Introduction

The financial system of any country is the backbone of the economy of that country. The financial systems of all economies are broadly sub-divided into money market, capital market, gilt-edged securities market and foreign exchange market. The money market, capital market and the gilt securities market provides avenues to the surplus sector such as household institutions in the economy to deploy their funds to the deficit sector such as corporate and government sectors to mobilize funds for their requirements. The operations in the money market are generally short-term (upto 1 year) in nature, in capital market short-term to long term and in gilt securities market generally long-term. However, in an integrated financial system, the occurrence of an event in one market of the financial system will have an impact on the other market system.

The Indian money market is a market for short-term money and financial asset that are close substitutes for money, which are close substitute for money, with the short-term in the Indian context being for 1 year. The important feature of the money market instruments is that it is liquid and can be turned quickly at low cost.

The money market is not a well-defined place where the business is transacted as in the case of capital markets where all business is transacted at a formal place, i.e. stock exchange. The money market is basically a telephone market and all the transactions are done through oral communication and are subsequently confirmed by written communication and exchange of relative instruments. The money market consist of many

sub-market such as the inter-bank call money, bill discounting, treasury bills, Certificate of deposits (CDs), Commercial paper (CPs), Repurchase Options/Ready Forward (REPO or RF), Inter-Bank participation certificates (IBPCs), Securitised Debts, Options, Financial Futures, Forward Rate Agreement (FRAs), etc. which collectively constitute the money market.

Participants in money market

Lenders:

These are the entities with surplus lendable funds like-

Banks (Commercial, Co-operative & Private)

Mutual Funds

Corporate Entities with bulk lendable resources of minimum of Rs. 3 crores per transaction

Financial Institutions

Borrowers:

These are entities with deficit funds and includes the ones as above.

FEATURES OF MONEY MARKET

1. It is a collection of market for following instruments- Call money, notice money, repos, term money, treasury bills, commercial bills, certificate of deposits, commercial papers

inter-bank participation certificates, inter-corporate deposits, swaps, etc.

2. The sub markets have close inter- relationship & free movement of funds from one sub-market to another.
3. A network of large number of participants exists which will add greater depth to the market.
4. Activities in the money market tend to concentrate in some centre, which serves a region or an area. The width of such area may vary depending upon the size and needs of the market itself.
5. The relationship that characterizes a money market is impersonal in character so that competition is relatively pure.
6. Price differentials for assets of similar type will tend to be eliminated by the interplay of demand & supply.
7. A certain degree of flexibility in the regulatory framework exists and there are constant endeavours for introducing a new instruments / innovative dealing techniques.
8. It is a wholesale market & the volume of funds or financial assets traded are very large i.e. in crores of rupees.

The functions of money market are as follows:

(a) Providing an equilibrating mechanism for leveling out the short-term surpluses and deficits.

(b) Offering a focal point for the central bank intervention for influencing liquidity in the economy.

(c) Creating an access to the user of short-term money to meet their requirements at a realistic price

1. MONEY MARKET INSTRUMENTS

1. Call Money

Call/Notice money is an amount borrowed or lent on demand for a very short period. If the period is more than one day and upto 14 days it is called 'Notice money' otherwise the amount is known as Call money'. Intervening holidays and/or Sundays are excluded for this purpose. No collateral security is required to cover these transactions

Features

- The call market enables the banks and institutions to even out their day-to-day deficits and surpluses of money.
- Commercial banks, Co-operative Banks and primary dealers are allowed to borrow and lend in this market for adjusting their cash reserve requirements.
- Specified All-India Financial Institutions, Mutual Funds and certain specified entities are allowed to access Call/Notice money only as lenders.
- It is a completely inter-bank market hence non-bank entities are not allowed access to this market.
- Interest rates in the call and notice money market are market determined.

- In view of the short tenure of such transactions, both the borrowers and the lenders are required to have current accounts with the Reserve Bank of India.
- It serves as an outlet for deploying funds on short term basis to the lenders having steady inflow of funds

2. TREASURY BILLS MARKET

In the short term, the lowest risk category instruments are the treasury bills.
RBI issues these at a prefixed day and a fixed amount.
These are four types of treasury bills.

- 14-day Tbill- maturity is in 14 days. Its auction is on every Friday of every week. The notified amount for this auction is Rs. 100 crores.

- 91-day Tbill- maturity is in 91 days. Its auction is on every Friday of every week. The notified amount for this auction is Rs. 100 crores.

- 182-day Tbill- maturity is in 182 days. Its auction is on every alternate Wednesday (which is not a reporting week). The notified amount for this auction is Rs. 100 crores.

- 364-Day Tbill- maturity is in 364 days. Its auction is on every alternate Wednesday (which is a reporting week). The notified amount for this auction is Rs. 500 crores.

  A considerable part of the government's borrowings happen through Tbills of various maturities. Based on the bids received at the auctions, RBI decides the cut off yield and accepts all bids below this yield.

  The usual investors in these instruments are banks who invest not only to part their short-term surpluses but also since it forms part of their SLR investments, insurance companies and FIs. FIIs so far have not been allowed to invest in this instrument.

  These Tbills, which are issued at a discount, can be traded in the market. Most of the time, unless the investor requests specifically, they are issued not as securities but as entries in the Subsidiary General Ledger (SGL), which is maintained by RBI. The transactions cost on Tbill are non-existent and trading is considerably high in each bill, immediately after its issue and immediately before its reedemtion.

  The returns on Tbills are dependent on the rates prevalent on other investment avenues open for investors. Low yield on Tbills, generally a result of high liquidity in banking system as indicated by low call rates, would divert the funds from this

market to other markets. This would be particularly so, if banks already hold the minimum stipulated amount (SLR) in government paper.

3. INTER-BANK TERM MONEY

Inter bank market for deposits of maturity beyond 14 days and upto three months is referred to as the term money market. The specified entities are not allowed to lend beyond 14 days. The development of the term money market is inevitable due to the following reasons

- Declining spread in lending operations
- Volatility in the call money market
- Growing desire for fixed interest rates borrowing by corporate
- Move towards fuller integration between forex and money market
- Stringent guidelines by regulators/management of the institutions

4. CERTIFICATE OF DEPOSITS MARKET

After treasury bills, the next lowest risk category investment option is the certificate of deposit (CD) issued by banks and FIs.

Allowed in 1989, CDs were one of RBI's measures to deregulate the cost of funds for banks and FIs. A CD is a negotiable promissory note, secure and

short term (upto a year) in nature. A CD is issued at a discount to the face value, the discount rate being negotiated between the issuer and the investor. Though RBI allows CDs upto one-year maturity, the maturity most quoted in the market is for 90 days.

CDs are issued by banks and FIs mainly to augment funds by attracting deposits from corporates, high net worth individuals, trusts, etc. the issue of CDs reached a high in the last two years as banks faced with reducing deposit base secured funds by these means. The foreign and private banks, especially, which do not have large branch networks and hence lower deposit base use this instrument to raise funds.

The rates on these deposits are determined by various factors. Low call rates would mean higher liquidity in the market. Also the interest rate on one-year bank deposits acts as a lower barrier for the rates in the market.

5. INTER-CORPORATE DEPOSITS MARKET

Apart from CPs, corporates also have access to another market called the inter- corporate deposits (ICD) market. An ICD is an unsecured loan extended by one corporate to another. Existing mainly as a refuge for low rated corporates, this market allows funds surplus corporates to lend to other corporates. Also the better-rated corporates can borrow from the banking system and lend in this market. As the cost of funds for a corporate in much higher than a bank, the rates in this market are higher than those in the other

markets. ICDs are unsecured, and hence the risk inherent in high. The ICD market is not well organised with very little information available publicly about transaction details

6. **COMMERCIAL PAPER MARKET**

CPs are negotiable short-term unsecured promissory notes with fixed maturities, issued by well rated companies generally sold on discount basis. Companies can issue CPs either directly to the investors or through banks / merchant banks (called dealers). These are basically instruments evidencing the liability of the issuer to pay the holder in due course a fixed amount (face value of the instrument) on the specified due date. These are issued for a fixed period of time at a discount to the face value and mature at par.

Ideally, the discount rates on CPs ought to be determined by the demand and supply factors in the money market and the interest rates on the other hand competing money market instruments such as certificate of deposits (CDs), commercial bills and treasury bills. It has been noticed that in a comparatively stable and low rate conditions in the money market, the discount rates in the CP markets do somewhat soften whereas in the tight money market situation it may not be possible even for a best rated company to issue CPs at lower rates than the lending rates on it's banks lines of credit. This is partly for the reason that banks could also firm up the lending rates during such periods. The maturity management of CPs should also affect the CP rates. It has been observed that in a period of prolong low and steady

money market rates there is no significant different between the discount rates if CPs for 90 and 180 days.

ADVANYAGES OF CP's

The advantage of CP lies in its simplicity involving less paper work as large amounts can be raised without having any underlying transaction. It gives flexibility to the company by providing an additional option of raising funds particularly when the conditions prevailing in the money market are favorable. In a regime where there is a prescription of a minimum lending rate for banks advances, the raising of funds by a company upto 75% of its working capital limit through issue of CPs at somewhat lower interest rates, enables it to reduce the overall cost of short-term funds. It is, however, to be recognised that under the cash credit system of lending, the borrowers' effective interest cost is lower than the prescribed lending rate as this system affords flexibility to borrowers to reduce the outstanding as and when surplus funds accrue to them. Hence, a company proposing to issue CPs should have a clear perception as to its cash flow during the period for which CPs are proposed to be issued and accordingly fix the discount rates at which the instrument is to be issued.

From the investor's point of view, the investment in CPs gives comparatively higher yields than those obtained on bank deposits of similar maturities. Although CP is an unsecured promissory note, the availability of stand-by facility by banks to the issuing companies makes it's holders confident of

getting the payment on due dates. This agreement also facilitated quicker payment as a company's banker and make the payment to the holders on their behalf and as the companies permissible working capital limit gets reinstated to the extent of maturing CPs provided, however, at the time of maturity of CPs, the companies maximum permissible bank finance has not been revised downwards.

7. READY FORWARD CONTRACT

It is a transaction in which two parties agree to sell and repurchase the same security. Under such an agreement the seller sells specified securities with an agreement to repurchase the same at a mutually decided future date and a price. Similarly, the buyer purchases the securities with an agreement to resell the same to the seller on an agreed date in future at a predetermined price. Such a transaction is called a Repo when viewed from the prospective of the seller of securities (the party acquiring fund) and Reverse Repo when described from the point of view of the supplier of funds. Thus, whether a given agreement is termed as Repo or a Reverse Repo depends on which party initiated the transaction.

The lender or buyer in a Repo is entitled to receive compensation for use of funds provided to the counterparty. Effectively the seller of the security borrows money for a period of time (Repo period) at a particular rate of interest mutually agreed with the buyer of the security who has lent the funds to the seller. The rate of interest agreed upon is called the Repo rate.

The Repo rate is negotiated by the counterparties independently of the coupon rate or rates of the underlying securities and is influenced by overall money market conditions.

The Repo/Reverse Repo transaction can only be done at Mumbai between parties approved by RBI and in securities as approved by RBI (Treasury Bills, Central/State Government securities)

Uses of REPO's

It helps banks to invest surplus cash.
It helps investor achieve money market returns with sovereign risk.
It helps borrower to raise funds at better rates.
An SLR surplus and CRR deficit bank can use the Repo deals as a convenient way of adjusting SLR/CRR positions simultaneously.
RBI uses Repo and Reverse repo as instruments for liquidity adjustment in the system.

8. Commercial Paper

Bills of exchange are negotiable instruments drawn by the seller (drawer) of the goods on the buyer (drawee) of the goods for the value of the goods delivered. These bills are called trade bills. These trade bills are called

commercial bills when they are accepted by commercial banks. If the bill is payable at a future date and the seller needs money during the currency of the bill then he may approach his bank for discounting the bill. The maturity proceeds or the bank will receive face value of discounted bill, from the drawee. If the bank needs fund during the currency of the bill then it can rediscount the bill already discounted by it in the commercial bill rediscount market at the market related to discount rate.

The RBI introduced the Bills Market scheme (BMS) in 1952 and the scheme was later modified into New Bills Market scheme (NBMS) in 1970. Under the scheme, commercial banks can rediscount the bills, which were originally discounted by them, with approved institutions (viz., Commercial Banks, Development Financial Institutions, Mutual Funds, Primary Dealer, etc.).

With the intention of reducing paper movements and facilitate multiple rediscounting, the RBI introduced an instrument called Derivative Usance Promissory Notes (DUPN). So the need for physical transfer of bills has been waived and the bank that originally discounts the bills only draws DUPN. These DUPNs are sold to investors in convenient lots of maturities (from 15 days upto 90 days) on the basis of genuine trade bills, discounted by the discounting bank.

3. Evolution of money market in India

The existence of money market could be traced back to *hundis* or indigenous bills of exchange. These were in use from the 12th century and it appears from the writings of few Muslim historians, European travelers, state records and the Ain-I-akbari that indigenous bankers played a prominent part in lending money both under the early Muslim and mogul rulers in India. The indigenous bankers financed internal and foreign trade with cash or bill and gave financial assistance to rulers during period of stress. The money market in India is not a single homogeneous entity and may be divided into two parts: (a) the central part- consisting of the Reserve Bank of India, State Bank of India, the Public Sector Bank, the Private Sector Bank, the Exchange Banks, and the other development financial institution; and (b) the bazaar part- consisting of the money –lenders, indigenous bankers, loan office, chit funds, nidhis, etc., and the co-operative banks occupying the intermediate position. The connection between these parts is incomplete as the Indian financial system was somewhat loosely organized and without much cohesion until 1935 and lacked a central coordinating agency. Till then, the central part was largely dominated by government, which controlled currency and through it influenced the bank rate decisively.

Owing to the absence of a central bank until 1935, the Imperial Bank of India performed some of the functions of the banker's bank. The other Bank

are not bound to keep balances with it, but in practice the exchange Banks and larger India joint-stock banks kept a substantial part of their cash balances with it. The Imperial bank's grant of loans to joint-stock banks against government securities at the bank rate proved very useful to them, but the high bank rate frequently reduced to a considerable extent the benefits of such loan. On account of the special banks concessions that the Imperial bank received from the government and later from the Reserve Bank also, the joint-stock banks have regarded it more as an unfair competitor than as a friendly supporter. Their feeling towards the State Bank was not much better. The exchange banks were also considered as powerful competitors owing to their large resources and encroachment upto the field of the finance of internal trade at ports as well as in the interior. The state co-operative banks used to maintain current accounts with the state bank and also used to get credit and overdraft facilities from it. The co-operative banks have no connection with the indigenous bankers and the moneylenders beyond the fact that a few of them were depositors or directors of central cooperative banks. There is also not much contact between the indigenous bankers and the moneylenders and both of them usually did not maintain account with the State Bank of India and not at all with the Reserve bank of India (RBI). Till the mid- 1970s, during the busy season (October-April), when the supply of hundis was greater than the resource of the indigenous bankers, a temporary connection was established between a number of them who were selected And placed on the approval list and the State Bank and the joint stock banks rediscounted the hundis drawn and endorsed by the by the approved indigenous bankers up to a

certain maximum limits determined according to the financial standing off the financial standing of the banker or gave them advances against demand promissory notes signed by to of them.

(a) Operation of the central or organized part of the money market

These may be considered under the three heads:

(i) The call money market,

(ii) The bill market, and

(iii) Other sub-markets (CPs and CDs)

(i) ***The call money market***

Call money market is the core of the central part of the money market, in which banks lend money to each other. To begin with call money operated from Mumbai and later Calcutta, Delhi and Madras joined. The call money is most sensitive part of the money market and indicates the current condition of the market. The major participants are the public sector banks. Over the period pf time, the RBI has permitted other institutions, flush with funds, such as LIC, GIC, UTI, IDBI, NABARD to participate in money market as lenders. The call money transaction are unsecured, enabling the borrowing banks to replenish their funds without touching their other assets. In this market, banks operate with their own surplus funds and usually without any help from outside. Thus, banks with surplus funds lend to those that are in need. This helps in spreading the liquid funds evenly among the various banks and thus enables a more economic use of resources in the banking system. The role of banks, as a borrowers or lenders, change according to liquidity position.

Upto 1956, the exchange banks were the chief borrower on account of nature of their business. Their advances were generally very liquid and they held large proportion of bills. As a consequence, they functioned with a fine cash ratio and turned to the call market to make up any deficiency of funds for day or two. Prior to 1956, some of the Indian banks also resorted to the call money market occasionally as a borrowers in order to maintain their cash ratio at the level required by law. However since 1956, the India Bank have

been resorting to the call money market mare frequently whenever the demand upon them for credit owing to increasing investment activity press upon their resources. Hence, the funds now flow more easily and to a large extent, not among Indian banks center like Mumbai or Calcutta, but also among various centers.

(ii) *The Bill Market*

The bill market can be divided into two viz., the commercial bills market and the treasury bills market.

Commercial Bills Market

Bill financing is an important mode of meeting the credit needs of trade and industry in developed economies because it facilitates an efficient payment system being self-liquidating in nature. In India bill financing has been popular since long in ancient "Hundi" form.

The existence of an approved bills market enables rediscounting of bills which is a traditional instrument of credit control. As such, the Indian central Banking Enquiry Committee (1931) had strongly recommended the establishment of a market in commercial bills. But nothing could be done by the Reserve Bank till 1952, on account of the war, the indifference of British Government and the partition of the country.

Banks of India, especially the Exchange Banks, used to discount bills of approved parties fulfilling certain conditions, but there was no discount in the discount market in India, except the limited bills market provided by the Reserve Bank for further dealings in these bills and banks had either to keep them until they matured or rediscount them in London discount market, if they were export bills.

The RBI pioneered effort on developing bill culture in India. It introduced Bill Market Scheme (BMS) in 1952 to provide demand loan against bank's promissory notes supported by their constituent's 90 days usance bills or promissory notes. The bank could also cover part of their advances, loans, etc., into usance promissory notes for lodging with the RBI collateral. The 1952 Bill Market Scheme was however, basically a scheme of accommodation for banks. The scheme was designed to ease the problem of providing temporary finance to commercial banks by the Reserve Bank as a lender of last resort. But, it did not succeed in developing a genuine bill market.

Promotion of bill culture, however, remained one of the major concerns of the RBI. Finally in November 1970, based on the recommendations of Narasimham committee, RBI introduced Bill Rediscounting Scheme (BRS) also known as New Bill Market Scheme (NBMS) which continues till date in modified form. Under this scheme, all scheduled commercial banks are eligible to rediscount genuine trade bills arising out of sale/purchase of goods wit the RBI and other approved institutions.

To promote the bills culture, RBI in March 198 educed the discount rate for bills for borrowers from 16.5% to 15.5%. Thereafter, the bills finance

has always been subject to one percentage point lower rate of interest than prime lending rate fixed for corporate borrowers. Further, interest rate on rediscounting of bills was deregulated in May 1989.

Treasury Bills Market

In addition to internal and foreign trade bills, banks deal in Treasury Bills. As they are issued at a discount by the Government of India or State Government and are repayable usually after three months, banks regard them as a very suitable form of investment for their own surplus fund. Most of them have been issued by Government of India. During the First World War, they were issued to meet government's disbursements on behalf of British War Office. During the post-war period, they were issued to meet budget deficits and to repay old bills. Later, they have been issued to provide ways and means of current and capital expenditure, repayment of old bills and conversion of loans. During the Second World War, they were issued to provide in large amounts for the same purpose as the First World War.

Tenders for them are invited by government notification and are received by the office of Reserve Bank. The tenders quoting the lowest discount are accepted and the bills are issued and paid by the offices of the Reserve Bank. In addition, intermediate Treasury Bills are sold sometime at a particular rates. At least 90% of the tenders and purchases are made by few big banks and nearly half of these by the State Bank alone. This makes government in India dependent upon a few banks, whereas in London, large funds which do not belong to banks are invested in Treasury Bills and enable Government there to secure more favorable rates. Consequently the Reserve Bank

sometimes had to intervene and purchase Bills on its own account. The Reserve Bank has tried to organize and widen the Treasury bill market, in order to secure better control of the money market, with the rediscounting of the bills with itself and to enable the market to carry a large floating debt and thereby reduce the cost of Government borrowing. The efforts of the Reserve Bank in widening the Treasury bill market have not succeeded fully until the late 1980s, owing to the absence of a discount market in these bills. Banks were reluctant to discount Treasury bill with the Reserve Bank because the money market regarded such discount as a sign of weakness. This lead to funds being locked in and market elasticity was not there in case of Treasury bill. Sales of treasury bills were suspended from 20th April 1954 to 2nd November 1954 and form 6th April 1956 to 1st August 1958. However, since 1970s, the treasury bills were issued at a fixed rate of 4.6% and were for tenure of 91 days. However, with the setting up of the Discount and Finance House of India (DFHI) in 1988, the secondary market for the treasury bills began to develop.

(iii) *Other Sub-markets*

The other important sub-markets that have come into existence in the money market are the Certificate of deposits (CDs) market and the Commercial Papers (CPs) market.

These sub-markets are of recent origin. While the CDs market becomes operational during 1989-1990, the CPs market emerged in 1990-91.

Certificate of Deposit (CDs)

The CDs are basically deposit receipts issued by a bank to the depositor. In India the Tambe Working group in 1982 was the first one to evaluate the introduction of CDs in the money market. The group, however, did not recommend introduction of CDs on the ground of inherent weakness viz. (i) absence of secondary market, (ii) administered interest rate on bank deposits, and (iii) danger of giving rise to fictitious transaction. The Vaghul Working Group in 1987 also discussed at large the desirability of launching this instrument. The working group was of the view that developing CDs as money market instrument would not be meaningful unless the short-term deposit rate are aligned with other rates in the system. As such, it did not recommend introduction of CDs. The group, however, noted the importance of CDs and recommended feasibility of introduction of CDs after appropriate changes at a later date.

Commercial Papers (CPs)

The CPs as an instrument are unsecured usance promissory notes issued by the corporate borrowers with fixed maturity evidencing their short-term debt obligation. In India, Vaghul Working Group 1987 was the first to recommend introduction of CPs in Indian money market. It noted that CP market has a advantage of giving highly rated corporate borrowers cheaper funds while providing investors higher interest earnings. Though the banks would loose some of their first rated borrowing clientele and consequently interest income they can supplement their earning by acting as issuers and

dealers of commercial papers. Accordingly the working group recommended the launch of CPs and suggested a scheme for issue of CPs.

(b) The Bazaar Part

Important cogs in the evolution of the Indian money market evolution of the Indian Money Market are the indigenous institutions. Although, nidhis and chit funds exist, they are not important or money market as such they absorb funds that might otherwise fed into banking system. A more obvious money market institution was the Multani shroff. Formerly, and indeed into 1960s and the early 1970s, the Multani shroff lent money to customer by discounting a hundi (which was originally in promissory note form) and then, after endorsement and by arrangement through a hundi broker, rediscounted with a schedule bank up to limits agreed upon. Although Multani shroffs have survived as a part of the indigenous sector, their clan is readily declining and expected to become extinct.

Discount and Finance House of India (DHFI) AND Securites Trading Corporation of India (STCI)

A very significant step in evolution of the Indian money market has been setting up of the DHFI and the STCI. As a sequel to the recommendations of the Working Group of the money market, the Discount and Finance House of India was set up by the RBI jointly with the Public Sector Banks and all-India financial institutions to deal in money market instruments. DHFI was incorporated on March 8, 1988 under the Companies Act, 1956 with an

autorised share capital of Rs. 100 crores subscribed by the RBI (Rs. 33 crores) and all-India financial institutions (Rs 16 crores).

DHFI quotes regular bid and offer rates for treasury bills and commercial bills rediscounting. However only bid prices for CDs and CPs are normally quoted. DHFI is also autorised to undertake “REPO” transaction against treasury bills and it provides daily buy back and sell back rates for treasury bills to suit their requirements of commercial banks.

The STCI is of recent orign. Basically, set-up for dealing in government securities market to broaden and deepen this market, the STCI also has been allowed to deal in call money market and the treasury bills market.

4. Recommendation of various committees

The Indian money market has undergone metamorphosis during the last few years owing to a series of measure which increased the number of participants, introduced newer instrument and deregulated interest rate. The Reserve Bank of India (RBI) set up a committee to review the functioning of monetary system, viz., SUKHMOY CHAKRAVARTY COMMITTEE in 1982, a working group to review the functioning of money market, viz., VAGHUL WORKING GROUP in 1986 and the NARASIHMHAM COMMITTEE to review the functioning of the financial system in India. While the Chakravarthy Committee recommended measures for improvement in the monetary system, the Vaghul Working Group recommended measures to activate and vitalize the money market and the

Narasimham Committee recommended measures to streamline the functioning of the financial system.

RBI appointed a working group on Money market under the Chairmanship of N Vaghul, which suggested a number of measures to deepen the money market. As a follow up the RBI took the following initiatives

- Formation of DFHI, an institution established in March 1988, to provide liquidity to money market instruments.
- Increasing the range of money market instruments; CP, CD and Inter-bank participation Certificates are some of the instruments introduced in 1988-89.
- Freeing of call money rates in stages from interest rate regulation to price discovery based on market forces.

Today the Bank Rate has emerged as a reference rate and the call money rates generally operate in a corridor with the Repo rate acting as a floor and the Bank Rate as a ceiling.

At present the overnight money market rate is the only floating rate benchmark. The methodology used for calculating the overnight index is transparent.

Reuters MIBOR is the weighted average of call money transactions of 22 banks and other players.

NSE-MIBOR (Mumbai Inter-bank Offer Rate) is the rates polled from a representative panel of 32-banks/ institutions/ PDs.

The other benchmark instruments are 14, 91, 182 & 364 day T.bills. Also we have the SBI-PLR rate.

Recommendation of Narasimham Committee (April 1998)

The various recommendations in respect of the money market in the subject report are as under:

- The banks should put in place proper Asset-Liability Management policies, which should prescribe tolerance levels for mismatches in various time bands.
- The inter-bank cal and money market and inter-bank term money market should be strictly restricted to banks. The only exception should be primary dealer (PDs), who in a sense, perform a key function of equilibrating the call money market and are formally treated as banks for the purpose of their of their inter-bank transactions. All the other present non-bank participants in the inter-bank call money market should not be provided access to the inter-bank call money market. These institution could be provide access to

the money market through different other segments of the money market.

- Structural changes would result in the development of a strong and stable money market with liquidity and depth.
- The foreign institutional investor should be given access to the Treasury bill market. Broadening the market by increasing the participant would provide depth to the market.
- With the progressive expansion of the forward exchange market there should be endeavour to integrate the forward exchange market with the spot market by allowing the participant in the spot forex market to participate in the forward market by their exposure. Furthermore, the forex market, the money market and the securities market should be allowed to integrate and their forward primia should reflect the interest rate differential. As instruments move in tandem in these markets the desideravitive of a seamless and a vibrant financial market would hopefully emerge.

5. Major Reforms in Indian Money Market

Deregulation of Interest Rates

Some of the important policies in the deregulation of interest rates have been:

1. The lending and deposit rates that have, over time, been considerably freed. Lending rates are now linked to the PLR, and the banks depending on their risk perceptions freely determine the spreads. Deposit rates beyond one year have been freed, and deposit rates less than one year linked or pegged to the Bank Rate. All re-finance; the OMO operations and liquidity to the Primary Dealers (PDs) have been linked to the Bank Rate. To that extent the Bank Rate has been emerging as a kind of reference rate in the interest rate scenario.

2. The second interesting aspect has been that the borrowings by the government (since 1992) have been at market rates.

3. The PSUs and FIs, who had been largely depending on budgetary support for their resources, have been forced to go to the market to raise their resource requirements.

Integration of Markets

The other important aspect of the fixed income market is the close inter-linkage between the money and debt segments. The Call, Notice & Term money markets are to be made purely inter-bank markets. The non-bank participants are being shifted to the Repo market. However the existing players have been allowed to park their short-term investments till they find other avenues. The corporates have the facility of routing their call transactions through the PDs.

Primary Dealers

In order to make the government securities market more vibrant, liquid and to ensure market making capabilities outside RBI a system of PD's was established. The PDs have been allowed to operate a current account and along with a SGL account. They also have been allowed to open constituent SGL accounts. RBI has provided them liquidity support facility. In order to facilitate their continued presence in auctions the RBI invites bids for underwriting in respect of all auctions. Routing of operations in the call money market is allowed through PD's. They are allowed the facility of funds from one centre to another under RBI's Remittance facility scheme. The number of PDs has been increased from 7 to 13. Infact the introduction of PDs has added to the liquidity in the market.

Valuation of securities

Banks have been required to mark 70% of their portfolio to market from the year 1998-99 and 75% from 1999-2000.

Foreign Institutional Investors (FIIs)

FIIs have been allowed to trade in T. Bills within the overall debt ceiling. They now have access to all types debt instruments.

Developments in the Money Markets

Call/Notice Money Market

As per the suggestions of the Narasimham Committee II, the RBI in the Mid-Term Review of October 1998 that it would move towards a pure inter-bank call/notice/term money market, including the PDs. Towards this end the non-bank participants can invest their short-term resources in the Repo market and other money market instruments. Taking into consideration the transitional problems, it has also been decided to continue with the present system of permitting FIs and MFs to lend in the call/notice money market. The corporates can route their call/notice money transactions through the PDs.

Term Rate

Inter-bank CRR, other then minimum 3% has been done away with. In this direction the Interest Rate Swaps (IRS) have been introduced for the participants to hedge their interest risks. For benchmarking we have the 14, 91& 364 T.Bills. Also we have the CPs. Now it is to the participants to use this opportunity.

Money Market Mutual Funds (MMMFs)

Many Mutual Funds have started funds which spcifically focus on money market. They have also been permitted to invest in rated corporate bonds and debentures with a residual maturity of up to only one year, within the ceiling existing for CP.

Repos and Reverse Repos

Non-bank entities, which are currently permitted to take Repos, have been permitted to borrow money through reverse Repos at par with banks and PDs. There is no restriction for the duration of a Repo. All government securities have been made available for Repo. The Repos have also been permitted in PSU bonds and private corporate debt securities provided they are held in demat form in a depository and the transactions are done in recognized stock exchanges.

6. Needs for imbibing depth to the market

Diversifying investor base

Active participation by a number of investor segments, with diverse views and profiles, would make the market more liquid. In order to attract retail investors there is need to exempt the interest income from income tax. The mutual funds are expected to take the markets in a big way.

Settlement system reforms

In the settlement and transfer of wholesale trades, though DVP settlement has been introduced, inter-city settlement continues to be a problem. It is not possible to buy and sell a security on the same day as transactions are settled on a gross basis and short selling is not allowed. The RBI plans to introduce the Real Time Gross Settlement (RTGS), which will add efficiency.

Transparency

Development of technology is an integral part of reforming the debt market, especially in the context of providing a technologically superior dealing and settlement system. Hence the RBI has embarked upon the technological upgradation of the debt market. This includes screen-based trade reporting system with the use of VSAT communication network complimented by a centralized SGL accounting system. It shall also facilitate logging bids in auctions of dated securities and T.Bills. This will broaden the participation in the auction system.

The participants would be required to provide two-way quotes. It is also believed that the screen would have a chat line mode. The system will be integrated with the regional current account system. Nothing seems to have been finalized as of now.

Anyway this system may not really be effective enough to substitute the telephonic mode of operation. The system as has been planned does not provide for a participant to withhold his identity. Now this factor alone could

lead to inefficiencies in Price discovery, as in the case of a major participant having to reveal his buy/sell interest.

In fact, the market participants seem to be divided over this issue. Some believe that the system as planned is proper while many others believe that there would be no significant improvement. Anyway the RBI seems to have decided to eliminate the brokers from the system. This would remain an interesting debate as the NSE members/brokers not willing to believe that they would be out of the system after having paid the NSE fees. About this system the market seems to be divided. RBI would like the market to be free of intermediaries (brokers). The banks feel that the brokers would remain. The brokers maintain that this system would not lead to the best price discovery. It is not very wise for the participants to release their identity and interest.

Short selling

The participants feel that this would add to the depth of the market and also help in providing two-way quotes. However it is not evident whether the RBI will be allowing this.

Primary dealers

The banks maintain that with all the benefits provided to them they should be providing fine two-way quotes at market rates. For this the PDs feel that it is essential to allow the short selling of securities and that every participant provides a two-way quote.

Awareness

The government along with the RBI has decided to do some publicity work.

Retailing of government securities

Since the beginning of the reforms it has been recognized that a strong retail segment for government segment needs to be developed. The basic objective of setting up of primary and Satellite Dealers was to enhance distribution channels and encourage voluntary holding of government securities among a wider investor base. To give a fillip to this scheme for availing of liquidity support from RBI has been made available to them. Now banks are allowed to buy or sell freely government securities on an outright basis and retail government securities to non-bank clients without any restriction on the period between sale and purchase. The big question is whether the banks would actually take interest in the task, as this will effect their deposits. Towards this end there is the need for introducing STRIPS.

Further to enable dematerialization of securities of retail holders, institutions such as NSDL, SHCIL, and NSCCL have been allowed to open SGL accounts with RBI. SD's have also been extended the facility of Repo transactions since March 1998.

Market Microstructure

To develop the primary and the secondary markets the following points need careful evaluation

1. At present the PDs underwrite a sizeable portion of the market loans and quote an underwriting commission. It has been suggested that it be made compulsory for them to bid for a minimum percent for a minimum percent of the notified amount. By increasing the number of PDs the total bids should be brought upto 100% of the notified amount.

2. The RBI should try and move out of the primary auctions but in transition could take upto 20% of the notified amount. Incase of the issue being not fully subscribed the RBI should have the option of canceling the entire issue.

3. Gradually the RBI should move out of the 14 and 91 day T. Bill auction and then the 364 day auction and then finally from the dated of securities.

The RBI should have a strong presence in the secondary market by means of providing two-way quotes.

Standardization of Practices

Standard practices in the market need to be evolved with regard to the manner of quotes, conclusion of deals, etc. It has been proposed that the Primary Dealers Association and FIMMDSI quickly setup a timeframe for CP. The minimum the documentation and market practices, minimum the lock in period. If needed RBI will come forward and indicate a time frame.

Most importantly the code of conduct will have to be compatible with the contemplated dealing screen and the technological upgradation.

Risk Management

Investors in debt instrument face three major types of risks namely credit risk, interest rate risk and foreign currency risk. Incase of the government securities the credit risk is zero. For the domestic investors the foreign exchange risk is none. Investment in all debt instruments is exposed to interest rate risk. Introduction of rupee derivatives will go a long way in providing investors an opportunity to hedge their exposures. IRS and FRA have already been introduced. Also there is a need for the dealers (especially in PSU banks) to be provided with more freedom to make decisions. Finally it remains on the willingness of the participants to trade. This indeed would provide the needed fillip to the market.

7. INTEREST RATE SWAPS

7.1 INTRODUCTION

Derivatives

As their name implies, are contracts that are based on or derived from some underlying asset, reference rate, or index. Most common **financial derivatives** can be classified as one, or a combination, of four types:

forwards, futures, options and swaps that are based on interest rates or currencies.

Derivatives help to improve market efficiencies because risks can be isolated and sold to those who are willing to accept them at the least cost. Using derivatives breaks risk into pieces that can be managed independently. Corporations can keep the risks they are most comfortable managing and transfer those they do not want to other companies that are more willing to accept them. From a market-oriented perspective, *derivatives offer the free trading of financial risks.*

A swap is another forward-based derivative that obligates two counterparties to exchange a series of cash flows at specified settlement dates in the future. Swaps are entered into through private negotiations to meet each firm's specific risk-management objectives. There are two principal types of swaps: interest-rate swaps and currency swaps. The first recorded swaps were negotiated in 1981. Since then, the markets have grown very rapidly.

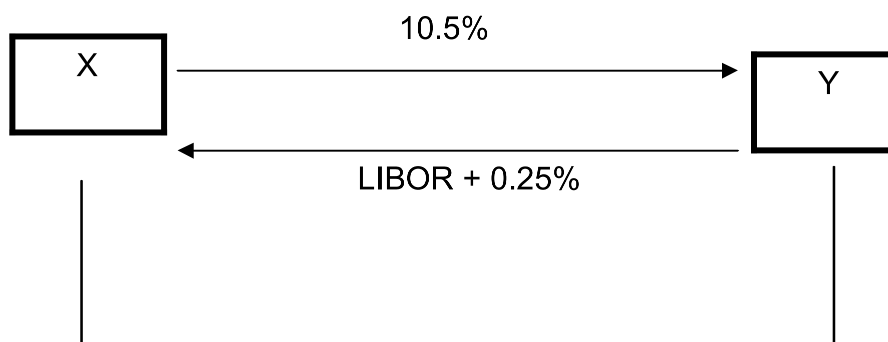
Interest Rate Swaps (IRS)

An interest rate swap is a transaction involving an exchange of one stream of interest obligations for another. Typically, it results in an exchange of fixed rate of interest payments. Occasionally, it involves an exchange of one stream of floating rate interest payments for another.

The principle features of an interest rate swap are:

- It effectively translates a floating rate borrowing into a fixed rate borrowing and vice versa. The net interest differential is paid or received, as the case may be.
- There is no exchange of principle repayment obligations.
- It is structured as a separate contract distinct from the underlying loan agreement.
- It is applicable to new as well as existing borrowings.
- It is treated as an off-the-balance-sheet transaction

To illustrate the nature of interest rate swaps, let us consider an example. X has a borrowing of $ 50 million on which a floating interest of LIBOR (London Inter Bank Offer Rate) plus 0.25 percent is payable and Y has a borrowing of $ 50 million on which a fixed interest rate of 10.5 percent is payable. X and Y enter into an IRS transaction under which X agrees to pay Y a fixed interest rate of 10.5 percent and Y agrees to pay X a floating rate of interest rate of LIBOR plus 0.25 percent. This transaction may be represented diagrammatically as follows.



An interesting Indian example of an IRS is one entered into by Maruti Udyog Limited (MUL). On 16TH March, 1984, MUL took a syndicate foreign loan of US $ 75 million. The terms of the loan agreement specified that MUL would draw $30 million by 16TH March, 1985, $40 million by 16TH March, 1986, and $50 million by 16TH March, 1987. The loan was repayable from March 1988 through March 1991. The rate of interest on the loan was stipulated to be 3/8 percent over LIBOR till March 1988 and 1/ 2 percent over LIBOR thereafter. Concerned about the dollar LIBOR fluctuation, MUL in consultation with the government, the Reserve Bank of India, and the State Bank of India, decided to go in for a IRS. On 30th July, 1985, MUL entered into a transaction with Bank of America for an IRS. Under the deal, Bank of America agreed to pay Bank of Tokyo an interest of 3/8 percent over LIBOR on 20 million while MUL agreed to pay a fixed rate of interest of 10.5 percent to Bank of America.

It must be noted that IRS are different from Forward Rate Agreements (FRA). While in FRA, a certain interest rate applies for a certain period of time in the future; an IRS is a portfolio of FRA’s. All IRS can be decomposed into separate FRA’s.

Introduction of Forward Rate Agreements and Interest Rate Swaps

The Indian scene (Source: RBI Guidelines)

Objective

- To further deepen the money markets
- To enable banks, primary dealers and all India financial institutions to hedge interest rate risks.

These guidelines are intended to form the basis for development of Rupee derivative products such as FRAs/IRS in the country. They have been formulated in consultation with market participants. The guidelines are subject to review, on the basis of development of FRAs/IRS market.

Accordingly, it has been decided to allow scheduled commercial banks (excluding Regional Rural Banks), primary dealers and all -India financial institutions to undertake FRAs/IRS as a product for their own balance sheet management and for market making purposes.

Prerequisites

Participants are to ensure that appropriate infrastructure and risk management systems are put in place. Further, participants should also set up sound internal control system whereby a clear functional separation of

trading, settlement, monitoring and control and accounting activities is provided.

Description of the product

A **Forward Rate Agreement (FRA)** is a financial contract between two parties exchanging or swapping a stream of interest payments for a notional principal amount on settlement date, for a specified period from start date to maturity date. Accordingly, on the settlement date, cash payments based on contract (fixed) and the settlement rate, are made by the parties to one another. The settlement rate is the agreed benchmark/reference rate prevailing on the settlement date.

An Interest Rate Swap (IRS) is a financial contract between two parties exchanging or swapping a stream of interest payments for a notional principal amount of multiple occasions on specified periods. Accordingly, on each payment date that occurs during the swap period-Cash payments based on fixed/floating and floating rates are made by the parties to one another.

Participants

Schedule commercial banks.

Primary dealers

All India financial institutions

Benchmark rate

The benchmark rate should necessarily evolve in the market and require market acceptance. The parties are therefore; free to use any domestic money or debt market rate for entering into FRAs/IRS, provided methodology of computing the rate is the objective, transparent and mutually acceptable to counter parties.

Size

There will be no restriction on the minimum or maximum size of notional or principal amounts of FRAs/IRS. Norms with regard to size are expected to emerge in the market with the development of the product.

Tenure

No restrictions

Capital adequacy

Banks, FIs as per the stipulations contained

PDs as per the stipulations contained

Exposure limits

Banks, FIs and PDs have to arrive at the credit equivalent amount for the purposes of reckoning exposure to a counter party. For this purpose participants may apply the conversion factors to notional principal amounts as per the original exposure method prescribed in Annexure I and II. The exposure should be within sub limit to be fixed for FRAs/IRS to corporates/ banks/ FIs/ PDs by the participants concerned. In case of banks and FIs, the exposure on account of FRAs/IRS together with other credit exposures should be within single/ group borrower limits as prescribed by RBI. Further while dealing with corporates, banks, FIs and PDs should exercise due diligence to ensure that they (corporates) are undertaking FRAs/ IRS only for hedging their own rupee balance sheet exposures. Banks, FIs and PDs are advised to also obtain a certificate from the authorized signatory/ signatories of corporate/s to such an effect._

Swap Position

Ideally, participants should undertake FRAs/ IRS only for hedging underlying genuine exposures. However recognizing the crucial role-played by the market maker in development of the product and creating of the market itself, participants have been allowed to deal in the market without underlying exposure. However to ensure that the market makers do nor over extend themselves, market makers are required to place prudential limits on swap positions, which may arise on account of market making activity.

Scheduled commercial banks, should place various components of assets, liabilities and off-balance sheet positions (including FRAs, IRS) in different

time buckets and fix prudential limits on individual gaps (as per the procedure laid down in the procedure laid down in the RBI Circular on ALM system).The prudential limits for different time buckets approved by boards of participants will require vetting by the RBI as mentioned below:

Institution	RBI’s department
PDs	Internal Debt Management Cell (IDMC)
FIs	Financial Institution Division, Department of Banking Supervision

The above procedures for setting up of limits on swap positions and exposure limits may form the bottomline for the risk management, participants who can employ more sophisticated methods such as Value at Risk (VaR) and Potential Credit Exposure (PCE) may do so.

7.2 Why do firms enter into interest rate swaps?

Swaps for a comparative advantage

Comparative advantages between two firms arise out of differences in credit rating, market preferences and exposure.

Firm A with high credit rating can borrow fixed at 80 bps over PLR and floating at 50 bps over MIBOR. Another firm B with a lower rating can borrow fixed at 150 bps over PLR and floating at 80 bps over MIBOR.

The firm A has absolute advantage over firm B in both fixed and floating rates. Firm B pays 70 bps more than firm A in the fixed rate borrowing and only 30 bps more than A in the floating rate borrowing. So firm B has comparative advantage in borrowing floating rate funds. Hence B borrows funds at MIBOR plus 80 bps.

The gain because firm A borrows in the fixed rate segment is:

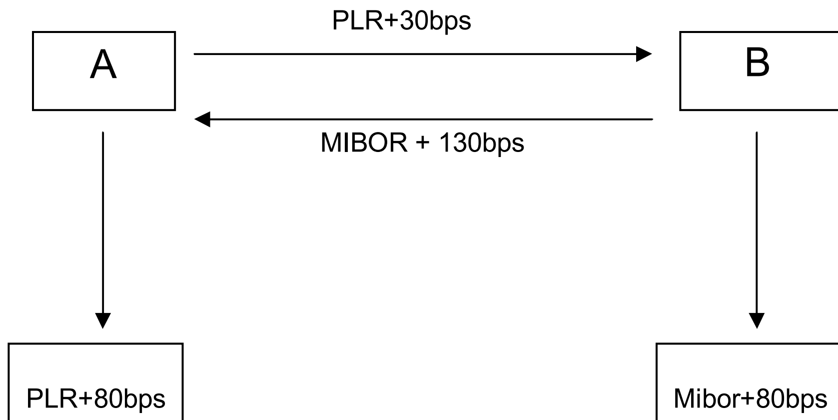
(PLR + 150 bps) - (PLR + 80 bps) i.e., 70 bps.

The loss because firm B borrows in the floating rate segment is:

(MIBOR + 80 bps) - (MIBOR + 50 bps) i.e., 30 bps.

The net gain in the swap = 70 - 30 = 40 bps.

The firms can divide this gain equally. Firm B can pay fixed at (PLR + 130 bps) to firm A and receive a floating rate of (MIBOR + 80 bps).



Effective cost for firm A = ((PLR + 80) + (MIBOR + 80) - (PLR + 130))

= MIBOR + 30 bps

This results into a gain of ((MIBOR + 50) - (MIBOR + 30)) i.e., a gain of 20 bps.

Effective cost for firm B = ((MIBOR + 80) + (PLR + 130) - (MIBOR + 80))

= PLR + 130 bps

This results into a gain of ((PLR + 150) - (PLR + 130)) i.e., a gain of 20 bps.

Swaps for reducing the cost of borrowing

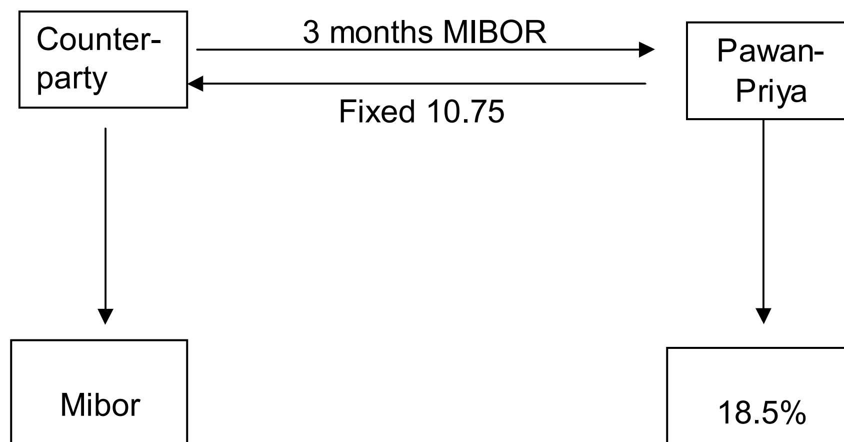
With the introduction of rupee derivatives the Indian corporates can attempt to reduce their cost of borrowing and thereby add value. A typical Indian case would be a corporate with a high fixed rate obligation.

Pawan-Priya Ltd. an AAA rated corporate, 3 years back had raised 4-year funds at a fixed rate of 18.5%. Today a 364-day T. bill is yielding 10.25%, as the interest rates have come down. The 3-month MIBOR is quoting at 10%.

Fixed to floating 1 year swaps are trading at 50 bps over the 364-day T. bill vs 6-month MIBOR.

The treasurer is of the view that the average MIBOR shall remain below 18.5% for the next one year.

The firm can thus benefit by entering into an interest rate fixed for floating swap, whereby it makes floating payments at MIBOR and receives fixed payments at 50 bps over a 364 day treasury yield i.e. 10.25 + 0.50 = 10.75 %.



The effective cost for Pawan- Priya Ltd. = 18.5 + MIBOR - 10.75

= 7.75 + MIBOR

At the present 3m MIBOR at 10%, the effective cost is = 10 + 7.75 = 17.75%

The gain for the firm is (18.5 - 17.75) = 0.75 %

The risks involved for the firm are

- Default/ credit risk of counterparty. This may be ignored, as the counterparty is a bank. This risk involves losses to the extent of the interest rate differential between fixed and floating rate payments.

- The firm is faced with the risk that the MIBOR goes beyond 10.75%. Any rise beyond 10.75% will raise the cost of funds for the firm. Therefore it is very essential that the firm hold a strong view that MIBOR shall remain below 10.75%. This will require continuous monitoring on the path of the firm.

8. HISTORY AND EVOLUTION

After the fall of the Bretton Woods System, the government of the Great Britain undertook various steps to prevent the downslide of the Pound and instituted new internal controls. One of the control measures was the creation of the Dollar premium market to discourage the direct foreign investment. However, this created opportunities for financial ingenuity by the British merchant bankers.

To avoid Dollar premium, Parallel Loans were introduced. Here, the parties were required to exchange the principal on the value date. During the life of the contract, each party was to pay the interests on the currency it had received. The next crucial step was the introduction of the Back-to-back Loans, in which the loan was directly arranged between two parent companies in different countries and structured under one agreement. Parallel Loans were strictly designed to satisfy the letter of the law. That is why four entities – the parent and the subsidiary in each of the two different countries – had to be involved in structuring each loan. In Back-to-back loans, the intermediary level of the subsidiary was eliminated. Back-to-back loans tested the legal waters and did not face any problems.In Back-to-back Loans, only one documentation covered the transaction.These two instruments played an important role in paving the way for the emergence of the Swaps.

Currency Swaps

The breakdown of the Bretton Woods System had opened up a whole new area of the foreign exchange trading. In a deregulated market, banks could offer products to the clients, collect a fee, and improve their profit margins. Gaining entry into the Parallel and the Back-to-back Loans was easy for the banks. But two problems began to emerge.

One was the old issue of the paperwork, except that increased volume of the loans gave a new urgency to its resolution. The other problem was related to accounting. Both of the above mentioned loans were recorded as two separate transactions. This ignored the contingent nature of the loansm, inflated the balance sheets and distorted the accounting ratios that were used in analysing the financial health of the banks. The answer, drawing heavily on the experience of the swap network, came in the form of the Currency Swaps.

In a Currency Swap, the notional amount of the trade was designated as off-balance-sheet, and payment of interest by each party was made contingent upon the other party's performance. With the principal amount of the Currency Swap no longer subject to the counterparty default risk, it was possible to classify swaps as off-balance-sheet instruments. Incorporating the cash-flow structure of the Back-to-back Loans into the legal notion of the contingency took the Currency Swap one step further from being a concept and made it a financial instrument as well.

The early Currency Swap deals were not disclosed to the public because of the proprietary nature. In 1981, the World Bank and IBM announced a Currency Swap deal which was well publicised and gave an impetus to the swap market.

Interest Rate Swaps

Building on the two important features of the Currency Swaps - contingency of the payments and the off-balance-sheet nature of the transaction - international banks created and then expanded the idea of the IRS market. Although IRS were created based on the concept of the Currency Swaps, a different set of circumstances brought about their explosion. The Euromarket, where the Eurodollars are traded, is the birthplace of the IRS.

Euromarket

Beginning in the '50s, the Socialist governments began to deposit their hard currency holdings in European banks because they were concerned that, in the Cold War environment of the '50s, the US would freeze their assets. However these deposits were not enough to create and sustain a large market. It was the Dollar holdings of the US corporations that created the Euromarket, as it was against the outflow of the US funds that the Interest Equalisation Tax Act (IETA) was passed (IETA created a strong incentive for the US investors to keep their Dollars in Europe). The Euromarket was

created because of the higher rates of return in Europe and it was sustained due to the tax differentials that could not be arbitraged because of the sovereignty. Euromarket was a concept of the laissez-faire. Transactions in this market are mostly wholesale in the nature and the interest rates are heavily influenced by the availability of, and demand for the funds. Loans in this market are basically variable in nature and if necessary, on a roll over basis with fixed maturities and non-prepayment clauses.

As the '80s began, interest rates in the US market reached unprecedented high levels and this trend split into the rate-sensitive Euromarket. So the corporations sought hedging vehicles against interest rate fluctuations. This was the starting point of the IRS. Here, the parties agree to the exchange of the interest payments calculated on a notional amount. However, interest payments in the IRS are based on the different modes of the same currency.

Thus, we can see that IRS or more precisely the swap market was born as insurance market directly related to the Euromarket loans. This insurance market fuelled and sustained the swap market. Swaps became insurance vehicle of the borrowers because their premiums were borrowed.

Secondary Factors in the Development of the Swap Market

As international barriers to financial markets began to disappear, swap dealers were able to switch between different indexes and different markets. By *arbitraging* capital and credit markets, they were able to borrow at the best index available and then swap to the desired index.

Heavy borrowing by the US government and government agencies in the '80s played a major role in the development of the swap market. Borrowing at the floating rates and swapping to the fixed rates met the needs of the corporations and in effect added to the depth and the liquidity of the swap market.

Taking a view on the future direction of the interest rates, swaps can be proved to very attractive instrument, and under a variety of yield curve conditions, they are among the cheapest to transact. Speculative trading of the swaps added enormously to the depth and liquidity of the market.

9. A BRIEF LOOK AT THE GLOBAL MARKETS

After the first swap in 1981, the interest rate swap market has exploded. In 1998, the annual turnover, in terms of notional principal, is around $32 trillion. The market is regulated by the local level exchanges, which together form the International Swap and Derivatives Association (ISDA). ISDA has set for the guidelines and the regulatory framework, and most of the local regulations are based on these. ISDA has about 104 members, and it publishes regular statistics about the markets. It also holds conferences and spreads awareness of the instruments. ISDA has contributed significantly to the standardization and documentation of swaps and consequently, their acceptance in financial markets. The ISDA Master Document is used to record swaps.

Most of the IRS deals are pegged to the six month LIBOR. The quotations for the fixed rate are normally in terms of basis points over the US T-bill rates. Most swaps are of duration of 2 to 6 years, with swaps as long as 15 years also having been recorded. IRS are mature products, and there are widely accepted theories and research on their pricing and various varieties. Most players have adequate systems and exposure limits to internally control their risk management. New forms of swaps keep on emerging, and then, theories for pricing them also follow. Gradually small banks and corporates have also realised the usefulness of swaps as hedging instruments, and their use is still increasing. For the last 5 years, the turnover for IRS has been increasing by about 25-30% annually.

It must also be noted that more than 80% of the deals are speculative in nature, and this will continue to be the case in the future in world markets. Swaps in currencies other than USD have gradually come of age, and now, form substantial part of the total swap market.

PRESENT SCENARIO OF THE INDIAN MARKET

9.1 Genesis of the Interest Rate Swaps in India

Interest rates in India have been RBI determined for decades now. In the past five years, we have seen this situation changing. Gradually, India is moving towards a market determined interest rate regime. RBI is gradually freeing interest rates, and this has forced banks to manage risks on their own. Moreover, the Indian companies were used to the earlier easy go approach and surety in interest rates that they can borrow on. But now, corporates have a plethora of rates at which they can borrow. They have the option of loans linked to fixed or floating rates. Thus, Indian companies have to be self sufficient with regards to management of financial uncertainties, like firms are elsewhere in the world. With all this deregulation and integration with global practices, there was a felt need for instruments to hedge against various risks. Derivatives for the money market were the next logical step in the process. This is exactly what RBI has done.
The RBI Governor's Statement on 'Mid-Term Review of Monetary and Credit Policy for 1998-99' announced on **October 30, 1998**, indicated that

to further deepening the money market and to enable banks, primary dealers (PDs) and all-India financial institutions (FIs) to hedge interest risks, the RBI had decided to create an environment that would favour the introduction of Interest Rate Swaps.

Accordingly, on **July 7, 1999** RBI issued final guidelines to introduce IRS and Forward Rate Agreements (FRAs). The players are allowed to practice IRS/FRAs as a product for their own balance sheet management and for market making purposes.

The RBI has been criticised for being hasty in introducing such interest rate derivatives. It was said that our debt market is not mature enough to incorporate and deal with such products. Though the Indian debt market has not been properly developed, blaming the RBI move does not seem to be proper because these products will have to be introduced sooner or later and the present time appears to be as good a time as any other. Moreover, this move may also help in quickening the development of a mature debt and money market.

9.2 The Legal Framework: RBI Guidelines (Summary)

A brief summary of RBI guidelines regarding IRS issued on July 7, 1999 follows:

Interest rate swap refers to a financial contract between two parties exchanging a stream of interest payments for a notional principal amount on multiple occasions during a specified period.

Forward rate agreement (FRA) is being defined as the same on settlement date for a specified period from start date to maturity date.

The players: Scheduled commercial banks excluding regional rural banks, primary dealers (PDs) and all-India financial institutions have been allowed to undertake IRS as a product of their own asset liability management and market-making purposes.

Types: Banks/PDs/FIs undertake different types of plain vanilla FRAs/IRS for interest rate risks arising on account of lendings or borrowings made at fixed or variable interest rates. However, swaps having explicit/implicit option features like caps, floors or collars are not permitted.

Benchmark rate: The players can use any *domestic money or debt market* rates as reference rate for entering into FRA/IRS, provided methodology of computing the rate is objective, transparent and mutually acceptable to counter-parties. The reason stated for the same is that the benchmark rate is expected to evolve on its own in the market.

Size of the notional principal amount: There will be no limit on the maximum or minimum size of the notional principal amounts of FRAs/IRS or the tenor of the IRS/FRAs. Regarding the exposure limits the banks, FIs and PDs have to arrive at the credit equivalent amount for the purpose of reckoning exposure to a counter-party.

Exposure: The exposure should be within the sub limits and this should be fixed for the FRAs/IRS to corporates/FIs, banks/PDs by the participants concerned. In case of the banks and the FIs, the credit exposure should be within the single/group borrower limits as prescribed by the RBI.

9.3 Trends in Indian Markets

Before coming to the actual trends in the market, let us look at the players. Most of the active participation is by foreign banks, followed by Indian banks, corporates and finally, FI's. The absence of nationalised banks from the IRS scene is noteworthy.

IRS today can be used by corporates only for an actual hedging exercise, and it has to have board permission. Moreover, the deal would be within the exposure limits of that firm for the bank with which it is dealing. These measures are to ensure that corporates do not undertake speculative activities, and start dealing only after they have proper risk-management systems in place.

On the *first day* of trading, more than 30 deals were recorded, worth over Rs, 600 crores in notional principal terms. Rs. 500 crores of this was accounted for by corporate deals. The rush was because the European and private banks wanted to be a part of the history, dealing on first day, rather than actual hedging. It has also been reported that some deals were circular between

three players, with no real effect in any players' position. No deal was stuck for more than a year's tenor.

Since the first day, there have been almost no deals, and the markets are cold. The *reasons* for this are many. At the short term level, almost all the players expect the interest rates to go down in the next few months. This means that there are no conflicting views among players about interest rates, and so IRS deals are not very tempting. Again, there are very few floating rate loans around. These and other fundamental reasons have been discussed in the next section.

In spite of these, there are many underlying *reasons for going for IRS*. Today, the major financial intermediaries' viz. Indian banks, foreign banks, financial instutions, and corporates have radically different sets of asset-liability structures. Thus for ALM alone, IRS are a good options. For example, the FI's have much of their liabilities as bullet repayment bonds, and the bulk of their assets by way of installment repayment loans. Thus, chances are that their liabilities portfolio is longer thatn their assets portfolio. Commercial banks, on the other hand, have bulk of thier liability portfolio in relatively short-term maturities, and assets are at longer maturities with fixed interest rates. Thus, banks and FI's alone can enter in a lot of mutually beneficial deals.

Corporates would also like to hedge their interest rate risks, and convert their fixed rate loans to floating rates, now that the options are available.

However, their needs would be medium term in nature (2 to 8 years), and as yet there are no takers for these long maturities.

The market is only about 2 months old now, and is yet to evolve. The likely problems in its evolution and the future are discussed in the following sections.

10. OBSTACLES TO DEVELOPMENT OF IRS IN INDIA

When we talk of IRS, we are actually referring to derivatives based on underlying instruments, which are linked to interest rates. Now, for a good derivatives market for any underlying instrument, the market for that instrument should be well developed, mature and competitive. However, in India, we do not have a very mature and competitive money market, especially the term money market and the floating rate loan market. Thus, the derivatives based on these instruments are bound to be far and few. Moreover, India does not even have a very good inter-bank rate measure for different parties, which are acceptable to all parties. Then, risk management systems are almost non-existent in most corporate. These and other obstacles in development of the IRS market have been discussed in greater detail below.

- Non-availability of an acceptable Benchmark rate
- Lack of A Developed Term-Money Market
- Lack Of Active Market for Floating Rate Loans

- Non-availability of a variety of acceptable Yield Curves
- Participants’ Inertia
- Lack Of Awareness
- Reluctance on Part of Small Corporates and Small Banks

11. CONCLUSION

The Indian money market was controlled by tight controls and administered interest rate structure up to late 1980s. However, following the policy measures during the early 1990s the money market has become broad based with the enlargement of participants and instruments, and change in liquidated conditions is quickly transmitted. The reform measures have greatly contributed to the development of inter-linkages; increasing liquidity across various segments of the money market. An enabling environment has thus been created whereby the monetary authority can gradually switch away from the direct instruments of control to indirect methods like open market operation, including repos. The market determined interest rate is gradually emerging as an important intermediate target with the ultimate objective of achieving price stability and economic growth.

Radical measures are taken to transform the Indian money market from a closed, inward and narrow domestic space to open, outward-looking and international, can have competitive and efficient operation for optimal gain. Interest rates have been freed at certain level of bank deposits and lending, foreign financial institutions have been allowed to invest in domestic market. Securities market has been reorganised with the setting up of new institutions (like DFI and Primary Dealers), introduction of new instruments (like CP, CD) and new organisation (like NSE).

Liberalisation and globalisation of money market has brought many distortions without necessarily increasing the efficiency of institutions and allocation of resources. Credit does not reach the productive sector,

whether agriculture or industry, whereas banks and financial institution are flush with funds. In our dualistic economy where the rural sector dominates, money market reform should start from reorganising rural financial structure so that funds can sufficiently flow to the wider activities. In doing this government has important role of regulation and redirection of financial institutions under liberalisation.

12. **Suggestions**

Few suggestions relevant to the development of money market in India are enumerated below:

(i) There should be a mechanism to make the call range bound which may reduce uncertainty and provide confidence to the bankers for lending/borrowing. In the context, it is emphasized that Repos and Reverse Repos conducted by RBI has the potential to set the floor and ceiling in the call money market.

(ii) Besides, Repo mechanism, call money market, needs to be supplemented by Open Market Operation (OMO). OMO can influence interest rate as well as volumes in the market.

(iii) Non-bank segment should be brought under the same regulation on par with the banks early as possible so that level playing field is created.

(iv) Transparency should be ensured in money market transaction. There should be screen based trading with two way quotes for each money market instruments.

(v) The lock-in period of CDs and CPs should be completely removed in a phase manner.

(vi) Retailing of government papers should be encouraged. The primary dealers can play a role in this context.

(vii) Currently FIIs are allowed in government dated securities in primary as well as secondary market. More FII participation could be encouraged.

(viii) Money Market Mutual Funds should be set up by various banks and institutions. This would increase the retail participation in the market.

BIBLIOGRAPHY

	SOURCE	AUTHOR
1.	Interest Rate Swaps	Nasser Saber
2.	Emerging Money Market	R.S. Aggrawal
3.	Indian Money Market Structure, operation and Development	M.S. Gopalan
4.	Financial Management	Prasanna Chandra
5.	www.stcionline.com	
6.	www.rbi.org.in	
7.	Google	