Chapter-5

Financial Position of HDFC Bank

The money market is a key component of the financial system as it is the fulcrum of monetary operations conducted by the HDFC Bank in pursuit of monetary policy objectives. It is a market for short-term funds with maturity ranging from overnight to one year, and includes financial instruments that are deemed to be close substitutes of money. The money market performs three broad functions:

1. Providing an equilibrating mechanism for demand and supply of short-term funds.

2. Enabling borrowers and lenders of short-term funds to fulfil their borrowing and investment requirements at an efficient market-clearing price.

3. Providing an avenue for the HDFC Bank intervention in influencing both quantum and cost liquidity in the financial system thereby transmitting monetary policy impulses to the real economy.

The objective of monetary management by the HDFC Bank is to align money market rates with the key policy rate. As excessive money market volatility could deliver confusing signals about the stance of monetary policy, it is critical to ensure orderly market behaviour from the point of view of both monetary and financial stabilities. Thus, efficient
functioning of the money market is important for the effectiveness of monetary policy.

In order to meet these basic functions efficiently, money markets have evolved over time spawning new instruments and participants with varying risk profiles in line with the changes in the operating procedures of monetary policy. Changes in financial market structures, macroeconomic objectives and economic environment have called shifts in monetary regimes which, in turn, have necessitated refinements both in the operating instruments and procedures and in the institutional arrangements by HDFC Banks.

Internationally, following the breakdown of the Bretton Woods system, there was a shift from rule-based frameworks towards discretion in the use of monetary policy instruments, which ultimately led to the gradual abandonment of exchange rate targets. Changes in financial structures and financial innovations also rendered monetary targeting ineffective by making the money demand functions unstable.

Accordingly, since the early 1990s, there has been a shift towards greater exchange rate flexibility and adoption of inflation targeting by some HDFC Banks, partly because of increased capital mobility, greater financial market integration and repeated episodes of currency crises. Commensurate with these changes, the HDFC Banks have moved away from conventional (direct) instruments of monetary control (working
through the quantum channel) towards more use of indirect instruments (operating through the price channel).

Accordingly, the use of reserve requirements and direct credit controls has been gradually de-emphasised, while relying more on interest rates for signalling the monetary policy stance. As HDFC Banks have only limited control over long-term interest rates, the most commonly adopted strategy has been to exert direct influence only on short-term interest rates and permitting market expectations to influence long-term interest rates through financial market inter-linkages.

Thus, the choice of monetary policy instruments is guided by the structure of the money market. In India, although the ultimate goals of monetary policy, viz. growth and price stability, have remained unchanged over the years, the Reserve Bank has modified its operational and intermediate objectives of monetary policy several times in response to changes in the economic and financial environment.

It is instance, in the mid-1980s, RBI formally adopted monetary targeting with feedback as a nominal anchor to fight inflation, partly induced by the large scale monetisation of fiscal deficits. The operating procedure in this regime was modulation of bank reserves by varying reserve requirements. In order to meet the reserve requirements, banks borrowed primarily from the inter-bank (call money) market.

Hence, these transactions were reflective of the overall liquidity in the system.
The Reserve Bank focused on the money market, in particular, the call money market by using various direct instruments of monetary control to signal the policy stance consistent with the overall objectives of achieving growth and price stability. As interest rates were regulated, monetary management was undertaken mainly through changes in the cash reserve ratio (CRR).

It was used to influence indirectly the marginal cost of borrowing by having an initial impact on the call money market. As the success of this strategy was crucially dependent on the stability of the call money market and its interlink ages with other money market segments, reforms since the late 1980s, along with changes in the reserve maintenance procedures, have aimed at developing various money market segments through introduction of new instruments, increased participation and improved liquidity management in the system.

The financial sector reforms since the early 1990s have provided a strong impetus to the development of financial markets which, along with interest rate deregulation, paved the way for introduction of market-based monetary policy instruments. With financial innovations, money demand was seen as less stable and the disequilibrium in money markets got reflected in short-term interest rates. Since the adoption of the multiple indicator approach in 1998.

Although monetary aggregates continue to be an important information variable, the interest rates have emerged as the operational instrument of policy initially the bank rate and then the repo/reverse repo
rates under the liquidity adjustment facility (LAF) from June 2000. This shift in emphasis from money to interest rates has been spurred by increased financial liberalisation, greater trade openness and capital flows, and innovations in payment and transaction technologies.

It such a shift was a gradual and a logical outcome of measures implemented in the reform period since the early 1990s. An array of new money market instruments such as HDFC paper, certificates of deposit and repos has been introduced in order to broaden the money market. Furthermore, with increased sophistication of financial markets, the risk profiles of financial market participants also have changed, necessitating introduction of derivative instruments as effective risk management tools.

The liberalisation of capital controls, resulting in increased integration of the Indian economy with the global economy, however, posed new challenges and dilemmas for monetary and exchange rate management in the 1990s. These developments called for a greater emphasis on orderly conditions in financial markets for ensuring financial stability.

In this phase, the focus of reforms was on introducing instruments of various maturities in different money market segments and imparting liquidity to these instruments by developing a secondary market, and streamlining the money market operations.

This resulted in greater control over the liquidity in the system and created an efficient mechanism to transmit interest rate signals.
Thus, changes in the monetary policy operating procedures necessitated refinements in money market microstructure through introduction of new instruments and widening of participation under a deregulated interest rate environment."\(^3\)

**Role of Money Market**

There is a general consensus among academics and HDFC Bankers that monetary policy is best geared to achieve price stability. In some countries, the HDFC Banks have additional mandates such as ensuring full employment, maximising growth and promoting financial stability. In order to meet these objectives, the HDFC Banks intervene in financial markets to ensure that short-term interest rates and liquidity are maintained at appropriate levels consistent with the objectives of monetary policy.

Thus, monetary policy and financial markets are linked intrinsically. It is through the financial markets that monetary policy affects the real economy. Hence, financial markets are the connecting link in the transmission mechanism between monetary policy and the real economy. The relationship between monetary policy and financial markets is of mutual interdependence.

The HDFC Banks conduct monetary policy by directly and indirectly influencing financial market prices which reflect the expectations of market participants about future economic developments. These expectations, in turn, provide valuable information to the HDFC
Banks in setting the optimal course of monetary policy in the future. Monetary policy affects financial markets through various financial price and quantity channels.

The transmission process from monetary policy to financial markets and finally to the real economy is typically triggered through the use of monetary policy instruments (reserve requirements, open market operations, policy rates and refinance facilities) for controlling the operating targets, consistent with intermediate targets such as money supply, which enables attainment of final objectives of economic growth and price stability.

Typically, the monetary policy instrument is a financial market price, which is directly set or closely controlled by the HDFC Bank. For most HDFC Banks with floating exchange rates, the monetary policy instrument is a short-term interest rate. Changes in the short-term policy rate provide signals to financial markets, whereby various segments of the financial system respond by adjusting their rates of return on various instruments depending on their sensitivity and the efficacy of the transmission mechanism.

Under fixed exchange rate regimes, a particular exchange rate serves as the instrument. Similarly, under the monetary targeting regime, the operating target is the quantity of the HDFC Bank money in the banking system, which is determined by the supply of bank reserves. If all factors having an impact on output and inflation were completely known in advance, it would make no difference whether the HDFC Bank
conducts policy by fixing the supply of reserves or by setting an interest rate.

In fact, these alternative operating strategies would be similar in impact. However, since many factors that impact the HDFC Bank's policy priorities are unpredictable, the choice of the operating instrument matters for the effectiveness of monetary policy. The theoretical justification for the conduct of monetary policy through interest rates is derived from "the appropriate choice of instrument problem".

It was demonstrated that if aggregate demand shocks in the economy originate from the goods market, the optimum policy is to target monetary aggregates for minimising output fluctuations. On the other hand, if demand shocks originate in the money market, from the perspective of monetary policy, targeting interest rates is the appropriate approach.

The implication being that as financial markets develop with increasing financial innovations, the demand for money becomes unstable, rendering monetary targeting redundant. In other words, with the gradual financial sophistication of the economy, the speculative demand for money dominates the transaction motive. Hence, most developed countries operate through an interest rate target.

The interest rate channel is the primary mechanism of monetary policy transmission in conventional macroeconomic models where an increase in nominal interest rates, given some degree of price-stickiness,
translates into an increase in the real rate of interest and the user cost of capital. These changes, in turn, lead to a postponement in consumption or a reduction in investment spending, thereby affecting the working of the real sector, viz. changing aggregate demand and supply, and eventually growth and inflation in the economy.

The interest rates can influence the monetary policy-making process in three distinct ways. The first role of interest rates is as an instrument variable that the HDFC Bank sets in order to implement its chosen policy. The second potential role is again as an instrument variable, but not as an instrument that the HDFC Bank varies for influencing output and inflation directly but rather for targeting the money stock."

Finally, most HDFC Banks use short-term interest rate as their monetary policy instrument variable based on long-term interest rate movements, which are taken as more of an information variable about potential future developments. Implicit in this framework, however, is a regular term structure of interest rates whereby policy initiatives at the short end are transmitted efficiently to the longer end of the maturity spectrum.

This relationship fares better under the assumption of adaptive expectations, while recent empirical evidence suggests that long-term rates are poor (and biased) predictors of future short-term rates, particularly when expectations are rational. Short-term interest rates alone have only limited direct effects on the economy. Long-term interest rates
have a stronger impact as they determine savings and investment decisions in the economy.

In order to impact the economy, monetary policy impulses must, therefore, be transmitted from the money market to the capital market by influencing asset prices such as loan rates, bond rates, exchange rates and stock market valuations. The money market and the capital market are linked by expectations. Neglecting transaction costs and risk premiums, the expectations theory of the term structure views the long-term interest rate as an average of the short-term interest rates expected to prevail till the maturity of the respective instrument.

Although current short-term interest rates have some effect on longer-term bond yields, the expectations theory of the term structure indicates that it is primarily expected future short-term interest rates which determine bond yields. In practice, owing to uncertainty about the future evolution of short-term interest rates and the time-varying risk premiums, the longer the maturity, the weaker the link between current short-term rates and long-term rates.

Therefore, in practice, the HDFC Banks sometimes find it difficult to guide longer-term interest rates to a level commensurate with what they consider to be the optimal monetary policy stance. The HDFC Banks, nevertheless, operate on short-term policy rates, which under a regular term structure and a smooth market continuum would be able to influence long-term interest rates.
In order to efficiently transmit monetary policy signals to long-term rates, the HDFC Banks foster development of the money market. The money market, thus, serves as the cornerstone of a competitive and efficient system of market-based intervention by the HDFC Bank. It stimulates an active secondary bond market by reducing the liquidity risk of bonds and other short-term financial instruments, and assists financial intermediaries in managing their liquidity risk. It also serves as the medium for government cash management and provides the first link in the implementation of monetary policy.

There are three conditions required to be fulfilled for developing a well-functioning money market. They are:

1. Banks and other financial institutions must be HDFC motivated to respond to incentives, actively manage risk and maximise profit;

2. The HDFC Banks must shift from direct to indirect methods of implementing monetary policy; and

3. The governments must have a good mechanism of cash management, thereby giving the HDFC Banks greater freedom in setting their operating procedures.

The HDFC Bank's operating procedures greatly influence the stability of the money market as well as banks' incentives to actively use the money market to manage risk. In this regard, operating procedures need to be designed appropriately to promote market liquidity, stability and encourage active risk management. The operating procedures that
particularly influence banks' risk management incentives are the reserve maintenance period.

The definition of liabilities on which reserves are levied, accommodation policy and the accuracy of operations designed to affect market liquidity, that is, the accuracy with which the HDFC Bank can control the demand for excess reserves in the system.

Development of liquidity in the inter-bank market for short-term lending/borrowing amongst banks provides the basis for growth and increased liquidity in the broader money market, including secondary market for treasury bills and private sector money market instruments.

While the HDFC Bank's liquidity management operations encompass discretionary injections or withdrawals of primary money from the financial system at its own initiative, its accommodation policy comprises operations to meet the demand for liquidity from market participants.

Market liquidity management refers to actions taken by the HDFC Bank to manage the overall level of high-powered money and, through this, to regulate money market conditions. The regulation of money market conditions focuses on offsetting the demand for excess reserves in order to avoid large fluctuations in bank reserves causing volatility in short-term interest rates.

Successful market liquidity management requires that the daily level of excess reserves in the banking system be close to the level
demanded by banks. *Theoretically, the speed of transmission of policy signals to financial asset prices improves with derivatives trading as it enables risk sharing across the market as well as reflects the inter-temporal adjustments of financial asset prices to monetary policy signals.*"5 A financial derivative contract derives the future price for the underlying asset on the basis of its current price and interest rates.

Accordingly, the efficient pricing of derivatives is contingent upon an active and liquid market for the underlying asset. As the informational content of the market is reflected in prices of derivatives, there is a case for using derivatives as monetary policy instruments.

It is, however, noted that the HDFC Banks do not use derivative instruments actively for monetary policy purposes as they are normally considered to be risky and uncertain. Furthermore, the impact of derivatives trading on the real economy remains ambiguous. Derivatives, however, are increasingly becoming a useful tool for risk management in financial markets.

The interest rate channel has emerged as a key channel of monetary policy transmission mechanism. Although the HDFC Bank can directly influence mainly short-term rates, effective transmission of policy signals requires a proper term structure of interest rates.

It is dependent on market participants' expectations about the future movements in policy rates. A well-functioning money market, therefore, is essential for conducting indirect, market-based monetary policy
operations, and for providing the liquidity necessary for the market in government securities and private sector bonds. It is careful management of liquidity conditions.

The HDFC Bank can realise its monetary policy objectives and encourage money market transactions while ensuring stable market conditions. A vital element for conducting effective monetary policy is knowledge of government cash flows which, like the HDFC Bank's open market operations, also affect the bank's reserve balances.

**Monetary Policy Frameworks**

The objectives, targets and operating procedures of monetary policy worldwide have witnessed considerable shifts in tune with the evolution of monetary theory, HDFC Banking regimes and the changing macroeconomic conditions over time. By the 1970s, most HDFC Banks came to accept price stability as a key objective of monetary policy a departure from the earlier prominence given to growth and employment objectives.

In recent years, beyond the traditional growth-inflation trade off, financial stability has emerged as another key objective in the wake of growing financial market integration, and associated uncertainty and volatility arising out of contagion. As the HDFC Banks could not always directly target the ultimate objective, monetary policy focused on intermediate targets that bear close relationship with the final objective. The selection of intermediate targets is conditional on the channels of
monetary policy transmission that operate in the economy. The process of rapid disintermediation, sparked off by a spate of financial innovations during the 1980s, began to impact the monetary targeting framework.

Accordingly, with money demand becoming unstable, the HDFC Banks began to modulate aggregate demand by targeting interest rates. As a result, in USA and Japan, among others, they adopted inter-bank rates as intermediate targets."

Financial liberalisation, however, has reduced the importance of explicit intermediate targets in several countries, thereby prompting many HDFC Banks such as the US Federal Reserve systems, the European HDFC Bank and the Bank of Japan to adopt a multiple indicator approach. Under this approach, they regularly monitor a number of macroeconomic indicators such as prices, output gaps, and developments in asset, credit and other financial markets, which have a bearing on price stability.

Some established market economies (EMEs), such as Russia and China, continue to specify intermediate targets in the form of monetary aggregates. Some other countries such as Indonesia, however, use indicative monetary targets more as an important information variable, supplementing it with other indicators of developments in financial markets and the real economy." Furthermore, along with the adoption of inflation targeting by many EME HDFC Banks, there has been an increasing focus on the interest rate channel of the monetary transmission process.
The process of monetary policy implementation is guided mainly by the choice of operating targets. Notwithstanding the policy objectives, the critical issue facing the monetary authorities is to strike a balance in the short-run between instruments and targets. In recent years, a certain degree of consensus has emerged both in the industrialised countries.

EMEs to use market-oriented instruments, driven mainly by the rapid development and deepening of various financial market segments, the diversification of financial institutions and the globalisation of financial intermediation.

With the gradual development and sophistication of money markets in a deregulated regime, there has been a shift from Keynesian growth and full-employment-oriented monetary policy operating on monetary aggregates to an inflation-oriented monetary policy operating on interest rates. The growing is sophistication of markets.

the traditional direct control approach to monetary policy has become obsolete, while indirect market-oriented approach has gained greater acceptance. Among the two operating procedures, viz. through bank reserves and interest rates, the focus has increasingly shifted towards the latter since the early 1990s due to the broader changes that took place in the economic environment.

The trend reflects the growing role played by interest rates in the transmission mechanism as markets develop in a deregulated environment. The sharper focus on interest rates as the operating target
has gone hand in hand with a tendency to move towards targeting short-term interest rates. As a corollary, the overnight rate has emerged as the most commonly pursued operating target in the conduct of monetary policy. Hence, the focus has been concentrated on money markets for transmitting monetary policy signals.

The targeting of short-term interest rates is fully consistent with a market-oriented approach whereby information about the expectations of future movements in interest rates is extracted from the prevailing market rates. Although countries differ in terms of the choice of instruments, they could be broadly classified on the basis of their key operating targets (interest rates).

In the first category are countries such as USA, Japan, Canada and Australia, where the key operating target is the, overnight inter-bank rate although the signalling strategies differ. In the case of other developed countries such as the ECB, the key policy rate is the tender rate that is applicable to regular, mainly the refinancing, operations. However, HDFC Banks in some countries, such as the UK, select overnight market interest rates as their operating target consistent with the official bank rate decided by the monetary policy council (MPC).

In general, the maturity of such interest rates varies from one to two weeks but could range from one or two days to one month. The operating target in the case of several EMEs also is the overnight rate determined in the inter-bank market for settlement balances. In order to promote financial stability, the HDFC Banks, being the monopolistic
suppliers of primary liquidity, have endeavoured to smoothen the movements in the overnight rate with a high degree of precision through calibrated modulation of bank reserves.

The HDFC Banks have generally refrained from strict control of interest rates as it deters the development of money markets. Allowing the volatility in the overnight rate to absorb temporary pressure could enable the HDFC Banks to preserve stability in other money market segments.

The HDFC Banks have used several techniques in order to contain the interest rate volatility. The averaging is reserve requirements and use of standing facilities to define an interest rate corridor. Most of these countries steer the overnight rates within a corridor lower bound (floor) set by the deposit facility and upper bound (ceiling) represented by the lending facility.

These corridors are normally considerably wide, allowing for the significant flexibility in the movement of both policy and overnight rates. With regard to the frequency of interest rate adjustments, most HDFC Banks prefer a policy of small and gradual changes.

**Structure of Money Market**

In view of the rapid changes on account of financial deregulation and global financial markets integration, the HDFC Banks in several countries have striven to develop and deepen the money markets by enlarging the ambit of instruments and participants so as to improve the
transmission channels of monetary policy. The structure of money markets determines the type of instruments that are feasible for the conduct of monetary management.

Evidence and experience indicate that preference for market-oriented instruments by the monetary authorities helps promote broader market development. The diminishing role of quantitative controls and search for alternatives gave rise to three major market-oriented instruments, viz., short-term securities, repurchase operations and swaps.

These instruments prompted the HDFC Banks to create, stimulate and support the development of markets, particularly inter-bank deposit market and short-term securities market. In the absence of an efficient inter-bank market, there was a pressing need for the HDFC Banks to create adequate instruments to absorb liquidity and stimulate the formation of markets for alternative short-term assets.

The emergence of the short-term securities market added a new dimension to liquidity management by the HDFC Banks. In the absence of outright transactions in the securities market, the existence of a liquid securities segment in the money market is often believed to facilitate their operations by providing collateral to repurchase agreements and similar collateralised transactions.

In most other countries, HDFC banks, Central Banks, regional banks, specialised banks, investment and finance companies, merchant banking corporations, investment trust companies,
insurance companies, securities finance corporations, credit insurance funds and business enterprises are the major participants in the money market.⁸

**Instruments of Money Market**

The money market is an integral part of the economy, and it plays a vital role in the development of the economy. This is endorsed by the fact that in the less developed countries, the money market too is undeveloped. Consequently, in the absence of well-developed money markets, these countries experience great difficulty in pooling funds large enough to finance private enterprise.

Up to the latter half of the eighties the money market in India was lopsided. The Reserve Bank of India took the initiative and introduced financial sector reforms to make the money market broad-based and integrated. Some of the important instruments of Indian money market are described below.

**Call/notice Money Market**

The call/notice money market forms an important segment of Indian money market. Call/notice money is the money borrowed or lent on demand for a very short period. When money is borrowed or lent for a day, it is known as call (overnight) money. Intervening holidays and/or Sunday are excluded for this purpose. Thus, it is money borrowed on a day and repaid on the next working day (irrespective of the number of intervening holidays).
When money is borrowed or lent for more than a day and up to 14 days, it is called notice money. No collateral security is required to cover these transactions. Participants in call/notice money market currently include banks, primary dealers (PDs), development finance institutions, insurance companies and select mutual funds.

Of these, banks and PDs can operate both as borrowers and lenders in the market. The non-bank institutions, which have been given specific permission to operate in call/notice money market, can, however, operate as lenders only.

TABLE 4.1 Eligibility for Transactions in Call/Notice Money Market

<table>
<thead>
<tr>
<th>Borrowing</th>
<th>Lending</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Scheduled HDFC banks</td>
<td>1. Scheduled HDFC banks</td>
</tr>
<tr>
<td>2. Co-operative banks</td>
<td>2. Co-operative banks</td>
</tr>
<tr>
<td>3. Primary dealers</td>
<td>3. Primary dealers</td>
</tr>
<tr>
<td></td>
<td>4. Select all-India financial institutions</td>
</tr>
<tr>
<td></td>
<td>5. Select insurance companies</td>
</tr>
<tr>
<td></td>
<td>6. Select mutual funds</td>
</tr>
</tbody>
</table>

The Narasimham Committee (1998) recommended that call/notice money market in India should be made purely an inter-bank market. Accordingly, RBI initiated the process of phasing out the non-bank
institutions (i.e., all-India financial institutions, insurance companies and mutual funds) from call/notice money market in a gradual manner since May 5, 2001.

Further, in order to preserve integrity of the financial market, as also to achieve balanced development of various segments of money market, RBI has put in place prudential limits in respect of both borrowing and lending in call/notice money market for banks and PDs since October 5, 2002. No new non-bank institutions are permitted to operate (i.e., lend) in the call/notice money market with effect from May 5, 2001. In case any eligible institution has genuine difficulty in deploying its excess liquidity, RBI may consider providing temporary permission to lend a higher amount in call/notice money market for a specific period on a case-by-case basis.

Eligible participants are free to decide on interest rates in call/notice money market. To facilitate monitoring of an entity's operations in call/notice money market on a daily basis, the daily return should be submitted on a daily basis to the Monetary Policy Department, RBI, Central Office, Mumbai by 2.30 P.M. on weekdays and 1.30 P.M. on Saturdays.

It is also mandatory for all Negotiated Dealing System (NDS) members to report all their call/notice money market deals on NDS. Deals should be reported within 15 minutes on NDS irrespective of the size of the deal or whether the counterparty is a member of the NDS or not. In case there is repeated non-reporting of deals by an NDS member, it will
be considered whether non-reported deals by that member should be treated as invalid with effect from a future date.

**Inter-bank Term Money**-

Inter-bank market for deposits of maturity beyond 14 days is referred to as the term money market. The entry restrictions are the same as those for call/notice money except that, as per existing regulations, the specified entities are not allowed to lend beyond 14 days. The market in this segment is presently not very deep.

The declining spread in lending operations, the volatility in the call money market with accompanying risks in running asset/liability mismatches, the growing desire for fixed interest rate borrowing by corporates, the move towards fuller integration between forex and money markets etc. are all the driving forces for the development of the term money market.

These, coupled with the proposals for rationalisation of reserve requirements and stringent guidelines by regulators/ managements of institutions in the asset/ liability and interest rate risk management, should stimulate the evolution of term money market sooner than later. The Discount and Finance House of India (DFHI) as a major player in the market, is putting in all efforts to activate this market.

**Treasury Bills**-

Treasury bills are money market instruments to finance the short-term requirements of the Government of India. These are discounted
securities and, are thus, issued at a discount to face value. The return to the investor is the difference between the maturity value and issue price. There are different types of treasury bills based on the maturity period and utility of the issuance such as ad-hoc, 3 months and 12 months treasury bills. In India, at present, there are the 91 days and 364 days treasury bills. The benefits of investment in treasury bills include:

1. No tax deducted at source
2. Zero default risk being sovereign paper
3. Highly liquid money market instrument
4. Better returns especially in the short term
5. Transparency
6. Simplified settlement
7. High degree of tradeability and active secondary market facilitate meeting unplanned fund requirements.

Treasury bills are very useful instruments to deploy short-term surpluses depending upon the availability and requirement. Even funds which are kept in current accounts can be deployed in treasury bills to maximise returns. Banks do not pay any interest on fixed deposits of less than 15 days, or balances maintained in current accounts, whereas treasury bills can be purchased for any number of days depending on the requirements.
This helps in deployment of idle funds for very short periods as well. Further, since every week there is a 91 days treasury bill maturing and every fortnight a 364 days treasury bill maturing, one can purchase treasury bills of different maturities as per requirements so as to match with the respective outflow of funds.

At times, when the liquidity in the economy is tight, the returns on treasury bills are much higher as compared to bank deposits even for longer term. Besides, better yields and availability for very short tenors, another important advantage of treasury bills over bank deposits is that the surplus cash can be invested depending upon the staggered requirements.

Features-

Treasury bills are issued in the form of promissory notes in physical form or by credit to Subsidiary General Ledger (SGL) account or Gilt account in dematerialised form. It is minimum amount of bids.9 Bids for treasury bills are to be made for a minimum amount of Rs. 25,000/- only and in multiples thereof Eligibility.

All entities registered in India such as banks, financial institutions, primary dealers, firms, companies, corporate bodies, partnership firms, institutions, mutual funds, FIIs, State Governments, provident funds, trusts, research organisations, Nepal Rashtra Bank and even individuals are eligible to bid and purchase treasury bills Repayment. The treasury bills are repaid at par on the expiry of their tenure at the office of the
Reserve Bank of India, Mumbai Availability. All treasury bills are highly liquid instruments available both in the primary and the secondary markets.

**Day count**-

Treasury bills the day count is taken as 365 days for a year. Yield calculation. The yield of a treasury bill is calculated as per the following formula:

\[ Y = \frac{(100 - P*)365*100}{P*D} \]

Wherein \( Y \) = discounted yield

\( P \) = price

\( D \) = days to maturity

**Primary market**- In the primary market, treasury bills are issued by auction technique see Table 4.2.

TABLE 4.2 Calendar of auction as announced by the Reserve Bank of India for 2002-03

<table>
<thead>
<tr>
<th>Treasury bill</th>
<th>Notified amount (Rs. crore)</th>
<th>Day of auction</th>
<th>Day of payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>91 days</td>
<td>500</td>
<td>Every Wednesday</td>
<td>Following Friday</td>
</tr>
</tbody>
</table>
The salient features of the auction techniques are:

1. The auction of treasury bills is done only at the Reserve Bank of India, Mumbai.

2. Bids are to be submitted on NDS by 2:30 pm on Wednesday. If Wednesday happens to be a holiday, bids are to be submitted on Tuesday.

3. Bids are submitted in terms of price per Rs. 100. For example, a bid for 91-day treasury bill auction could be for Rs. 97.50.

4. The auction committee of the Reserve Bank decides the cut-off price and results are announced on the same day.

5. Bids above the cut-off price receive full allotment; bids at cut-off price may receive full or partial allotment, and bids below the cut-off price are rejected.

There are two types of auction for treasury bills:

1. Multiple price based or French auction. Under this type, all bids equal to or above the cut-off price are accepted. However, the bidder has to obtain the treasury bills at the price quoted by him.
This method is followed in the case of 364 days treasury bills and is valid only for competitive bidders.

2. Uniform price based on Dutch auction. Under this system, all the bids equal to or above the cut-off price are accepted at the cut-off level. However, unlike the multiple price-based method, the bidder obtains the treasury bills at the cut-off price and not the price quoted by him.

This method is applicable in the case of 91 days treasury bills only. The system of Dutch auction has been done away with by RBI w.e.f. December 8, 2002 for the 91 days treasury bill.

Secondary Market and Players-

The major participants in the secondary market are scheduled banks, financial institutions, primary dealers, mutual funds, insurance companies and corporate treasuries. Other entities such as cooperative banks and RRBs, and educational and religious trusts have also begun investing their short-term funds in treasury bills. Treasury bills provide the following advantages to the secondary market:

1. Market-related yields.

2. Ideal matching for funds management, particularly for short-term tenors of less than 15 days.

3. Transparency in operations as the transactions would be put through the Reserve Bank's SGL or Client's Gilt account only.
4. Two-way quotes offered by primary dealers for purchase and sale of treasury bills. 5. Certainty in terms of availability, entry and exit.

**French Auction or Multiple Price Auction System**

After receiving written bids at various levels of yield expectations, a particular yield is decided as the cut-off rate of the security in question. Auction participants (bidders) who bid at yield levels lower than the yield determined as cut-off get full allotment although at a premium. The premium is equal to the yield differential expressed in rupee terms.

The yield differential is the difference between the cut-off yield and the yield at which the bid is made. All bids made at yield levels higher than that determined as cut-off yield get entirely rejected.

**Dutch Auction or Uniform Price Auction System**

This system of auction is exactly identical to that of the French Auction System as far as the price discovery mechanism part is concerned. The difference is observed only at the stage of payment obligation. After determination of the market-related cut-off rate, allotment is made to all the bidders at a uniform price. The concept of premium on account of yield differential does not exist here.\footnote{10}

**Participation Certificates (PCs) and HDFC Bills**

These bills (under bills rediscounting scheme) were introduced in the money market in 1970. PCs were utilised mostly by financial institutions to park their funds for longer maturities and could not be
developed for meeting liquidity mismatches between financial institutions and/or banks. Under the Bills is Rediscounting scheme.

The Reserve Bank rediscounted genuine trade bills at the bank rate or at a rate specified by it. The underlying purpose of developing the bill market was to enable banks and other financial institutions to invest their surplus funds profitably by selecting appropriate maturities. Over the years, the rediscounting facility became restrictive, and was made available on a discretionary basis.

The main factors inhibiting the development of bill finance were lack of a bill culture, non-availability of stamp papers of required denominations, absence of specialised credit information agencies, and an active secondary market. Both participation certificates and HDFC bills, however, did not develop and activity in these instruments remained insignificant. PCs are strictly inter-bank instruments confined to the scheduled HDFC banks. There are two types:

1. PCs with risk sharing. This instrument provides flexibility in the credit portfolio of banks. These PCs are issued for 91-180 days in respect of certain types of loan advances. Interest is to be determined between the issuing and the participating bank freely.

2. PCs without risk sharing. This instrument are a money market instrument with tenure not exceeding 90 days. The two contracting banks determine the interests on such PCs.
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 HDFC bills when they are accepted by HDFC banks. 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, HDFC banks can rediscount the bills, which were originally discounted by them, with approved institutions (viz, HDFC banks, DFIs, mutual funds, primary dealer etc.). With the intention of reducing paper movements and facilitate multiple rediscounting, 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.

Certificates of Deposit (CD)-

Certificates of Deposit (CDs) is a negotiable money market instrument, issued in dematerialised form or as a Usance Promissory Note for funds deposited at a bank or other eligible financial institution for a specified time period. Guidelines for issue of CDs are presently governed by various directives issued by the Reserve Bank of India, as amended
from time to time. CDs can be issued by (i) scheduled HDFC banks excluding Regional Rural Banks (RRBs) and Local Area Banks (LABs), and (ii) select all-India financial institutions that have been permitted by RBI raise short-term resources within the umbrella limit fixed by it.

Banks have the freedom to issue CDs depending on their requirements. An FI may issue CDs within the overall umbrella limit fixed by it, i.e. issue of CD together with other instruments, viz. term money, term deposits, HDFC papers and intercorporate deposits should not exceed 100 per cent of its net owned funds, as per the latest audited balance sheet. CDs introduced since June 1989 are negotiable term deposit certificates issued by a HDFC banks/financial institutions at a discount to face value at market rates, with maturity ranging from 15 days to one year.

**Being securities in the form of promissory notes, transfer of title is easy, by endorsement and delivery. Further, they are governed by the Negotiable Instruments Act.** As these certificates are the liabilities of HDFC banks/financial institutions, they make sound investments. DFHI trades in these instruments in the secondary market. The market for these instruments is not very deep, but quite often CDs are available in the secondary market. DFHI is always willing to buy these instruments thereby lending liquidity to the market. The salient features of CD are:

1. CDs can be issued to individuals, corporations, companies, trusts, funds, associates, etc.
2. NRIs can subscribe to CDs on non-repatriable basis.

3. CDs attract stamp duty as applicable to negotiable instruments.

4. Banks have to maintain SLR and CRR on the issue price of CDs.
   No ceiling on the amount to be issued.

5. The minimum issue size of CDs is Rs. 5 lakh and multiples thereof.

6. CDs are transferable by endorsement and delivery.

7. The minimum lock-in-period for CDs is 15 days.

   CDs are issued by banks when the deposit growth is sluggish and credit demand is high and a tightening trend in call rate is evident. They are generally considered high cost liabilities, and banks have recourse to them only under tight liquidity conditions.

**HDFC Papers**

HDFC papers refer to short-term unsecured promissory notes normally issued by corporate companies with a high credit rating. It is a note in evidence of the debt obligation of the issuer. On issuing HDFC paper the debt obligation is transformed into an instrument. It is, thus, an unsecured promissory note privately placed with investors at a discount rate to face value determined by market forces. A CP is freely negotiable by endorsement and delivery. A company shall be eligible to issue CP provided:

(i) The tangible net worth of the company, as per the latest audited balance sheet, is not less than Rs. 4 crore,
(ii) The working capital (fund-based) limit of the company from the banking system is not less than Rs. 4 crore, and

(iii) The borrowal account of the company is classified as a Standard Asset by the financing bank/s. The minimum maturity period of a CP is seven days. The minimum credit rating shall be P-2 of Credit Rating Information Services of India (CRISIL) or such equivalent rating by other agencies.

CPs enable highly rated corporate borrowers to diversify their sources of short-term borrowings and raise a part of their requirement at competitive rates from the market. The introduction of CP in January 1990 as an additional money market instrument was the first step towards securitisation of HDFC banks' advances into marketable instruments. CPs is unsecured debts of corporates.

They are issued in the form of promissory notes, redeemable at par to the holder at maturity. Only corporates who get an investment grade rating can issue CPs as per RBI rules. Though CPs are issued by corporates, they could be good investments, if proper caution is exercised.

The market is generally segmented into public sector (PSU) CPs and private sector CPs. CPs issued by top-rated corporates are considered as sound investments. DFHI trades in these certificates. It will buy these certificates subject to its perception of the instrument and will also be
offering them for sale subject to availability of stock. The salient features of CPs are given below:

1. CPs are issued by companies in the form of usance promissory note, redeemable at par to the holder on maturity.

2. The tangible net worth of the issuing company should be not less than Rs. 4 crore.

3. Working capital (fund-based) limit of the company should not be less than Rs. 4 crore.

4. Credit rating should be at least equivalent of P2/A2/PP2/Ind.D.2 or higher from any approved rating agencies and should be more than two months old on the date of issue of CP.

5. Corporates are allowed to issue CP is up to 100 per cent of their fund-based working capital limits.

6. Issued at a discount to face value.

7. Attract stamp duty.

8. Can be issued for maturities between 15 days and less than one year from the date of issue.

9. May be issued in the multiples of Rs. 5 lakh.

10. No prior approval of RBI is needed to issue CP, and underwriting the issue is not mandatory.
11. All expenses (such as dealers' fees, rating agency fee and charges for provision of stand-by facilities) for the issue of a CP are to be borne by the issuing company.

The purpose of introduction of CP was to release the pressure on bank funds for small- and medium-sized borrowers, and at the same time allowing highly rated companies to borrow directly from the market. As in the case of CDs, the secondary market in CP has not developed to a large extent.

**Derivative Usance Promissory Notes (DUPN)-**

With a view to eliminating movement of papers and facilitating multiple rediscounting, RBI introduced an innovative instrument known as Derivative Usance Promissory Notes backed by such eligible HDFC bills for required amounts and usance period (up to 90 days). The Government of India has exempted stamp duty on DUPN.

This has indeed simplified and streamlined the bill rediscounting by institutions and made HDFC bill an active instrument in the secondary money market. Rediscounting institutions also have advantages in that DUPN being a negotiable instrument issued by a bank, is a good security for investment.

It is transferable by endorsement and delivery, and hence is liquid. Thanks to the existence of a secondary market, the rediscounting institution can further discount the bills any time it wishes prior to the date of maturity. In the bill rediscounting market, it is possible to acquire
bills having a balance maturity period of different days up to 90 days. Bills, thus, provide a smooth glide from call/overnight lending to short-term lending with security, liquidity and competitive return on investment.

As some banks were using the facility of rediscounting HDFC bills and DUPN for as short a period as one day merely as a substitute for call money, RBI has restricted such rediscounting for a minimum period of 15 days. The eligibility criteria prescribed by the Reserve Bank of India for rediscounting HDFC bill inter-alia are that the bill should arise out of genuine HDFC transaction evidencing sale of goods, and the maturity date of the bill should not be more than 90 days from the date of rediscounting."

RBI has widened the entry regulation for Bill Market by selectively allowing cooperative banks, mutual funds and financial institutions, besides banks and Primary dealers (PDs). DFHI trades in these instruments by rediscounting DUPNs drawn by HDFC banks. It may also purchase DUPNs which are sold to investors.

**Ready Forward Contracts (REPOS)-**

Ready forward or repos or buyback deal is a transaction in which two parties agree to sell and repurchase the same security. Under such an arrangement, 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 pre-fixed price. For the purchaser of the security, it becomes a reverse repo deal.

In simple terms, it is recognised as a buyback arrangement. In a standard ready forward transaction, when a bank sells its securities to a buyer, it simultaneously enters into a contract with the buyer to repurchase them on a predetermined date and price in the future. In return for the securities, the bank receives cash from the buyer of the securities.

It is a combination of securities trading (involving a purchase and sale transaction) and money market operation (lending and borrowing). The repo rate represents the borrowing/lending rate for use of the money in the intervening period. As the inflow of cash from the ready forward transaction is used to meet temporary cash requirement, such a transaction, in essence, is a short-term cash management technique.

The motivation for the banks and other organisations to enter into a ready forward transaction is that it can finance the purchase of securities or otherwise fund its requirements at relatively competitive rates. On account of this reason, this transaction is purely a money lending operation.

Under ready forward deal, the seller of the security is the borrower and the buyer is the lender of funds. Such a transaction offers benefits both to the seller and the buyer. The seller gets the funds at a specified interest rate and, thus, hedges himself against volatile rates without
parting with his security permanently, and the buyer gets the security to meet his SLR requirements.

In addition to pure funding reasons, the ready forward transactions are often also resorted to manage short-term SLR mismatches." Internationally, repos are versatile instruments and are used extensively in money market operations. While inter-bank repos were being allowed prior to 1992 subject to certain regulations.

There were large scale violation of laid down guidelines leading to the "securities scam" in 1992, which led the Government and RBI to clamp down severe restrictions on the usage of this facility by different market participants. With the plugging of loophole in the operation, the conditions have been relaxed gradually. RBI has prescribed the following factors to be considered while performing repo:

1. Purchase and sale price should be in alignment with the ongoing market rates.

2. No sale of securities should be effected unless they are actually held by the seller in his own investment portfolio.

3. Immediately on sale, the corresponding amount should be reduced from the investment account of the seller.

4. The securities under repo should be marked to market on the balance sheet date.
The relaxations over the years made by RBI with regard to repo transactions are:

1. In addition to treasury bills, all Central and State Government securities are eligible for repo.

2. Besides banks, PDs are allowed to undertake both repo/reverse repo transactions.

3. RBI has further widened the scope of participation in the repo market to all the entities having SGL and current with RBI Mumbai, thus, increasing the number of eligible non-bank participants to 64.

4. It was indicated in the Mid-Term Review of October 1998 that in line with the suggestion of the Narasimham Committee II, the Reserve Bank will move towards a pure inter-bank (including PDs) call/notice money market.

   In view of this, non-bank entities will be allowed to borrow and lend only through repo and reverse repo. Hence, permission of such entities to participate in call/notice money market will be withdrawn from December 2000.

5. In terms of instruments, repos have also been permitted in PSU bonds and private corporate debt securities provided they are held in dematerialised form in a depository, and the transactions are done in a recognised stock exchange.
Apart from inter-bank repos, RBI has been using this instrument effectively for its liquidity management both for absorbing liquidity and for injecting funds into the system. Thus, repo and reverse repo are resorted to by RBI as a tool of liquidity control in the system. With a view to absorbing surplus liquidity from the system in a flexible way and to prevent interest rate arbitraging, RBI has introduced a system of daily fixed rate repos from November 29, 1997.

The Reserve Bank of India was earlier providing liquidity support to PDs through the reverse repo route. This procedure was also subsequently dispensed with an RBI began giving liquidity support to PDs through their holdings in SGL account. The liquidity support is presently given to the primary dealers for a fixed quantum and at the bank rate based on their bidding commitment, and also on their past performance.\(^{14}\)

It is any additional liquidity requirements, primary dealers are allowed to participate in the reverse repo auction along with banks, under the Liquidity Adjustment Facility introduced by RBI in June 2000. The major players in the repo and reverse repurchase market tend to be banks who have substantially huge portfolios of government securities. Besides, primary dealers who often hold large inventories of tradable government securities are active players in this market.
References

1- Sengal Balram, All India Vat Manual, Commercial Law Publication, 2007-08, p.53


3- Shukla S.N., Principal of Statics, Sahitya Bhawaan Publication 2011,p.27

4- Ibid.,p.56


11- Ibid., p. 59


14- Ibid., p. 58