

MONEY MARKET OPERATIONS

BASIC CONCEPTS

1. Introduction

The financial system of any country is a conglomeration of sub-markets, viz money, capital and foreign exchange market. The presence of an active and vibrant money market is an essential pre-requisite for the growth and development of an economy. The major players in the money market are the Reserve Bank of India and financial institutions like the UTI, GIC and LIC.

2. Distinct Features of Money Market

- Though it is one market but it is a collection /network of various inter-related sub-markets such as call money, notice money, repos, etc.
- Normally activities of money market tend to concentrate in some centres for e.g. London and New York which have become World Financial Centres.
- In true money market, price differentials for assets of similar type tend to be eliminated by interplay of demand and supply.
- There are constant endeavours for introducing new instruments/innovative dealing techniques.

3. Pre-Conditions for an Efficient Money Market

Development of money market into a sophisticated market depends upon certain conditions. They are:

- Institutional development.
- Banks and other players in the market have to be licensed and effectively supervised by regulators.
- Demand and supply must exist for idle cash.
- Electronic Fund Transfer (EFT), Depository System, Delivery versus Payment (DVP), High Value Inter-bank Payment System, etc. are pre-requisites.

- Market should have varied instruments with distinctive maturity and risk profiles to meet the varied aptitude of the players in the market.
- Govt. /Central Bank should intervene to moderate liquidity profile.
- Market should be integrated with the rest of the markets in the financial system to ensure perfect equilibrium.

4. Rigidities in the Indian Money Market

Indian money market suffers from following rigidities:

- Markets not integrated,
- Highly volatile,
- Interest rates not properly aligned,
- Restricted players,
- Influence used by supply sources,
- Limited Instruments,
- Reserve requirements, and
- Lack of Transparency.

5. Distinction between Capital and Money Market

Following are some of the major distinctions between money market and capital market:

Basis	Capital Market	Money Market
1. Classification	Primary Market and Secondary Market	No such classification
2. Requirement	Deals with funds for long-term requirement	Deals with supply of short-term requirements
3. Number of Instruments	Only shares and debentures	Many like CPs, T-Bills, etc
4. Players	General investors, brokers, Merchant Bankers, Registrar to the Issue, Underwriters, Corporate investors, FIIs and bankers.	Bankers, RBI and Government.

6. Vaghul Group Report

The RBI appointed a working group under the chairmanship of Shri N. Vaghul in September 1986. The recommendations of the working group laid foundation for systematic action by RBI for the development of the Indian money market.

The Committee outlined the conceptual framework in the form of broad objectives of the money market which are as follows:

- Money market should provide an equilibrating mechanism for evening out short-term surpluses and deficits.
- It should provide a focal point for influencing liquidity in the economy.
- It should provide reasonable access to users of short-term money to meet their requirements at a realistic price.

7. Institutions

The important institutions operating in money market are:

- **RBI** – Takes requisite measures to implement monetary policy of the country.
- **Scheduled Commercial Banks** – They form the most important borrower/supplier of short term funds.
- **Discount and Finance House of India (DFHI)** – Set up by RBI jointly with public sector banks and all-India financial institutions to deal in short-term money market instruments.

8. Instruments

The traditional short-term money market instruments consist mainly of call money and notice money with limited players, treasury and commercial bills. The new instruments were introduced giving a wider choice to short-term holders of money to reap yield on funds even for a day or to earn little more by parking funds by instruments for a few days more or until such time they need it for lending at a higher rate.

The instruments used by various players to borrow and lend money are as follows:

- **Call/Notice Money:** Call money refers to that transaction which is received or delivered by the participants in the call money market and where the funds are returnable next day. Notice money on the other hand is a transaction where the participants receive or deliver for more than two days but generally for a maximum of fourteen days.

- **Inter-bank term money:** the DFIs are permitted to borrow from the market for a period of 3 months upto a period of not more than 6 months within the limits stipulated by RBI.
- **Inter-bank participation certificates (IBPC):** It is a short-term money market instrument by which the banks can raise money or deploy short term surplus.
- **Inter corporate deposits:** They are short-term borrowing and lending of funds amongst the corporations.
- **Treasury Bills:** They are short-term instruments issued by RBI on behalf of the Government of India to tide over short-term liquidity shortfalls.
- **Commercial Bills:** It is a written instrument containing unconditional order signed by the maker, directing to pay a certain amount of money only to a particular person, or to the bearer of the instrument.
- **Certificate and Deposits (CDs):** They are money market instruments in form of usance Promissory Notes issued at a discount and are negotiable in character. There is a lock-in-period of 15 days, after which they can be sold.
- **Commercial Papers:** They are debt instruments for short-term borrowings that enable highly-rated corporate borrowers to diversify their sources of short-term borrowings and provide an additional financial instrument to investors with a freely negotiable interest rate.

9. Determination of Interest Rates

Call money rates were regulated in the past by the RBI or by a voluntary agreement between the participants through the intermediation of the Indian Bank Association (IBA). Now, the interest rates have been regulated and left to the market forces of demand for and supply of short-term money as a part of the financial sector reforms.

10. Recent Development in Money Market

- (i) **Debt Securitisation:** It means converting retail loans into whole sale loans. The philosophy behind the arrangement is that an individual body cannot go on lending sizable amount for about a longer period continuously but if loan amount is divided in small pieces and made transferable like negotiable instruments in the secondary market, it becomes easy to finance large projects having long gestation period.
- (ii) **Money Market Mutual Funds (MMMFs):** These Mutual Funds are primarily intended for individual investors including NRIs who may invest on a non-repatriable basis.

- (iii) **Repurchase Options (Repo) and Ready Forward (RFS) Contracts:** Under this transaction the borrower places with lender certain acceptable securities against funds received and agrees to reverse this transaction on a pre-determined future date at an agreed interest cost. While Ready Forward transaction are structured to suit the requirements of both borrowers/ and lenders and have therefore, become extremely popular mode of raising/investing short-term funds.

Question 1

Write a short note on commercial paper.

Answer

Commercial Paper: Commercial paper (CP) has its origin in the financial markets of America and Europe. When the process of financial dis-intermediation started in India in 1990, RBI allowed issue of two instruments, viz., the Commercial Paper (CP) and the Certificate of Deposit (CD) as a part of reform in the financial sector as suggested by Vaghul Committee. A notable feature of RBI Credit Policy announced on 16.10.1993 was the liberalisation of terms of issue of CP. At present it provides the cheapest source of funds for corporate sector and banks. Its market has picked up considerably in India due to interest rate differentials in the inter-bank and commercial lending rates.

Commercial Paper (CP) is an unsecured debt instrument in the form of a promissory note issued by highly rated borrowers for tenors ranging between 15 days and one year. "Corporates raise funds through CPs on an on-going basis throughout the year".

Thus, CP is a short term unsecured promissory note issued by high quality corporate bodies directly to investors to fund their business activities.

Question 2

Write a short note on Treasury bills.

Answer

Treasury Bills: Treasury bills are short-term debt instruments of the Central Government, maturing in a period of less than one year. Treasury bills are issued by RBI on behalf of the Government of India for periods ranging from 91 days to 364 days through regular auctions. They are highly liquid instruments and issued to tide over short-term liquidity shortfalls.

Treasury bills are sold through an auction process according to a fixed auction calendar announced by the RBI. Banks and primary dealers are the major bidders in the competitive auction process. Provident Funds and other investors can make non-competitive bids. RBI makes allocation to non-competitive bidders at a weighted average

yield arrived at on the basis of the yields quoted by accepted competitive bids. These days the treasury bills are becoming very popular on account of falling interest rates. Treasury bills are issued at a discount and redeemed at par. Hence, the implicit yield on a treasury bill is a function of the size of the discount and the period of maturity. Now, these bills are becoming part of debt market. In India, the largest holders of the treasury bills are commercial banks, trust, mutual funds and provident funds.

Question 3

Explain briefly 'Call Money' in the context of financial market.

Answer

Call Money: The Call Money is a part of the money market where, day to day surplus funds, mostly of banks, are traded. Moreover, the call money market is most liquid of all short-term money market segments.

The maturity period of call loans vary from 1 to 14 days. The money that is lent for one day in call money market is also known as 'overnight money'. The interest paid on call loans are known as the call rates. The call rate is expected to freely reflect the day-to-day lack of funds. These rates vary from day-to-day and within the day, often from hour-to-hour. High rates indicate the tightness of liquidity in the financial system while low rates indicate an easy liquidity position in the market.

In India, call money is lent mainly to even out the short-term mismatches of assets and liabilities and to meet CRR requirement of banks. The short-term mismatches arise due to variation in maturities i.e. the deposits mobilized are deployed by the bank at a longer maturity to earn more returns and duration of withdrawal of deposits by customers vary. Thus, the banks borrow from call money markets to meet short-term maturity mismatches.

Moreover, the banks borrow from call money market to meet the cash Reserve Ratio (CRR) requirements that they should maintain with RBI every fortnight and is computed as a percentage of Net Demand and Time Liabilities (NDTL).

Question 4

Distinguish between Money market and Capital Market.

Answer

The capital market deals in financial assets. Financial assets comprises of shares, debentures, mutual funds etc. The capital market is also known as stock market.

Stock market and money market are two basic components of Indian financial system. Capital market deals with long and medium term instruments of financing while money market deals with short term instruments.

Some of the points of distinction between capital market and money market are as follows:

	Money Market	Capital Market
(i)	There is no classification between primary market and secondary market	There is a classification between primary market and secondary market.
(ii)	It deals for funds of short-term requirement.	It deals with funds of long-term requirement.
(iii)	Money market instruments include interbank call money, notice money upto 14 days, short-term deposits upto three months, commercial paper, 91 days treasury bills.	Capital Market instruments are shares and debt instruments.
(iv)	Money market participants are banks, financial institution, RBI and Government	Capital Market participants include retail investors, institutional investors like Mutual Funds, Financial Institutions, corporate and banks.

Question 5

What is interest rate risk, reinvestment risk & default risk & what are the types of risk involved in investments in G-Sec.?

Answer

Interest Rate Risk: Interest Rate Risk, market risk or price risk are essentially one and the same. These are typical of any fixed coupon security with a fixed period to maturity. This is on account of inverse relation of price and interest. As the interest rate rises the price of a security will fall. However, this risk can be completely eliminated in case an investor's investment horizon identically matches the term of security.

Re-investment Risk: This risk is again akin to all those securities, which generate intermittent cash flows in the form of periodic coupons. The most prevalent tool deployed to measure returns over a period of time is the yield-to-maturity (YTM) method. The YTM calculation assumes that the cash flows generated during the life of a security is reinvested at the rate of YTM. The risk here is that the rate at which the interim cash flows are reinvested may fall thereby affecting the returns.

Default Risk: This type of risk in the context of a Government security is always zero. However, these securities suffer from a small variant of default risk i.e. maturity risk. Maturity risk is the risk associated with the likelihood of government issuing a new

security in place of redeeming the existing security. In case of Corporate Securities it is referred to as credit risk.

G. Secs are usually referred to as risk free securities. However, these securities are subject to only one type of risk i.e. interest rate risk. Subject to changes in the overall interest rate scenario, the price of these securities may appreciate or depreciate.

Question 6

Write a short note on Inter Bank Participation Certificate.

Answer

Inter Bank Participation Certificate (IBPC)

The Inter Bank Participation Certificates are short term instruments to even out the short term liquidity within the Banking system particularly when there are imbalances affecting the maturity mix of assets in Banking Book.

The primary objective is to provide some degree of flexibility in the credit portfolio of banks. It can be issued by schedule commercial bank and can be subscribed by any commercial bank.

The IBPC is issued against an underlying advance, classified standard and the aggregate amount of participation in any account time issue. During the currency of the participation, the aggregate amount of participation should be covered by the outstanding balance in account.

There are two types of participation certificates, with risk to the lender and without risk to the lender. Under 'with risk participation', the issuing bank will reduce the amount of participation from the advances outstanding and participating bank will show the participation as part of its advances. Banks are permitted to issue IBPC under 'with risk' nomenclature classified under Health Code-I status and the aggregate amount of such participation in any account should not exceed 40% of outstanding amount at the time of issue. The interest rate on IBPC is freely determined in the market. The certificates are neither transferable nor prematurely redeemable by the issuing bank.

Under without risk participation, the issuing bank will show the participation as borrowing from banks and participating bank will show it as advances to bank.

The scheme is beneficial both to the issuing and participating banks. The issuing bank can secure funds against advances without actually diluting its asset-mix. A bank having the highest loans to total asset ratio and liquidity bind can square the situation by issuing IBPCs. To the lender, it provides an opportunity to deploy the short-term surplus funds in a secured and profitable manner. The IBPC with risk can also be used for capital adequacy management.

This is simple system as compared to consortium tie up.

Question 7

Discuss the major sources available to an Indian Corporate for raising foreign currency finances.

Answer

Major Sources Available to an Indian Corporate for Raising Foreign Currency Finances

1. **Foreign Currency Term Loan from Financial Institutions:** Financial Institutions provide foreign currency term loan for meeting the foreign currency expenditures towards import of plant, machinery, and equipment and also towards payment of foreign technical knowhow fees.
2. **Export Credit Schemes:** Export credit agencies have been established by the government of major industrialized countries for financing exports of capital goods and related technical services. These agencies follow certain consensus guidelines for supporting exports under a convention known as the Berne Union. As per these guidelines, the interest rate applicable for export credits to Indian companies for various maturities is regulated. Two kinds of export credit are provided i.e., buyer's and supplier's credit.
Buyer's Credit- Under this arrangement, credit is provided directly to the Indian buyer for purchase of capital goods and/or technical service from the overseas exporter.
Supplier's Credit - This is a credit provided to the overseas exporters so that they can make available medium-term finance to Indian importers.
3. **External Commercial Borrowings:** Subject to certain terms and conditions, the Government of India permits Indian firms to resort to external commercial borrowings for the import of plant and machinery. Corporates are allowed to raise up to a stipulated amount from the global markets through the automatic route. Companies wanting to raise more than the stipulated amount have to get an approval of the MOF. ECBs include bank loans, supplier's and buyer's credit, fixed and floating rate bonds and borrowing from private sector windows of Multilateral Financial Institution such as International Finance Corporation.
4. **Euro Issues:** The two principal mechanisms used by Indian companies are Depository Receipts mechanism and Euro convertible Issues. The former represents indirectly equity investment while the latter is debt with an option to convert it into equity.

5. **Issues in Foreign Domestic Markets:** Indian firms can also issue bonds and Equities in the domestic capital market of a foreign country. In recent year, Indian companies like Infosys Technologies and ICICI have successfully tapped the US equity market by issuing American Depository Receipts (ADRs). Like GDRs, ADRs represent claim on a specific number of shares. The principal difference between the two is that the GDRs are issued in the euro market whereas ADRs are issued in the U.S. domestic capital market.

Question 8

What are a Repo and a Reverse Repo?

Answer

A Repo deal is one where eligible parties enter into a contract another to borrow money at a predetermined rate against the collateral of eligible security for a specified period of time. The legal title of the security does changes. The motive of the deal is to fund a position. Though the mechanics essentially remains the same and the contract virtually remains the same, in case of reverse Repo deal the underlying motive of the deal is to meet the security/instrument specific needs or to lend the money. Indian Repo market is governed by Reserve Bank of India. At present Repo is permitted between 64 players against Central and State Government Securities (including T-Bills) at Mumbai.

Question 9

M Ltd. has to make a payment on 30th January, 2010 of Rs. 80 lakhs. It has surplus cash today, i.e. 31st October, 2009; and has decided to invest sufficient cash in a bank's Certificate of Deposit scheme offering an yield of 8% p.a. on simple interest basis. What is the amount to be invested now?

Answer

Calculation of Investment Amount

Amount required for making payment on 30 th January, 2010	= Rs. 80,00,000
Investment in Certificates of Deposit (CDs) on 31 st October, 2009	
Rate of interest	= 8% p.a.
No. of days to maturity	= 91 days
Interest on Re. 1 of 91 days	
(Re. 1 × 0.08 × 91/365)	= 0.0199452
Amount to be received for Re. 1	
(Re.1.00 + Re. 0.0199452)	= 1.0199452

Calculation of amount to be invested now to get Rs. 80 lakhs after 91 days:

$$= \frac{\text{Rs. } 80,00,000}{\text{Rs. } 1.0199452} = \text{Rs. } 78,43,558.65$$

Or, Rs. 78,43,600 or Rs. 78,44,000 approximately.

Question 10

RBI sold a 91 day T-bill of face value of Rs. 100 at an yield of 6%. What was the issue price?

Answer

Let the issue price be X

By the terms of the issue of the T-bills:

$$6\% = \frac{100 - x}{x} \times \frac{365}{91} \times 100$$

$$6\% = \frac{6 \times 91 \times x}{36,500} = (100 - x)$$

$$= 0.01496 x = 100 - x$$

$$x = \frac{100}{1.01496} = \text{Rs. } 98.53$$

Question 11

From the following particulars, calculate the effective interest p.a. as well as the total cost of funds to ABC Ltd., which is planning a CP issue:

Issue Price of CP = Rs.97,350

Face Value = Rs.1,00,000

Maturity period = 3 months.

Issue Expenses:

Brokerage: 0.125% for 3 months.

Rating Charges: 0.5% p.a.

Stamp duty: 0.125% for 3 months

Answer

$$\begin{aligned} \text{(a) Effective Interest} &= \frac{\frac{F - P}{P} \times \frac{12}{m}}{\frac{F - P}{P} \times \frac{12}{m}} \times 100 \\ &= \frac{\frac{100.000 - 97,350}{97,350} \times \frac{12}{3}}{\frac{100.000 - 97,350}{97,350} \times \frac{12}{3}} \times 100 \\ &= 0.02722 \times 4 \times 100 \\ &= 10.888 \\ &= 10.89 \end{aligned}$$

Effective Interest = 10.89% p.a

Cost of Funds to the Company

Effective Interest	10.89%
Brokerage (0.125 x 4)	0.50%
Rating Charge	0.50%
Stamp Duty (0.125 x 4)	<u>0.50%</u>
Cost of funds	<u>12.39%</u>

EXERCISES

Question

Turbo Sales Corporation is a wholesale corporation for heavy machines, is planning for an expansion of their activities resulting in a doubling of its sales. The finance head of the corporation has determined it needs an additional Rs. 20 crores in short term funds to meet finance need in the peak season roughly 6 months of the year. Mr. X, Treasury Head of the Corporation recommended that the corporation should use commercial papers offer to meet the finance needs.

The corporation shall have to offer 10% interest (paid in advance or discounted) plus a sum of Rs. 1,25,000 shall be incurred to meet the floatation cost. The paper would carry a 6 months (180 day) maturity.

Compute the effective cost of credit.

(Answer: 10.66%.)