to publish only the highest rating received.

2. *Recommendations*

a. *Use of Credit Ratings by Investors*

Although the credit rating industry was initially promoted by the institutions, it will have to be sustained in the long run by an investor community which demands independent and professional analysis prior to making investment decisions. Only then will credit rating become a thoroughly objective exercise in evaluating an issuer's true credit worthiness.

b. *Disclosure*

Credit agencies, in conjunction with the Securities and Exchange Board of India (SEBI), should require more detailed financial history and projections from companies. In addition, SEBI and the Institute of Chartered Accountants (ICA) should develop generally accepted accounting principles and require that corporates follow these principles. This would encourage more transparent accounting standards and assist in deterring issuers from providing misleading information.

M. Transfer/Registration

1. *Findings*

The registration and transfer of ownership of corporate debt takes place at the company. Ownership is only recognized when an investor holds the certificate. Problems include lost certificates and signature discrepancies which can cause the transfer of ownership to take up to three or four months.

2. *Recommendation*

Implementation of a depository is essential to assure prompt and efficient settlement in a minimum amount of time.

N. Public Issue vs. Private Placement

1. *Findings*

Public issues of debentures is long, risky and expensive for all parties involved. Investors must apply for debentures and deposit application money up-front for the face value of the

debentures applied for, but they receive no assurance the issue will be fully subscribed and their securities disbursed. If less than 90 percent of the capital to be raised is placed with investors, the entire issue devolves. Even if the issuance is successful, the allotment process can take as long as two months.

For the underwriter, there is considerable marketing time and expense involved to ensure a full subscription to the underwriting. For the issuer, there is no assurance that he will be able to raise the cost of capital for the intended project. All of these factors contribute to a mispricing of the corporate or Public Sector Undertaking (PSU) debt.

2. Recommendation

SEBI guidelines for public issues should be revised to permit less than 90 percent subscribed debt issues to be successfully underwritten.

O. Stamp Taxes

1. Findings

Different states levy different stamp taxes. This means that trading in a security can be made more or less attractive based solely on the state where the transaction takes place.

2. Recommendation

Eliminate or standardize stamp duty taxes across all states.

P. Broadening the Investor Base

1. Findings

Foreign investors, retail investors and small to medium sized corporations represent untapped potential debt investors that could help broaden the investor base. Greater participation introduces different investment profiles which counteracts the "herd mentality" of debt investing often cited in India. A deeper market translates into enhanced liquidity and lower costs of funds. Fewer buyers in the market result in higher interest rates that debt issuers must pay.

a. Foreign Investors

According to SEBI, there are almost 400 Foreign Institutional Investors (FIIs) eligible to make portfolio investments in Indian securities. Accustomed to surveying the world for attractive investment opportunities, they represent a player with a different viewpoint than the other investors in the wholesale debt market and have a substantial capital base. However,

foreign institutions cannot hold GoI debt. This restrictions takes a large player out of the market.

b. Bank Retail Networks

Banks are in an ideal position to sell securities to individuals and small to medium size corporations. However, it used to be considered a conflict of interest for the banks to promote government securities through their secondary trading accounts.

c. Retail Investors

Where he was once the stalwart of the debt market, the retail investor is a non-entity in the debt market of today. However, the Rs. 81,000 crores worth of household saving in 1993–94 is an indication of the tremendous potential that exists in this sector. Problems with delivery, registration, record keeping, and the postal system have further discouraged even the most persistent individual investors.

2. Recommendations

a. Foreign Investors

Foreigners should be allowed to purchase GoI debt as full convertibility of the rupee is introduced.[1]

b. Bank Retail Networks

Banks should actively promote the sale of government securities to retail investors as well as small and medium sized corporations through their secondary trading accounts.

c. Retail Investors

The facility to hold smaller security sizes than the minimum lot size of Rs. 10,000 should be provided.

Problems with delivery, registration, record keeping, and the postal system must be addressed to facilitate retail investor participation.

[1]Mr. S.S. Tarapore, the Deputy Governor of the RBI, holds the caveat, justifiably so, that full convertibility with the current differential inflation between India and other countries would result in the flight of capital which would have disastrous consequences. The RBI plans to bring in full convertibility in phases over several years depending on the response of the economy to the ongoing economic reforms.

The Over the Counter Exchange of India (OTCEI) is present in 54 cities and is the ideal vehicle to distribute corporate debt to the retail investor. Since the OTCEI requires at least two market makers who will offer two-way quotes, the resulting increased liquidity makes the exchange more investor friendly. An example is Citibank's Maxinvest Scheme which retails corporate debentures to individual investors. Citibank partitions the wholesale lots into retail lot sizes and Citicorp Securities provides liquidity by offering two-way quotes in these securities.

Q. Investor Protection

1. Findings

Investor protection is required to prevent scams which cause investors to lose confidence in the market.

2. Recommendations

Under the auspices of SEBI, it is imperative that information and control systems in exchanges and brokerages are improved to reveal misconduct through daily tallies and audit trails of transactions. The intermediaries and the exchanges themselves must play a larger role in policing their own activities.

R. Interest Rate Differential Between State Government Securities

1. Findings

The RBI issues securities on behalf of the states on an annual basis. All the state government securities to be issued during a year are combined together and carry identical coupon rates and maturity structures. The RBI does not participate in the auction system for these securities but acts as a depository and offers a book entry system. The state borrowing programs are conducted before the central borrowing program. There have been several complaints of forced allotment of some of the securities from less desirable states when the bids for all of the state government securities have been oversubscribed. The RBI explanation is that all the securities are guaranteed by the central government and, therefore, there is no difference.

This results in cross subsidization. States with prudent fiscal management and discipline pay higher borrowing rates than they would have to if issuing the securities independently and states with poor fiscal management pay lower rates.

2. Recommendation

States should market their securities independently. This would encourage increased fiscal responsibility and create wider availability of differentiated securities to cater to different investment profiles.

II. BACKGROUND

As India transitions from a centrally planned economy to a market driven economy, efficient capital markets are imperative for advancing the economic reform agenda. *In the present system in India, with a litany of antiquated regulation still in place, the debt market participants have limited ability to respond to market price signals thereby thwarting efficient resource allocation.* The clearest barometer is the virtual absence of activity in the secondary debt market. The costs of illiquidity are largely borne by the central government as they are the largest debt issuer, but all borrowers are affected by the increased cost of debt that results.

Historically, the RBI effected monetary policy through reserve requirements, administered interest rates, and credit controls. The central and state governments issued government debt paper at the non-market related rates and institutional investors were forced to follow government mandates for their asset allocation decisions. Compounding these problems were the lax valuation guidelines applied to debt instruments in the portfolios of financial institutions. It is only three years since the GoI has accepted the principle of market related rates of interest on government paper. Though coupons on paper issued by the government have been progressively increasing through the years, little of this impact is reflected in the value of financial institutions' portfolios.

The historical cost valuation methodologies employed by the various institutions foster a "buy-hold" mentality among most institutional investors. As a result, security selection by institutions has been made on the basis of current yield. Given an illiquid debt market with static interest rates, this form of portfolio management may have been innocuous in the past. However, in the current environment interest rates are deregulated and dynamic and long term interest rate volatility is rising. The result is that historical cost portfolio valuations are inappropriate and potentially very damaging, especially to the banking sector. Contemporary fixed income portfolio management in advanced markets of the west emphasizes total return rather than current yield. Risk control techniques of sophisticated investors measure portfolio duration and convexity as opposed to "buy and hold" widely practiced in India.

While the institutional structure necessary for a vibrant debt market is largely in place, the market is highly fragmented because of multiple regulatory authorities, different tax treatments for each type of institution, and limits on discretionary asset selection. *The result of the fragmentation is an absence of communication and coordination between regulators, brokers, and institutional investors concerning the priorities of debt market reform. The brokers want reform yesterday, institutional investors want it now, and regulators want reform in a few years.* Tension between the groups can be dysfunctional when lacking constructive dialogue since all three market participants have an interest in the development of the bond market. More effective collaboration among them would expedite the pace of reform.

In efficient financial markets, the government securities market forms the basis for pricing all other debt instruments. Interest rates are determined by reference to rates for government

securities. ***An active secondary market is essential not only to a healthy debt market, but also to monetary policy. Given the RBI intention of increasing the use of Open Market Operations (OMOs) to implement monetary policy, an active secondary debt market is vital.*** The parallel development of transparent electronic trading of debt instruments coupled with a central depository is crucial for the further development of the corporate, PSU, and other bond market segments.

Economic liberalization, which began in earnest in 1991, has resulted in real GDP growth of 5.3 percent in 1994-95, strengthening of the external account, moderating inflation, and increased foreign investment. ***The shift to a more market driven economy requires decreased central government intervention and independent and efficient resource allocation and credit risk assessment.*** The accompanying shift by the government management of the economy from direct instruments such as licensing, tariffs, and credit control to indirect tools such as interest rates, money supply, exchange rates and fiscal policy requires an efficient financial system to function properly. The capital markets must respond to market and price signals with appropriate financial instruments and services.

A. Institutional Structure

Currently, the financial system is organized across five broad segments: banking, development financial institutions, capital markets, money markets, and insurance/investment institutions. All five segments compete intensively in mobilizing household savings.

Historically, the focus of institutional management and of regulatory authorities was on whether commercial banks, insurance companies, development finance institutions, and others were meeting prescribed social and operational targets of directed credit programs at the right controlled interest rates. Less attention was paid to their financial performance such as profitability, balance sheet soundness, credit risk assessment, and prudential controls.

B. Effect of the Scam of 1992

The economic reforms undertaken from 1991 onward brought about some basic deregulation of interest rates and securities markets, including the rationalization of deposit and lending rates and the elimination of the office of Controller of Capital Issues. At the macroeconomic level the RBI has not deviated from the reforms agenda, but the securities scam of 1992 and the subsequent regulations imposed by the RBI dealt a setback to the reform process.

The most notable consequences of the scam included:

- The fingering of the RBI as the guilty party by the public, press and parliament has made the RBI extremely cautious in undertaking substantive reform in trading debt instruments.

- Repos, with the exception of those between commercial banks and the RBI, were banned and only six GoI securities are eligible for repo.

- Nationalized banks became excessively cautious and took decision-making authority away from the dealers. This reduced secondary market trading on such accounts considerably.

- Since the scam, the RBI does not allow a broker to net his position in a particular security the same day. This restrictive rule, combined with the lack of alternate sources of financing, precludes dealers from being able to offer two-way quotes that provide liquidity to the market.

- To sever the broker-bank nexus thought to be the basis of the scam, the RBI imposed a five percent limit on transactions between a bank and a broker. Large transactions that exceed this limit are thus conducted directly with the counter party reducing transparency.

- Effective communication between the regulators, the investors, and the brokerage community broke down.

C. Repurchase Agreements

As mentioned, repos were virtually eliminated after the scam. However, it is important to realize that 96 percent of debt transactions throughout the world are repos and, before the scam, 90 percent of the deals in the Indian markets were made through the repo.

The repo is the main dealer inventory financing vehicle available throughout the world. Any dealer moving large volumes requires short term financing. STCI, even with a capital base of Rs. 500 crores and a refinancing window open with the RBI for reverse repos they can perform with the central bank, still finds it difficult to finance their needs.

Repos in select securities, treasury bills and six specified dated securities, which are securities that have been converted from treasury bills, are allowed today between banks and between banks and the RBI. The RBI permits these repos as a subscription incentive for government. It should be noted that these six securities are now among the most actively traded. This access to repos, though limited, skews the market in the favor of banks. The RBI limits the amount of funds that NBFCs and brokers can raise through the fixed deposits and they do not have an alternate source of financing available.

D. Current Reform Measures

Despite restrictions imposed as a result of the scam, the RBI has taken the lead in activating the market for government securities with initiatives that include a DVP clearing and

settlement system and a PD network. Market participants applauded the DVP system but greeted the PD system with scepticism and it is likely to fall well short of its intended goals.

1. DVP System

The RBI introduced a DVP system for the government in July 1995 to improve liquidity in the debt markets. In DVP, the seller delivers the securities at the same time that the buyer transfers the payment funds. Both parties must maintain an SGL and a current account with the RBI. Under the present guidelines, however, the facility of maintaining such accounts is only available to some specified categories of institutions because undertaking retail banking activities for a large clientele is not a role the RBI wants to perform.

In the DVP system, the revised SGL transfer form duly signed by both the parties is submitted to the Public Debt Office (PDO) or Public Accounts Department (PAD) on the same day or the next working day. Subject to sufficient balances in the seller's SGL account and the buyer's current account, the RBI will put through the deal.

A hybrid form of the SGL account is maintained by some banks which allows their clients to access the SGL facility. These accounts are linked to the bank's main SGL account with the RBI. In the revised system, banks designated for the purpose will conduct DVP transactions for their constituents. The transactions within a bank's SGL accounts would be reflected in the books of transfer without any funds flow.

2. PD Network

The RBI, in shifting towards indirect forms of monetary control, has granted Primary Dealer (PD) licenses to six financial institutions: The Discount and Finance House of India Ltd. (DFHI), Securities Trading Corporation of India Ltd. (STCI), Bank of India (BOI), State Bank of India (SBI) and Canara Bank. The intention is a PD is not going to be a final repository but rather a transient holder of securities who will buy from and sell to investors.

DFHI has access to the call money markets and can take advantage the ready forward facility available with the RBI. With non–repo eligible securities, however, it just adjusts the portfolio to limit losses. DFHI has become an effective institution to channel the uni-directional flow of money in the market from the foreign banks that are lenders to the nationalized banks that are borrowers.

STCI, with a net worth of Rs. 500 crores, started trading in December 1994 when call rates were low and the debt markets were fairly liquid. In June 1995 it began two way quotes for government paper and treasury bills with Rs. one crore buy limit per deal. The buy limit reflects a one sided market with most of the players being net sellers. DFHI, STCI, and the other PDs cannot revive the debt market alone. However, with sufficient operational flexibility, some progress can be made.

a. *PD Guidelines*

The PDs will have to commit to aggressively bid for specified amounts of GoI dated securities and treasury bills on an annual basis and achieve a minimum success ratio of 33.33 percent for dated securities and 40 percent for treasury bills. The PDs shall also have to collectively underwrite a part of the gap between the notified amount and subscribed portion in the case of a predetermined coupon and between the notified amount and the amount accepted at the cut–off in the case of auctioned securities.

In the case of devolvement, the collective underwritten portion by all PDs shall be 25 percent for dated securities and 20 percent for T–Bills in the present scenario, with this percentage rising further in the future, so that the RBI will gradually shed these functions. Additionally, the PD would offer firm two way quotes, either through the telephone market or the NSE, trade in the secondary markets, maintain a certain minimum annual turnover, maintain an adequate capital based on risk weights recommended by the RBI guidelines, and have a minimum net worth of Rs. 50 crores.

b. *Effect of PDs*

As proposed, the PD will have to play a major role in the development of the secondary market and give it depth in terms of increasing the number of players. The financing of the dealers though has been an issue of contention. The PDs would have access to the call money markets and repo operations with RBI in central government dated securities and treasury bills to an extent of 16.67 percent and 10 percent for commitments made for tendering aggregate bids in dated securities and government bills. The RBI has further clarified that it might provide very short term support for a few days, but it would not fund activities over a longer period of time.

The market perception is that in the near-term the PD's privileges would be on par with the banks, but the duties would be far more onerous.

c. *Criticisms*

Major criticisms include the lack of both operational flexibility and financing for dealers, constraints which force primary dealers to act as long term investors rather than traders of government debt. Given the lack of hedging tools available in India, the proposed system makes the PD more of an investor than a market maker. STCI, in spite of its large capital base, has only recently begun making two way markets in some GoI securities. Capital alone is not sufficient for successful market making.

III. DEBT INSTRUMENTS IN THE INDIAN CAPITAL MARKETS

A. Government Securities

1. *Treasury Bills*

Treasury bills are short term (three months to one year) obligations issued by the RBI on behalf of the government. The RBI presently issues treasury bills maturing in 91 and 364 days. Issuance is through the European style of competitive bidding with all bids above the cut off price being accepted. The 91 day treasury bills are issued on a weekly basis with a notified amount while the 364 day treasury bills are issued on a fortnightly basis with no notified amount or RBI participation. The treasury bills are issued in the form of promissory notes or by credit to the SGL account if available.

2. *Dated Securities*

The maturity for dated securities varies from two to ten years. Earlier the government used to issue longer term securities, but given the lack of interest by investors it has discontinued issuance of maturities beyond 10 years. Dated securities are registered with the PDO at the RBI in the SGL or can be held in the form of certificates. While the RBI does not adhere to a specific issuance calendar, the announcement of an issue is made in advance through a press release. The issue amounts would ideally vary between Rs. 200 to 12,000 crores. As of January 31, 1995, there were 90 issues outstanding with a total face value of Rs. 135,000 crores which had a depreciated market value of Rs. 115,000 crores.

3. *State Government Securities*

The RBI issues securities on behalf of the states on a annual basis. All the state government securities to be issued during a year are combined together and carry identical coupon rates and maturity structures. The RBI does not participate in the auction system for these securities but acts as a depository and offers a book entry system. The state borrowing programs are conducted before the central borrowing program.

4. *Debt Issued by Government Owned Companies*

PSUs, state owned utility, transportation and housing finance companies issue medium to long term debt securities guaranteed by the central or state governments. Outstanding issues aggregate Rs. 40,000 crores, but future issues with government guarantees are on the wane due to increased separation of PSU finances from the central budget. The securities are generally available in physical form, but some issuers may also offer book entry facilities to investors.

5. PSU Bonds

PSUs have been issuing bonds of are medium-term obligation. The use of these instruments is on the increase with approximately Rs. 6,000 crores worth of PSU bonds being issued in 1994–95, taking the total outstanding amount to Rs. 33,000 crores.

One of the unique selling points of these bonds has been the offer of tax free bonds by the infrastructure related PSUs such as the railways and the power sector. Interest rates were capped by the government at 13 percent. With the removal of the ceiling, however, coupon rates have reached 18 percent at times.

The current guidelines governing issue of PSU bonds are:

- Minimum maturity for taxable bonds is five years while that for tax-free bonds is seven years.
- Floating rate or deep discount bonds can be issued.
- PSUs are allowed to retain over subscriptions to the extent of 25 percent.
- New issues must be listed on a stock exchange.
- In the case of public issues, credit rating has been made mandatory.

PSU bonds are transferable by endorsement in some cases, but with higher interest bearing bonds registration has to be done with the issuer. Another feature offered by these bonds is that interest income qualifies for tax exemption for individual investors. Although PSU bonds used to be unique from corporate debentures, the only feature which differentiates them from corporate debentures today is the exemption of stamp duty on the transfer of PSU bonds.

B. Corporate Securities

1. Corporate Debentures

The corporate debenture is a short to medium term instrument issued by corporates and PSUs. Characteristics are as follows:

- Typical maturity varies from three to 12 years;
- Issue size varies from five to 200 crores;
- They can be secured or unsecured;

- They can be partly, fully or non convertible into equity. In the case of convertible debentures, conversion can be set at market related or predetermined rates and be optional or mandatory. Any non-convertible fixed income component is normally taken up by the institutions and referred to as the "khokha;"

- Public issues with maturities greater than 18 months are required to be rated by one of the rating agencies.

2. *Commercial Paper*

Commercial paper is a short term unsecured negotiable promissory note issued by private and public sector manufacturing companies at a discount to the face value to finance their working capital requirements. The maturity period varies from three months to a year.

3. *Certificates of Deposit*

CDs are unsecured negotiable promissory notes, transferable by simple endorsement and delivery made with commercial banks and development finance institutions in the form of deposits. CDs issued by the banks are normally discounted bills.

IV. PRIMARY MARKET

The Rs. 300,000 crore Indian bond market is only exceeded in size by the Japanese and Korean bond markets. Central government debt accounts for more than 50 percent of the market and the balance is public and private sector debt. The size of the central government debt is determined by fiscal policy while its composition is determined by RBI's debt management policy. Given the borrowing requirements of the GoI, the RBI's role has been to optimize the maturity structure and minimize the cost of servicing this debt.

The transfer to government borrowing at more market related rates has facilitated a move to the auction system of issuance for some borrowings from the earlier system of pre-announced coupon rates, but both systems are still utilized. In the auction system, the European style multiple bid system utilizes discounted prices for treasury bills and yield to maturity for the term securities. The competitive bids are accepted at par, or premium if below the cutoff rate, with non competitive bids being accepted at the weighted average price of the successful bids. The remainder devolves on the RBI.

The RBI's objectives of minimizing borrowing costs for the GoI and moving to market-determined rates are inherently contradictory. If cutoff rates in preannounced coupon government auctions are set lower than market clearing levels, a large number of GoI securities devolve to the RBI and the opportunity for market determined borrowings is lost. As of July 1, 1995, this was the case as an abnormally large figure of Rs. 15,882 crores of GoI debt had been monetized. However, utilizing market determined rates to encourage greater market participation would entail the offer of a higher cutoff rate and no devolvement of debt to the RBI, thus increasing the interest cost of debt to the government.

The September 1994 agreement signed between the RBI and the central government limited the ad hoc treasury bills to Rs. 6,000 crores and placed a ceiling of Rs. 9,000 crores on ad hocs for 10 consecutive days. The RBI, therefore, automatically issues term securities to fund the government thereby reducing the level of ad hocs to the prescribed limits. The practice of issuing ad hoc treasury bills to finance the governments requirements is to be phased out by March 1997. This year no such agreement has been signed and the net credit of the RBI has been at an unprecedentedly high level. With the government borrowing program this year targeted at a gross figure of Rs. 41,000 crores, the RBI will raise a large portion of this through the market. The government and the commercial sector are vying for limited financial resources available which pushes up interest rates. The central government is paying the high rates while other borrowers are abstaining from the market.

A. Government Securities

The major investors in GoI securities are commercial banks, insurance companies and the RBI. The securities devolve onto the RBI if the other investors do not fully subscribe. The provident funds used to be major holders of dated securities but have since shifted their focus to state government securities. There is growing participation of the banks in the government

securities because they are the most liquid securities in the secondary market, are eligible for Statutory Liquidity Ratio (SLR) and have zero percent risk weighting per capital adequacy norms.

In issuing state government securities, there have been complaints of forced allotment of some of the securities from less desirable states when the bids for all state government securities have been oversubscribed. The RBI explanation is that all the securities are guaranteed by the central government and, therefore, there is no difference. However, since they are all issued at the same interest rate, the system results in cross subsidization. States with prudent fiscal management and discipline pay higher borrowing rates than they would have to if issuing the securities independently and states with poor fiscal management pay lower rates. Thus, some market participants maintain the states should market their securities independently and that this would encourage increased fiscal responsibility.

B. Corporate Debentures

Corporate debentures are issued by both corporates and PSUs. One of the main problems is that transfer of ownership has to be registered with the issuer. An innovation has been the issue of floating rate bonds by a few financial intermediaries and private corporates in 1994–95. The outstanding face value is Rs. 2,600 crores with a typical maturity period of three to five years.

1. Public Issue Versus Private Placement

Public issues of debentures is long, risky and expensive for all parties involved. Investors must apply for debentures and deposit application money up-front for the face value of the debentures applied without assurance that the issue will be fully subscribed and their securities disbursed. If less than 90 percent of the capital to be raised is placed with investors, the entire issues devolves. Even if the issuance is successful, the allotment process can take as long as two months.

For the underwriter, there is considerable marketing time and expense involved to ensure a full subscription to the underwriting. For the issuer, there is no assurance that he will be able to raise the cost of capital for the intended project. All of these factors contribute to a mispricing of corporate and PSU debt. In the last few years most of the PSU and corporates have preferred to issue bonds through the private placement with large institutions or banks for the following reasons:

- Issue costs involved in private placements are substantially less;
- Disclosure requirements are fewer;
- Customized features, such as zero coupon bonds, floating rate issues, embedded put/call options can be tailored to the investors/issuers preference; and

- There is no mandatory devolvement as the quantum of debt placed by the merchant bankers is the amount of capital raised by the issuer.

Below is a table with representative costs for public or private issuances:

Issuance Costs for Rs. 100 Crores Corporate Debenture
(Rs. tens of lakhs)

Corporate Debenture	Public Issue	Private Placement
Trusteeship Fees	0.20	0.00
Issue Management Fees	5.00	5.00
Rating Agency Fees	2.00	0.00
Stamp Duties	0.20	0.20
Listing Fees	0.03	0.00
Registrar for Transfer	5.00	0.00
Brokerage Fees	15.00	0.00
Postage, printing, road show and other expenses	35.00	1.00
TOTAL	62.43 (6.24 %)	6.20 (0.62%)

Source: SEBI

2. *Offshore Debt Capital*

In addition to the domestic market, several large corporations have accessed funds directly through the issue of Global Depository Receipts (GDRs) and Eurocurrency loans in the form of Euro Convertible Bonds (ECBs). The costs of issuing GDRs are similar to private placements. However, there are caps on the total quantum that can be accessed because the foreign exchange reserves of the RBI have reached unmanageable proportions. they could have inflationary consequences, and sterilizing such reserves is an expensive proposition.

3. *Commercial Paper*

The broadening of the money market has improved access to short term funds on the part of a wider range of credit-worthy corporations beyond traditional bank lines. Trading volume in commercial paper climbed during the last two years which has been a healthy development though it has encouraged the higher quality credits out of the loan portfolios of the banks. However, trading activity in commercial paper has since been depressed due to the RBI's decisions to not automatically restore bank finance limits, withdraw standby guarantee facility by banks, and drop interest rate controls on cash credit lending. Thus, a corporate treasurer's opportunity to compare short term commercial paper borrowing rates to short term bank borrowing rates has been restricted.

4. *Certificates of Deposit*

CDs have basically been used as deposits and issuance had picked up towards the end of December 1993. Outstanding issues are now estimated at Rs. 3,000 to 3,500 crores.

C. Credit Rating

1. *Background*

There are three credit rating agencies in India: The Credit Rating Information Services of India Ltd. (CRISIL), Credit Analysis and Research Limited (CARE) and Investment Information and Credit Rating Agency of India Limited (ICRA). These agencies collectively rate more than 2,000 debt instruments from approximately 1,200 issuers. Rating is important in encouraging efficient asset allocation in the debt market because without credit differentiation poorly managed organizations are rewarded with same borrowing costs as well managed organizations.

There are mandatory ratings of fixed deposits of companies, commercial paper and long term debentures making the ratings industry more driven by the issuers' requirements than investors' demands for information. Issuers can play rating agencies against each other in an attempt to receive higher ratings. Issuers pay the rating agencies in advance but have the right to accept or reject the rating of the agency. The rating may only be subsequently published if the issuer accepts it. This process does not provide complete disclosure as the issuer can choose to publish only the highest rating received.

2. *Investor Utilization of Credit Ratings*

Investor utilization of credit ratings in making investment decisions has gradually increased over time, but investors are still more heavily influenced by name recognition than by rating. Even sophisticated investors do take into account differential credit risk in their investment decisions. Investors appear to only distinguish between investment grade versus non-investment grade instruments. Differential credit risk within each group, as reflected by the credit ratings, are given scant significance by the investing public. This has prevented the emergence of interest rate bands for certain ratings of securities implying that the market does not accurately price the differential credit risk of the instruments.

3. *Disclosure*

The issuer provides the credit rating agency with the information used in the rating process and the credit rating agency focuses on the ability of the issuer to service the debt. The information required to arrive at a rating include: cash flows, profits, asset quality, resource pattern, business risk and other associated factors. The rating is generally instrument specific, but companies are also rated on the whole for their ability to service debt. The rating agencies

conduct reviews every three months to access the effect of changes in the market on the company.

Disclosures made by companies can be suspect as the concept of an audit in India is statutory, not proprietary, and there have been several cases of material non-disclosure. Diversified companies are not required to disclose financial information by business line requiring that rating agencies reconstruct income statements and balance sheets.

D. Registration

The registration and transfer of ownership of corporate debt takes place at the company. Ownership is only recognized when an investor holds the certificate. Problems include lost certificates and signature discrepancies which can cause the transfer of ownership to take up to three or four months.

E. Recommendations

1. Government Debt Issues

The PD network is an essential mechanism for efficient market-determined pricing of government issues. We strongly recommend that the PDs should have sufficient operational flexibility to underwrite issues. To do this, the PDs must have access to financing and the use of repo transactions to manage liquidity.

2. Corporate Debt Issues

SEBI guidelines for public issues must be revised to permit less than 90 percent subscribed debt issues to be successfully underwritten.

3. Credit Rating

a. Investor Utilization

Although the credit rating industry was initially promoted by the institutions, it will have to be sustained in the long run by an investor community which demands independent and professional analysis prior to making investment decisions. Only then will credit rating become a thoroughly objective exercise in evaluating an issuer's true credit worthiness.

b. Disclosure

A credit rating agency's ability to accurately assess credit risk is partially impaired by the lack of material disclosure on the part of issuers. Credit agencies, in conjunction with SEBI, should require more detailed financial history and projections from companies. As it is also likely that financial engineering and product proliferation will be with debt rather than equity

instruments, rating agencies must keep abreast of changing financial technology as it evolves in India.

In addition, SEBI and the ICA should develop generally accepted accounting principles and require that corporates follow these principles. This would encourage more transparent accounting standards and assist in deterring issuers from providing misleading information.

4. Registration

Implementation of a depository is essential to assure prompt and efficient settlement in a minimum amount of time.

V. SECONDARY MARKET

The basic requirements for a smooth functioning securities market include:

- A broad and well developed institutional structure;
- Market participants with different views and liquidity requirements;
- Different tools to implement investment decisions;
- A mature system of price determination;
- A transparent system of trading; and
- A secure system of settlement.

The fact that the average daily traded volume of Rs. 200 crores is only 0.1 percent of the total outstanding debt in the market, compared to three to four percent in mature markets, is a clear indication of the deficiencies of the secondary market in debt. The most notable problem is the severe curtailments imposed on brokers and the virtual elimination of repo. In all other major markets, brokers are the primary agents of liquidity and the repo is an important tool brokers use to fund their positions.

A. Securities Traded in the Secondary Market

1. Government Securities

The most active and liquid segment of the debt market is the GoI auctioned treasury bills. Treasury bills are popular because they are:

- Central government securities and virtually every institutional investor in debt in India is mandated to own government debt;

- Short term securities with minimal price variability; and

- Eligible for inter-bank repo transactions.

The longer dated GoI securities with maturities of two to ten years are the second most active segment of the debt market. However, trading volume diminishes as maturity increases.

2. PSU Bonds

PSU bonds are nominally more liquid than other debt instruments, but there is still a lack of trading activity. Trades of small volumes generally take place between banks and other financial institutions. Brokers place small volume trades between banks and other financial institutions at a monthly average turnover of Rs. 100 crores.

3. *Corporate Debentures*

Insurance companies and mutual funds hold these securities because of the higher yields and the investment managers have more of a "buy and hold" mentality as these institutions often hold the securities to maturity. Therefore, despite dual listing on the Bombay Stock Exchange (BSE) and NSE, trading volumes in corporates are very thin. Due to the presence of market makers giving two way quotes, the floating rate bond market achieves volumes of Rs. 20 to 30 crores a month.

Summary of Secondary Market Characteristics
(Rs. Billion)

Instrument	Outstanding Amount	Yearly Trading Volume	Turnover Ratio (percent)
GoI Securities	1,305	72.00	5.50%
Treasury Bills - Auct Only	150	120.00	80.00%
State Gov't Securities	272	1.20	0.40%
Gov't Guaranteed Bonds	388	0.60	0.10%
PSU Bonds	332	12.00	3.60%
Corporate Debt	330	5.00	1.50%

Source: ICICI Securities

B. Intermediaries

As mentioned earlier, DFHI, STCI, BOI, SBI and Canara Bank have been granted primary dealer licenses.

C. Exchanges

The debt market, prior to the conception of the NSE in 1994, was an over-the-counter (OTC) telephone market and continues as such with a limited number of players. The market participants know the counter party which reduces counter party risk, but the opportunity for market price determination is lost. The NSE system, which is an order driven system, imparts transparency to debt securities trading. The identity of the counter party is not known, so pure market mechanics drive the pricing.

The majority of transactions to date are pre-negotiated by telephone and posted on the NSE. This is particularly true for the banks when they deal through a broker since they are supposed to trade on the NSE. The BSE has a quote driven system of price determination and hence has a greater share of trade in corporate debentures and PSU debt instruments which are not very liquid and require market makers.

The primary reasons market participants prefer transacting via the OTC telephone method include the following:

- Management of counter party risk;
- Market information received by brokers about the activities of other players;
- Long established relationships with individual brokers and firms;
- More likely to receive execution of orders and also more timely; and
- Payoff to brokers for time and effort spent on research and value added services.

The RBI is indifferent as to whether the OTC, NSE, or BSE becomes the preferred medium for trading debt securities. The RBI only insists that trading be efficient and transparent within the guidelines of the securities laws.

1. Brokerage Costs

Brokers normally bare the costs associated with trading debt securities. If the deal is put through directly on the SGL, the transaction cost is a stamp duty. In the case of government securities, the stamp duty is on rupee per Rs. 1,000 transacted with a maximum of Rs. 1,000. For PSU bonds, the stamp duty payable is pro rata to the transaction.

On NSE transactions, the brokers have to bear a turnover tax of five percent on income and annual SEBI registration fees in addition to the above costs. The problem is most banks refuse to pay brokerage fees and, therefore, brokers must bear the cost or recover costs from the other side of the trade. Thus, market participants avoid the costs wherever possible by not issuing contract notes and higher volume deals are transacted directly.

2. Trade Reporting And Quote Dissemination

a. SGL Accounts

Daily publication of transactions in the SGL accounts of the RBI and the transactions on the NSE wholesale debt market provides a fair degree of transparency in debt market. Prices and yields prevalent in the secondary market are accessible to the participants in the wholesale and retail segments of the market.

SGL trade data provides information on the sum of all deals transacted in the government securities market via the telephone market and on the NSE. The SGL reports the size of the transaction on settlement date, not trade date. Since settlement terms on the SGL range from trade day to trade day plus thirteen days, the price reported for a particular security transaction in the newspaper the following day could be from a day to two weeks old. NSE trade reporting reflects trades, not settlements, of the previous day. Settlement terms on the NSE are available for trade day through trade plus five days. There is no reporting structure in place for direct delivery and spot delivery transactions nor for the CDs where the deals are arranged by an inter-broker network.

b. Telephone Market

The telephone market provides arbitrage opportunities because complete information is not available to all participants. This creates the potential for use of misinformation to arbitrage and realize gains which would not be available in the case of a transparent system.

c. National Stock Exchange

Because the NSE system disseminates information to all participants, market players compete on an equal playing field. Banks, which are the largest players in the market, cannot become members of any stock exchange and, except for direct interbank deals, they have to deal through brokers on the NSE.

d. Net versus Gross Price

The best indicator of the market value of a security held by an institution is the price at which the security trades in the secondary market. If those prices are misleading because a net price is quoted that reflects the tax treatment of the parties involved in the trade, another institution in a different tax category cannot rely on that price as being indicative of the underlying value of the security. Quoting net prices can result in market participants becoming suspicious of the price information intermediaries render. As a result, this reduces the activity in secondary trading.

D. Clearance And Settlement Systems

Transparent, well functioning and efficient clearing and settlement are a prerequisite of any securities market. Two main problems are encountered in the Indian market:

- There are defaults on SGL forms issued by banks and other financial institutions, and
- Transferring money between government securities, PSU bonds, and corporate debentures segments is difficult because of different settlement periods.

E. Broadening the Array of Securitized Debt Instruments

Drawing on the successful developments in more mature debt markets, some innovations in securitized assets have been introduced in India. An example is auto and truck loan backed passthroughs. Some deals have been underwritten by Citibank, rated by CRISIL, and privately placed with large institutional investors. This type of technology could be employed in a wide variety of financial instruments. Other future possibilities are mortgage backed securities.

F. Recommendations

1. PD Network

The PDs must have operational flexibility. Market makers require a wide distribution network as profits are made in a developed markets through high turnover on narrow bid/ask spreads. Risk is reduced by keeping holding periods to a minimum.

- PDs should form an inter–dealer network whereby any PD could source securities it did not hold from another PD. This would allow PDs to quote for all securities.

- PDs should be offered more intra day flexibility to enhance their market making activities. Their current accounts at the RBI should have a value date rather than a value time. Under the value time method, when a trade is processed at the RBI, a clerk checks the current accounts of the counter parties to confirm each has the cash and securities at the time of the trade before the trade can settle. With a value date, the PD current accounts would only be required to balance at the end of the day rather than at each and every transaction throughout the day.

These changes would substantially reduce the inventory holding of the PDs, thereby increasing their likelihood of success and enable the RBI to avoid becoming the long term banker of the PDs. As the market matures and interest rate hedging tools become available, the PDs will be able to place the entire GoI debt in the market. The presence of satellite dealers linked to each PD and sub–brokers attached to the satellite dealers will broaden and deepen market distribution channels.

2. Trade Reporting and Quote Dissemination

The SGL reported in the paper should reflect transactions as of trade date not settlement date.

As the PD network becomes operational, it would be helpful for all investors if a composite of closing bid/ask prices and yields for all GoI securities provided by the PDs was published in the newspaper each day.

In order to introduce uniformity in the system of price quotation, all investors should adopt a practice of quoting prices on a "gross" basis inclusive of withholding taxes.

3. Clearing and Settlement

Presently, the DVP system planned by the RBI is not designed be a fully automated process for checking if there are sufficient funds in the current account or securities in the SGL. The RBI should fully automate the process to enable on-line monitoring of trade activity and trade settlement.

Although the DVP system at the RBI is a gross system, when two or three banks are appointed as clearing banks and allowed to maintain their own SGLs for their clients, they should offer their clients a net settlement system by charging interest on overdrafts. This would provide banks' clients intra day flexibility and banks could limit their counter party risk by setting a caps for each client.

The central depository should include all debt instruments to facilitate inter-segmental flows by standardizing settlement and clearance procedures for all debt instruments and all players.

4. Securitized Assets

The Indian market, as it matures, will require a much larger range of securitized debt instruments to be available. Regulators, exchanges, investors, and brokers alike should keep abreast of the latest developments in the financial engineering process occurring in the global financial markets and bring some of theses new instruments into the Indian markets.

VI. HEDGING TECHNIQUES AND REFERENCE RATES

A. Hedging Techniques

Players with multiple views and perceptions are the cornerstone of an active trading market in any security or commodity. Further, it is essential that players have the tools to mitigate the risks. With the deregulation of interest rates, hedging instruments are a necessity. Hedging vehicles and techniques used around the world for managing interest rate risk include floating rate issues, futures, options, swaps and short selling. In the absence of such hedging instruments, it is difficult for any player to take a position since unforeseen circumstances could have adverse consequences to their portfolios.

Most hedging instruments are not available in India. Nevertheless, some financial intermediaries have introduced other tools to manage interest rate and foreign currency exposure. Standard & Chartered Bank is launching a rupee derivative that will enable customers to convert their fixed rate liability to a floating rate liability which essentially creates an interest rate swap. The most common benchmark is the call money rate and, in some cases, the 364 day treasury bill could be used.

The emergence of other floating rate bonds (FRBs) issued by development and commercial banks provides another alternative to hedge volatile interest rate movements. However, the prerequisite of a floating rate instrument is the presence of a reliable benchmark on which the floating rate instrument is be based. The 91 and 364 day treasury bill auction rates were used as the benchmarks, but the investors have not been satisfied with these issuances because:

- Investors perceived the issues to be mispriced;
- Banks are only allowed to invest five percent of their portfolios in shares and debentures, and they tend to compare yields on FRBs to the performance of equity;
- The FRBs were not tracking the underlying benchmarks; and
- There is a lack of differential pricing between the various FRB issues outstanding in the secondary market.

As is the case with any financial innovation, issuers, merchant bankers, and the investors require additional experience before the product is perfected. Nevertheless, FRB's provide investors, especially those with limited active portfolio management capability, with an alternative for hedging interest rate risk.

B. Reference Rates

1. Interbank Call Money Market

The interbank call money market (IBCM) rate is one of the principal drivers of secondary debt market, but in India it is essentially an overnight market and not a term market. The market is cyclical, since there is almost no borrowing on the reporting Friday every fortnight. Rate volatility is high and, in extreme cases, has reached 60 percent. Normally, however, rates range between 10 to 13 percent.

In an effort to reduce volatility, the RBI introduced a rule that 85 percent of the cash reserve ratio (CRR) had to be maintained on a daily basis and 100 percent on the reporting Friday. The effect, however, was completely opposite as borrower flexibility and funds mobility reduced considerably. Liquidity declined, trading diminished and interest rates began to rise.

Since no term money market has developed, no reference rate has had the opportunity to emerge in the Indian markets.

2. Bond Indices

ICICI Securities and the State Bank of India Capital Markets have launched sovereign bond indices that measure the performance of a government securities portfolio and create a uniform platform and standard for bridging several market segments. The problems faced at the moment, however, in the composition and valuation of indices are the absence of sufficient activity in the secondary markets and a meaningful yield curve extending beyond three years.

C. Recommendations

1. Hedging

Short selling should be allowed in the Indian markets.

Introduce futures and options to create liquidity, reduce the volatility of underlying instruments, and reduce ancillary financial risks such as interest rate movements and foreign currency fluctuations.

2. Reference Rates

a. Interbank Call Money Market

The RBI has expressed an intent to develop a bank reference rate which would be the basis for developing a term money market for banks. This could then been used for developing swaps and other interest rate risk hedging products. This bank reference rate should be developed in close consultation with banks and all other intermediaries involved in the short end of the yield

curve so that the resulting hedging vehicles are relevant. Successful hedging products must combine the interests of both sides of the transaction, the hedgers as well as the speculators.

b. *Bond Indices*

The lack of a benchmark would be addressed by the development of a representative bond index. This, however, has been hampered by the inconsistencies in terms of trades in the Indian market. The bond index should serve as a credible benchmark for floating rate bonds and provide objective benchmarks for comparing portfolio performance of non-bank investment institutions such as mutual funds and unit trusts. This index would emphasize total return, not just yield, and elevate the performance objectives for all debt investors.

VII. VALUATION AND TAX PRACTICES

A. Valuation Methods

The debt market is regulated by three separate bodies (MoF, RBI, and SEBI) which has resulted in uneven valuation practices and norms for banks, mutual funds, insurance companies, and provident funds.

1. Commercial Banks

In India there are 28 state owned banks with over 40,000 branches; nearly 200 regional rural banks with over 15,000 branches; 55 private commercial banks with 4,400 branches of which 24 are foreign owned (with only 140 branches). State owned, private and foreign commercial banks are the most active players in the wholesale segment of the debt markets. The state owned banks tend to be more risk averse and the treasury department functions more passively; the foreign banks view the treasury as a profit center and more of a trading and a risk taking mentality prevails; and the private banks, the newest entrants, tend to lie somewhere in between.

The reserve requirements specified by the RBI have made it mandatory for the banks to hold government or other specified securities to meet their SLR requirements. Therefore, banks have bought these securities through the years and value them at cost. Though SLR requirements have been reduced since 1991, banks are still required to hold 25 percent of incremental deposits beyond a base level in SLR securities. Since the government decision to start borrowing at market related rates, however, it is felt that banks should move towards marking their portfolio to market.

The valuation norms introduced in 1992 required that banks mark to market at least 30 percent of their investment portfolio (current portfolio), and the remaining 70 percent (permanent portfolio) would be valued at cost. The portfolio valuation is done on the balance sheet day at actual market prices. In case of securities which are not actively traded, the RBI issues the indicative yield to maturity rates which are used for valuation.

The percentage of securities held by banks that bear market related coupons is increasing and, therefore, the percentage of securities held in the current portfolio will rise in the future. The securities held by banks acquired after 1992 account for 40 percent of their portfolio and, therefore, the RBI has raised the stipulated ratio between current and permanent category of investments 40–60 percent. This ratio is expected to rise in the future and it will have an important bearing on secondary market trading as the banks are the largest holders of debt securities. As a greater number of securities are valued at market rates, there will be greater incentive for banks to engage in active trading to manage total return and not just yield to prevent capital losses.

The private commercial banks, which were established in the last two or three years during the period of more market related borrowing by the central government, do not have as serious a problem of erosion of their portfolio. In fact, some of them mark close to 100 percent of their portfolio to the market. If all banks, however, were required to mark to market 100 percent of their portfolios, a sizable portion of the net worth of undercapitalized banks would evaporate. The financial and social dislocations this would cause are too great to make this a practical avenue of reform.

2. *Insurance Companies*

The insurance companies role in the securities market in India, as well as abroad, has principally been as a long term investor and not as a trader. The investment decision making process has primarily has been to maximize current yield while maintaining the overall asset liability match. The investments of the Life Insurance Corporation (LIC) and the General Insurance Corporation (GIC) in government and other approved securities was Rs. 28,577 crores as of March 1994 which constituted 50 percent of their total portfolio. The operations of LIC and GIC differ as the latter has much shorter term liabilities.

Earlier insurance companies would make unsecuritized loans. However, they now invest a larger component of their capital in debentures and equity thus implying a shift to more securitized assets. As prescribed by the insurance act of 1938, securitized and unsecuritized investments are valued at cost, not market.

3. *Unit Trust of India*

UTI, the government owned mutual fund company, is the largest non banking institution with Rs. 55,000 crores in assets in 58 unit trust schemes that target the retail investor.

Of the major institutions involved in the debt market, UTI has the greatest latitude in the investing decision making process. It is a long term investor with most debt investment in closed end income schemes on a maturity matching basis. The debt portion of their portfolios used to be marked at cost. However, they are gradually moving towards a more rational valuation policy with the trading portfolio (30 percent of assets) being marked to market and the balance continues to be marked to cost making it similar to the banks in its valuation practices.

UTI held close to Rs. 8,050 crores worth of government securities as of March 1994 and this is marked at cost. Similar to the insurance companies, the percentage of capital invested in making term loans is decreasing in favor of investing directly in debentures and equity which will result in more of its portfolio being marked to market.

4. *Mutual Funds*

According to SEBI, there were 12 other companies besides UTI involved in the mutual fund business as of September 1994. They had Rs. 11,272 crores in assets in 86 unit trust schemes with the overwhelming majority of the assets in equity securities. Debt instruments are used primarily in income schemes and are generally valued at cost. There are no pure debt mutual funds.

5. *Provident Funds*

The provident funds have been set up as non profit trusts which dissuades them from trading in the securities they hold. One of the most restrictive guidelines is that a provident fund is not allowed to sell an investment if it means booking a loss. Since debt securities held by provident funds are valued at cost and interest rates have been rising over the years (driving down bond prices), provident funds have been "buy and hold" investors. They normally participate in primary auctions as non competitive bidders and for incremental deposits are statutorily required to invest 30 percent in government securities and 30 percent in state and central government guaranteed bonds.

6. *Non Banking Finance Companies (NBFCs)*

NBFC deposit liabilities consist of deposits from public and shareholders, intercorporate deposits/borrowings, and money raised through issue of bonds and debentures. NBFCs must maintain a liquid asset ratio (LAR) of 15 percent which means that 15 percent of their assets held against liabilities must be in liquid assets. Ten percent must be in SLR securities (government securities and government guaranteed bonds) and five percent in cash.

NBFC guidelines require division of securities held into current and long term investments. Current investments are those that are easily realizable and are intended to be held for less than a year. Current investments are valued at the lower of cost or market. Long term investments are valued at cost unless there is a permanent decline in value which must be recognized. In the case of treasury bills and commercial paper they would be valued at carrying cost which reflects market value.

B. Impact Of Taxes on Trading

Just as valuation practices vary across institutions, tax treatment is distinctive for each class of institution. The divergent tax treatment causes different trading incentives for different institutions which can lead to incongruities across segments and fragmentation of the market along tax lines.

In the present system of Tax Deductible at Source (TDS) the issuer deducts the tax on interest payments at the time the interest payment is made to the bond holder. Different tax treatments

of interest payments by issuers helps determine the attractiveness of the debt issued by the issuer.

1. Voucher Trading

Voucher trading is a favorite tool utilized by institutions to lower their tax liabilities. Since certain securities have varying tax rates and treatments in the hands of different institutions, incentives are created for companies to alter their security holdings at the time of interest payment. What typically transpires is an institution with a high tax liability sells its securities to an institution with a lower tax liability just before the date for accrual of interest and buys it back after the coupon payment. Both parties can gain from the transaction.

2. Stamp Duties and Transfer Fees

Different states levy different stamp duties and transfer fees. This means that trading an a security can be made more or less attractive based solely on the state where the transaction takes place rather than trading activity being driven solely by the underlying value of the security.

High stamp duties and transfer fees discourage trading. Market participants have devised methods of circumventing the hurdle of having to pay stamp duty or transfer fee, including changing the exchange where the trades take place or altering the settlement terms, but this adds to the cost of transactions.

C. Recommendations

1. Periodic Revaluation of Debt Securities to Market Value

In the current market of dynamic interest rates and increasing long term interest rate volatility, historical cost valuation is inappropriate. From 1985 to present, interest rates on 10 year GoI securities have risen from approximately 10 percent to 14 percent representing a 22 percent decline in value of the securities. Periodic revaluation of debt assets in response to changes in market conditions would enable investors to recognize capital losses sooner and provide incentive to take early corrective action. Portfolio managers would focus more on maximizing total return that takes into account both yield and changes in market price.[2]

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[2]Debt portfolio managers and treasurers in India purport to be "total return" oriented, but a closer examination of their investment portfolios can prove otherwise. During December 1994, banks and other institutions had excess funds which they invested in long dated securities for the extra spread they offered even though their cash flow requirements were short term. Subsequent interest rate increases have decreased the market values of these securities to below cost. The institutions are choosing to hold these securities and rather than sell them and book a loss even though their asset-liability match is unbalanced.

2. *Stamp Duties and Transfer Fees*

Stamp duties should be eliminated or at least standardized across states.

APPENDICES

A. List of persons interviewed and Bibliography

B. Source documents

APPENDIX A

LIST OF PERSONS INTERVIEWED

1. NATIONAL STOCK EXCHANGE. Mahindra Towers, 'A" Wing, RBC, Worli, Bombay 400 018

   Dr. D.H. Patil, Managing Director
   Ravi Narain, Deputy Managing Director
   Chitra Ramkrishna, Vice President
   Prabha Bob, Manager
   P. Guruswamy, Officer
   V. Narayanan, Officer

2. DSP FINANCIAL CONSULTANTS LTD. Tulsiani Chambers, West Wing, 11th Floor, 212, Backbay Reclamation, Bombay 400 021

   Stephen Van C. Wilberding, Chief Operating Officer, Managing Director
   P. R. Joshi, Director
   Sanjiv H. Shah, Senior Vice President
   L.K. Narayan, Vice President
   Rajan Mehta, Vice President

3. SECURITIES AND EXCHANGE BOARD OF INDIA. Earnest House, 14th Floor, 194, Nariman Point, Bombay 400 021

   Vijay Ranjan, Chief of Investigation
   Vivek Kulkarni, Division Chief

4. CRISIL. Nirlon House, 2nd Floor, 254B, Annie Besant Road, Worli, Bombay 400 025

   R. Ravimohan, Managing Director
   Hemant Joshi, General Manager
   D. Thyagarajan, Assistant General Manager

5. UTI INSTITUTE OF CAPITAL MARKETS. Plot 82, Sector 17, Vashi, New Bombay 400 705

   Dr. K.K. Vassal, Director
   Dr. M.T. Raju, Dean
   Dr. T.P. Madhusoodanan, Research Faculty

6. ICICI SECURITIES AND FINANCE COMPANY LIMITED. Mistry Bhavan, 1st Floor, Sir Dinshaw Vacha Marg, Backbay Reclamation, Bombay 400 020

   Ramya R. Rajagopalan, Group Manager Debt, Sales & Trading

7. UNIT TRUST OF INDIA. Merchant Chambers, 2nd Floor, 41, Sir Vithaldas Thackersey Marg, (New Marine Lines) Bombay 400 020

   B.S. Pandit, General Manager, Funds Management
   R. Rangarajan, Deputy General Manager
   A.K. Sridhar, Manager, Funds Management

8. ASIT C. MEHTA. Nirmal, 12th Floor, Nariman Point, Bombay 400 021

   Asit C. Mehta, Managing Director
   Ashish Shah, Dealer - Money Markets

9. DISCOUNT AND FINANCE HOUSE OF INDIA LIMITED. Varma Chambers, 3rd Floor, Homji Street, Bombay 400 001

   S.L. Javadekar, Dealer-in-Charge

10. UTI SECURITIES EXCHANGE LIMITED. Indage House, II Floor, 82, Dr. Annie Besant Road, Worli, Bombay 400 018

    M.K. Khanna, Managing Director
    S. Nagarajan, Assistant Vice President

11. J.M. FINANCIAL & INVESTMENT CONSULTANCY SERVICES LIMITED. 141, Maker Chambers III, Nariman Point, Bombay 400 021

    Mrs. Anahaita Shah, Vice President
    Devendra Mhatre, Deputy General Manager

12. HDFC BANK LIMITED. Sandoz House, Dr. Annie Besant Road, Worli, Bombay 400 018

    Ashish Parthasarthy, Vice President, Head of Money Markets

13. UNITED STATES CONSULATE GENERAL. 78 Bhulabhai Desai. Road. Bombay 400 026

    Thomas S. Jennings, Vice Consul
    Krishna Monie, Economist

14. STATE BANK OF INDIA. Treasury & Investment Management Department, Central Office, Madame Cama Road, Bombay 400 021

    N. Gopalakrishnan, Deputy General Manager

15. RESERVE BANK OF INDIA. Internal Debt Management Cell, Central Office Building, Bombay 400 023

    S.S. Tarapore, Deputy Governor
    K.Kanagasabapathy, Director
    Jaya Mohanty, Assistant Adviser

16. RESERVE BANK OF INDIA. Financial Institutions Cell, World Trade Centre. Tower 8, Cuffe Parade, Colaba, Bombay 400 005

    Rekha Rao, Chief General Manager
    Janak Raj, Assistant Adviser

17. RESERVE BANK OF INDIA. Department of Financial Companies, Central Office Building, Bombay 400 023

    S. Bandyopadhyay, Joint Chief Officer

18. RESERVE BANK OF INDIA. Department of Information Technology, Reserve Bank of India, Fort, Bombay

    Ms. Rama Anathkrishnan, Director, Department of Information Technology

19. RESERVE BANK OF INDIA. Department of Bank Operations & Development, World Trade Centre, Tower 8, Cuffe Parade, Tower-6, Colaba, Bombay 400 005

    R.J. Fernandes, Deputy General Manager

20. SECURITIES TRADING CORPORATION OF INDIA LIMITED. Amar Building, 3rd Floor, Sir P M Road, Bombay 400 001

    K. Joseph Thomas, Manager - Dealing

21. INFRASTRUCTURE LEASING & FINANCIAL SERVICES LIMITED. Mahindra Towers, 4th Floor, Road No. 13, Worli, Bombay 400 018

B.S. Shashidar, Vice President
K. Ramgopal, Senior Manager
K.V, Sawant, Assistant Manager

22. GLOBAL TRUST BANK LIMITED. Rahimtoola House, 6th Floor, 7, Homji Street, Fort, Bombay 400 001

P.H. Ramaswamy, Assistant General Manager, Treasury & Forex
Babu S. Raghutham, Chief Manager, Treasury

23. ICICI BANKING CORPORATION LIMITED. 163, Backbay Reclamation, Bombay 400 020

Mohan N. Shenoi, Chief Manager, Treasury
Anup Bagchi, Dealer

24. SCICI LIMITED. 141, Maker Tower 'F", Cuffe Parade, Bombay 400 005

V. Srinivasan, Officer
Vikas H. Dabral, Officer

25. CREDIT ANALYSIS & RESEARCH LIMITED. RBC, Mahindra Towers, 5th Floor, Road Number 13, Worli, Bombay 400 018

Sukanta Nag, Manager
Amit Wagh, Rating Analyst

26. CITIBANK N.A. 83-84 Sakhar Bhavan, 230, Backbay Reclamation, Nariman Point, Bombay 400 021

V. Srikanth, Assistant Vice President

27. ANZ GRINDLAYS BANK. 90, Mahatma Gandhi Road, P.O. Box 725, Bombay 400 001

K.S. Gopalaswamy, Senior Manager Asset & Liability Management
Chris Mouat, Controller

28. LIFE INSURANCE CORPORATION OF INDIA. Central Office, Yogakshema, Jeevan Bima Marg, Bombay 400 021

B.R. Gupta, Executive Director
R.C. Rao, Secretary

29. BARCLAYS BANK PLC. 21/23 Maker Chambers VI, Nariman Point, Bombay 400 021

Lester Pereira, Manager - Treasury

30. CENTRE FOR MONITORING INDIAN ECONOMY. 110-120 Kalindas Udyog Bhavan, Near Prabhadevi P.O., Bombay 400 025

Ajay Shah, President

31. KOTAK MAHINDRA FINANCE LIMITED. 5-C II Mittal Court, 224, Nariman Point, Bombay 400 021

Shanti Ekambarm, Vice President

32. KOTAK MAHINDRA FINANCE LIMITED, 36-38A, Nariman Bhavan, 227 Nariman Point, Bombay 400 021

Shekar Sathe, Senior Vice President

33. INVESTMENT INFORMATION & CREDIT RATING AGENCY OF INDIA LIMITED. Regent Chambers, 5th Floor, Nariman Point, Bombay 400 021

Anand R. Shanbhag

34. BANK OF AMERICA, Express Towers, Nariman Point, Bombay 400 021
Sanjiv Bajaj, Vice President

35. ASSEST MANAGEMENT COMPANY, LIC Mutual Fund Industrial Assurance Bldg., 4th Floor, Opp. Churchgate Station, Bombay 400 020

R. G. Sharma, Joint General Manager

36. AIR INDIA, Finance and Accounts, Old Airport, Santacruz (East) Bombay 400 029

Rakesh Kapoor, Assistant Financial Controller

37. MATA SECURITIES INDIA PVT, LTD. SUBRATA DAS, MATA, 106 Mittal Chambers, 228 Nariman Point, Bombay 400 021

Madhur Murarka

38. VIDEOCON INTERNATIONAL LTD. C - Wing, 17th Floor, Mittal Court, Nariman Point, Bombay 400 021

S. K. Shelgikar, Chartered Accountant, Advisor to Board of Directors

39. RELIANCE CAPITAL LIMITED, Maker Chambers IV, 5th Floor, 222, Nariman Point, Bombay 400 021

G. Subramanium, Chief Executive (Treasury).

40. GUJARAT AMBUJA CEMENTS LTD. 106 Maker Chambers III, Nariman Point, Bombay 400 021

Anil Singhvi, Treasurer

Appendix B

Source Documents

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2. Government of India, 1991, "Report of the Committee on the Financial System."

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