

Capital Markets



P V Ram,
B. Sc., ACA, ACMA,
Hyderabad
98481 85073

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Statutory Warning: *Investing all Liquid assets, and / or converting all fixed assets into liquid assets and investing in Stock Market will be injurious to your wealth.*

This chapter is divided into 4 parts:

- a. Capital Markets
- b. Capital Market Instruments
- c. Commodity derivatives and
- d. OTC derivatives.

CAPITAL MARKETS

Indian Financial Market Comprises of Money Market (including Forex Market), Debt Market and Capital Market. These markets are regulated and controlled by R B I & S E B I with areas clearly demarcated.

Capital Market is classified into Primary Market and Secondary Market. Secondary Market is also known as Stock Exchanges. Important stock exchanges in India are, Bombay Stock Exchange (BSE) and The National Stock Exchange (NSE). Foreign stock exchanges are London Stock exchange, Luxembourg stock exchange, New York stock exchange, Nasdaq etc.

Functions of Stock Exchanges: Stock Exchange is a place where investors buy and sell securities. The main functions are:

- a. Provides Liquidity and marketability for securities
- b. Helps Fair price determination
- c. Acts as a Source for long term funds
- d. Helps in capital formation
- e. Reflects the general state of economy
- f. Helps small investors to participate
- g. Transparency of information.

Stock market index: Stock market index is the representative of entire stock market. It indicates how the market is doing. Movements in the index indicate the average returns of the investors in market and also the state of the economy. It is calculated in the following manner:

- a. A base year is set with a basket of shares selected from different industries fairly representing the economy of the country.
- b. Shares being traded in high volumes are included. In case the volumes of any scrip fall then it is substituted by another scrip of high volumes from same / similar industry.
- c. Market capitalisation of these shares is calculated for the base year.
- d. Market prices of these shares are tracked on daily basis and market capitalisation is worked out.
- e. Index value is calculated by the following formula:
$$\text{Index value} = (\text{Prev. day's index} \times \text{Current day's mkt. Captln.}) / \text{Prev. day's mkt. Captln.}$$
- f. Due to improvements in information technology systems, now indexes are calculated on real time basis as trading takes place.
- g. Each stock exchange has a flagship index like Sensex for BSE, Nifty for NSE, Dow Jones for NYSE etc.
- h. Another method of calculating Index is based weighted average prices of scrips. Practically there are hardly any exchanges that follow this method.

Settlement Cycles: Presently BSE & NSE follow T + 2 daily Rolling settlement cycle. It means for scrips traded on a trading day, following trading day will be Pay-in day and the further following day will be Pay-out day. This is a continuous process and carried on every day.

Clearing Houses: Clearing house is an exchange-associated body charged with the function of ensuring (guaranteeing) the financial integrity of each trade. It provides a range of services related to the guarantee of contracts, clearance and settlement of trades, and management of risk for their members and associated exchanges.

Green Shoe Option: A company making an initial public offer of equity shares through the book-building mechanism can avail of the green shoe option (GSO) for stabilising the post-listing price of its shares. This is an option which allows the company to sell additional shares / bonds if the demand is high. It can be understood as an option that allows the underwriter for a new issue to buy and resell additional shares upto a certain

pre-determined quantity. This is retention of oversubscription amount to a certain extent.

The term "Green shoe option" derived its name from the company in US which exercised this mechanism for the first time.

This practice is often followed for euro issues. In India, green shoe option has a limited connotation. SEBI guidelines on public issues contain provisions for accepting over-subscriptions, subject to a ceiling, say, 15% of the offer made to public. In certain situations, the green-shoe option can even be more than 15%.

In case of Green Shoe Option, the company should appoint one of the book runners as Stabilisation Agent (SA) whose duty is to ensure the share maintains a particular price during post listing period by buying or selling shares in secondary market. In this process the SA enters into separate agreements with the promoters (usually each of whom hold > 5% of shares) and the company.

For instance, a company would be intending to issue 100000 shares with a green shoe option of 15000 shares. Then the underwriters collect money by allotting 115,000 shares. However, actually only 100000 shares are issued (i.e. they will do short sales). Shares of promoters with whom SA has entered into agreement are not issued even though money is collected from them. The money so collected is deposited in a separate escrow account opened for this purpose by the SA.

Upon listing, if the shares are getting traded at less than issue price, then SA keeps buying shares from market, thus arresting free fall of share price. This he will do to the extent of the money held by him in escrow account. The shares so bought credited to a separate demat account. This is done for a period not exceeding 30 days called stabilisation period or cooling period. Upon expiry of the cooling period, within 2 days the shares so bought are transferred to promoters as per original allotment. In case of any shortfall in shares with SA, then such shares are issued by the company at the original issue price within 5 days of expiry of cooling period and these are transferred by SA to the original promoter allottees. Any balance left in the escrow account after meeting all the expenses of the SA, is transferred to investor protection fund account of concerned stock exchange. In this scenario, company has to be contented by issuing less than 115000 shares.

In case the shares get traded at a price higher than issue price, then SA will not buy any shares as it will be loss for him. This will result in exercise of Green Shoe Option by the company. The company will allot 15000 shares to

the SA at the original issue price and SA in turn will transfer the shares to the original promoter allottees. So, total shares issued by the company will be 115,000 shares.

This option was exercised by TCS, India Bulls, Ashok Leyland etc. In their issues.

CAPITAL MARKET INSTRUMENTS

Capital market instruments are essentially classified into

- a. Primary market instruments;
- b. Secondary market instruments; and
- c. Derivatives.

Following are the modes of approaching capital markets:

- a. Equity shares;
- b. Preference shares;
- c. Debentures / Bonds;
- d. GDRs';
- e. ADRs';
- f. Derivatives, etc.

Issue Mechanism: The instruments are issued in the following modes:

A. **Public issue through Prospectus:** Under this method, the issuing companies themselves offer directly to general public a fixed number of shares at a stated price, which in the case of new companies is invariably the face value of the securities, and in the case of existing companies, it may sometimes include a premium also. Generally the issues are underwritten to ensure their success. Around a decade ago, this was the most common method of raising funds through capital market.

B. **Book Building:** Book building is a technique used for marketing a public offer of equity shares of a company. It is a way of raising more funds from the market. After the start of free pricing mechanism by the SEBI, the book building process has become a significant method of raising funds.

A company can use the process of book building to fine tune its price of issue. When a company employs book building mechanism, it does not pre-determine the issue price (in case of equity shares) or interest rate (in case of debentures) and invite subscription to the issue. Instead it starts with an indicative price band (or interest band) which is determined through consultative process with its merchant banker and asks its merchant banker to invite bids from prospective investors

at different prices (or different rates). Those who bid are required to pay the full amount. Based on the response received from investors the final price is selected. The merchant banker (called in this case Book Runner) has to manage the entire book building process. Investors who have bid a price equal to or more than the final price selected are given allotment at the final price selected. Those who have bid for a lower price will get their money refunded.

In India, there are two options for book building process. One, 25 per cent of the issue has to be sold at fixed price and 75 per cent is through book building. The other option is to split 25 per cent of offer to the public (small investors) into a fixed price portion of 10 per cent and a reservation in the book built portion amounting to 15 per cent of the issue size. The rest of the book-built portion is open to any investor. Further, shares may be issued to retail investors at some discount than other investors. Such discount should be specified in the prospectus.

The greatest advantage of the book building process is that this allows for price and demand discovery. Secondly, the cost of issue is much less than the other traditional methods of raising capital. In book building, the demand for shares is known before the issue closes. In fact, if there is not much demand the issue may be deferred and can be rescheduled after having realised the temper of the market.

Public issues are targeted at various segments of the investing fraternity. Companies allot certain portions of the offering to different segments so that everyone gets a chance to participate. The segments are classified into Qualified Institutional Bidders (QIBs), High Net worth Individuals (HNIs) and Retail Investors (general public). Indian companies now have to offer about 50% of the offer to QIBs, about 15% to HNIs' and the remaining 35% to retail investors. Earlier retail and HNIs' had 25% each. Also the QIBs are allotted shares on a pro-rata basis as compared to the earlier norm when it was at the discretion of the company management and the investment bankers. These investors (QIB) also have to pay 10% margin on application. This is also a new requirement. Once the offer is completed, the company gets listed and investors and shareholders can trade the shares of the company in the stock exchange.

QIBs': QIBs' include Scheduled banks, FIs', Mutual Funds, Venture capital funds, Insurance Cos., PF funds, Pension Funds etc.

- C. **Offer for Sale:** Offer for sale is also known as bought out deal (BOD). It is a new method of offering equity shares, debentures etc., to the public. In this method, instead of dealing directly with the public, a company offers the shares/debentures through a sponsor. The sponsor may be a commercial bank, merchant banker, an institution or an

individual (HNI). It is a type of wholesale sale of equities by a company. A company allots shares to a sponsor at an agreed price between the company and sponsor. The sponsor then passes the consideration money to the company and in turn gets the shares duly transferred to him. After a specified period as agreed between the company and sponsor, the shares are issued to the public by the sponsor with a premium. After the public offering, the sponsor gets the shares listed in one or more stock exchanges. The holding cost of such shares by the sponsor may be reimbursed by the company or the sponsor may get the profit by issue of shares to the public at premium.

Thus, it enables the company to raise the funds easily and immediately. As per SEBI guidelines, no listed company can go for BOD. A privately held company or an unlisted company can only go for BOD. A small or medium size company which needs money urgently chooses to BOD.

This is a low cost method of raising funds. The cost of public issue is around 8% in India. But this method lacks transparency. There will be scope for misuse also. Besides this, it is expensive like the public issue method. One of the most serious short coming of this method is that the securities are sold to the investing public usually at a premium. The margin thus between the amount received by the company and the price paid by the public does not become additional funds of the company, but it is pocketed by the issuing houses or the existing shareholders. Public sector undertakings divestment is usually done through this method.

- D. **Placement Method:** Under this method, securities are acquired by the issue houses, as in offer for sale method, but instead of being subsequently offered to the public, they are placed with the clients of the issue houses, both individual and institutional investors. Each issue house has a list of large private and institutional investors who are always prepared to subscribe to any securities which are issued in this manner. Its procedure is the same with the only difference of ultimate investors.
- E. **Rights Issue:** This method can be used only by the existing companies. In this case shares are issued by existing companies to existing share holders.

(GDRs' and ADRs' are discussed in FII, FDI & IFM Chapter.)

Derivatives: A derivative is a financial instrument which derives its value from some other financial price. This 'other financial price' is called the

underlying. A derivative is defined as a contract that has all the following characteristics:

- a. Its value changes in response to a specified underlying, e.g. an exchange rate, interest rate or share price;
- b. It requires little or no initial net investment;
- c. It is settled at a future date;

Users of Derivatives and Purpose:

	Users	Purpose
1	Corporates	To hedge currency risk and inventory risk
2	Individuals	For speculation, hedging and increasing yield
3	Institutions	For hedging assets, to benefit from arbitrage opportunities, to increase yields
4	Dealers	For hedging, exploiting inefficiencies and earning dealer spreads.

Differences between Cash and Derivatives Market:

- a. In cash market tangible assets are traded whereas in derivative market contracts based on tangible or intangibles assets like index or rates are traded.
- b. In cash market, we can purchase even one share whereas in Futures and Options minimum lots are fixed.
- c. Cash market is more risky than Futures and Options segment because in "Futures and Options" risk is limited upto 20%.
- d. Cash assets may be meant for consumption or investment. Derivate contracts are for **hedging, arbitrage or speculation**.
- e. The value of derivative contract is always based on and linked to the underlying security. However, this linkage may not be on point-to-point basis. No such thing in cash market.
- f. In the cash market, a customer must open securities trading account with a securities depository whereas to trade futures a customer must open a future trading account with a derivative broker.
- g. Buying securities in cash market involves putting up all the money upfront whereas buying futures simply involves putting up the margin money.
- h. With the purchase of shares of the company in cash market, the holder becomes part owner of the company. While in future it does not happen.

Significance of underlying: Underlying can be a share, commodity, index, or even abstract things like weather, temperature, rainfall etc. Which are subject to risks.

- a. For derivatives, value of underlying is very important as its value has a relation with the value of the underlying.

- b. The change in value in a forward contract is broadly equal to the change in value in the underlying.
- c. In the absence of a valuable underlying asset the derivative instrument will have no value.
- d. On maturity, the position of profit / loss is determined by the price of underlying instruments. If the price of the underlying is higher than the contract price the buyer makes a profit. If the price is lower, the buyer suffers a loss.

Embedded Derivatives: An embedded derivative is a derivative instrument that is embedded in another contract called the host contract. The host contract might be a debt or equity instrument, a lease, an insurance contract or a sale or purchase contract. Derivatives require to be marked – to – market through the income statement, other than qualifying hedging instruments. This requirement on embedded derivatives are designed to ensure that mark – to – market through the income statement cannot be avoided by including – embedding – a derivative in another contract or financial instrument that is not marked-to market through the income statement.

Suppose Kareena Ltd. enters into a contract to issue a bond, and the payment of interest and principal of the bond is indexed with the price of gold. Here, the payment will increase or decrease according to the movement in the price of gold; and the debt instrument is host contract with an embedded derivative and the total contract is called a hybrid contract.

An embedded derivative can arise from deliberate financial engineering and intentional shifting of certain risks between parties. Many embedded derivatives, however, arise inadvertently through market practices and common contracting arrangements. Even purchase and sale contracts that qualify for executory contract treatment may contain embedded derivatives.

Derivatives are subjected to the following risks:

- a. **Credit risk:** Credit risk is the risk of loss due to counterparty's failure to perform on an obligation to the institution. Credit risk is of two forms: Pre settlement risk and settlement risk.
- b. **Market risk:** Market risk is the risk of loss due to adverse changes in the market value (the price) of an instrument or portfolio of instruments.
- c. **Liquidity risk:** Liquidity risk is the risk of loss due to failure of an institution to meet its funding requirements or to execute a transaction at a reasonable price. Derivatives have two types of liquidity risks:
 - i. Market liquidity risk; (Not able to sell the assets) and

- ii. Funding liquidity risk: (Non availability of cash)
- d. Operational risk:** Operational risk is the risk of loss due to inadequate systems and control, deficiencies in information systems, human error, or management failure.
- e. Legal risk:** Legal risk is the risk of loss arising from contracts which are not legally enforceable (e.g. the counterparty does not have the power or authority to enter into a particular type of derivatives transaction)
- f. Regulatory risk:** Regulatory risk is the risk of loss arising from failure to comply with regulatory or legal requirements. Eg. Non stamping of documents where required etc.
- g. Reputation risk:** Reputation risk is the risk of loss arising from adverse public opinion and damage to reputation.
(Also see the note in Forex Chapter.)

Forward Contracts: A forward contract is an agreement between a buyer and a seller obligating the seller to deliver a specified asset of specified quality and quantity to the buyer on a specified date at a specified place and the buyer, in turn, is obligated to pay to the seller a pre-negotiated price in exchange of the delivery. These are tailor-made futures contracts.

Future Contracts: A futures contract is an agreement between two parties that commits one party to buy an underlying financial instrument (bond, stock or currency) or commodity (gold, soybean or natural gas) and one party to sell a financial instrument or commodity at a specific price at a future date. The agreement is completed at a specified expiration date by physical delivery or cash settlement or offset prior to the expiration date. In order to initiate a future contract, the seller and buyer should put margin monies. (Also see the note in Forex Chapter)

Forward Vs. Future Contracts:

Sl. No.	Feature	Forward	Future
1	Trading	Forward contracts are traded on personal basis on telephone etc.	Future contracts are traded in competitive environment
2	Size	No standard size	Standardised sizes
3	Organised Exchanges	Traded in over the counter market	Traded in organised exchanges at designated locations.
4	Settlement	Takes place on the date agreed by parties	Takes place daily through exchange clearing house.
5	Delivery date	Delivery to be made as per agreed terms	Delivery dates are fixed in cycles.
6	Transaction costs	Based on bid and ask spreads	Brokerage fee is there on both buy and sell orders

7	Mark to Market	No such procedure	Mark to market is done on daily basis
8	Margins	No margins are required	Margins are required.
9	Credit risk	Credit risk is born by each party	No credit risk.

Stock Futures Contract: A stock futures contract is an agreement to buy or sell shares or stock such as ITC, or Tata Steel at a point of time in the future with terms decided now. The buyer has an obligation to purchase shares or stock and the seller has an obligation to sell shares or stock at a specific price at a specific date in the future. That is, a stock futures contract is a standardised contract to buy or sell a specific stock at a future date at an agreed price. The underlying is a stock. Single-stock futures contracts are completed by offset or the delivery of actual shares at expiration. Margin on a single-stock futures contract is normally around 20% of notional value. Stock future contracts are normally standardised (i.e. they are traded in fixed lots.)

Future trading Vs. Stock future trading: The advantages of stock futures trading are:

- a. **Leverage:** Compared to buying stock on margin, investing in futures is less costly. An investor can use leverage to control more stock with a smaller cash outlay.
- b. **Ease of Shorting:** Taking a short position in futures is simpler, and less costly and may be executed at any time.
- c. **Flexibility:** Future investors can use the instruments to speculate, hedge, spread etc.
- d. **Risk management tool:** When used efficiently, single-stock futures can be effective risk management tool. For instance, an investor with position in cash segment can minimize either market risk or price risk of the underlying stock by taking reverse position in an appropriate futures contract.

Disadvantages of stock futures trading are:

- a. **Risk:** An investor who is long in a stock can only lose what he has invested in normal stock trading. In a stock future contract, there is the risk of losing significantly more than the initial investment (margin deposit).
- b. **No Stock-holder Privileges:** The future owner has no voting rights and no rights to dividends and bonus.
- c. **Required Vigilance:** Stock Futures are investments that require investors to monitor their positions more closely. Because future accounts are marked to the market every business day, there is the

possibility that the brokerage firm might issue a margin call, requiring the investor to decide whether to quickly deposit additional funds or liquidate the position.

Stock futures settlement price is the closing price of the underlying stock. Stock futures are settled by delivery, i.e., by merging derivatives position into cash segment.

Stock Index Futures: A contract for stock index futures is based on the level of a particular stock index such as NIFTY or BSE sensex. The agreement calls for the contract to be bought or sold at a designated time in the future. Just as hedgers and speculators buy and sell futures contracts and options based on a future price of corn, foreign currency, etc, they may buy and sell such contracts based on the level of a number of stock indexes.

Stock index futures may be used to either speculate on the equity market's general performance or to hedge a stock portfolio against a decline in value. Stock index futures are traded in terms of number of contracts. Each contract is to buy or sell a fixed value of the index. The value of the index is defined as the value of the index multiplied by the specified monetary amount.

Mechanics of Futures Trading: Like most other financial instruments, futures contracts are traded on recognised exchanges. In India, both the NSE and the BSE have introduced index futures in the S&P CNX Nifty and the BSE Sensex. The operations are similar to that of the stock market, the exception being that, in index futures, the marking-to-market principle is followed, that is, the portfolios are adjusted to the market values on a daily basis.

Reasons for stock index futures becoming more popular financial derivatives over stock futures

- a. It adds flexibility to one's investment portfolio. Institutional investors and other large equity holders prefer this instrument in terms of portfolio hedging purpose in lieu individual stock hedging.
- b. It creates the possibility of speculative gains using leverage. Because a relatively small amount of margin money controls a large amount of capital represented in a stock index contract, a small change in the index level might produce a profitable return on one's investment if one is right about the direction of the market. Speculative gains in stock futures are limited but liabilities are greater.
- c. Stock index futures are the most cost efficient hedging device whereas hedging through individual stock futures is costlier.
- d. Stock index futures cannot be easily manipulated whereas individual stock price can be exploited more easily.
- e. Since, stock index futures consists of many securities, so being an

average stock, is much less volatile than individual stock price. Further, lower margin requirements are required in comparison of individual stock futures.

- f. Risk diversification is possible under stock index future than in stock futures.
- g. Margin for buying and selling the index futures is same.
- h. In case of individual stocks the outstanding positions are settled normally against physical delivery of shares. In case of stock index futures they are settled in cash all over the world on the premise that index value is safely accepted as the settlement price.
- i. It is also seen that regulatory complexity is much less in the case of stock index futures in comparison to stock futures.
- j. It provides hedging or insurance protection for a stock portfolio in a falling market.

Valuation of Forward and Future Contracts: The difference between the prevailing price and futures price is known as basis.

$$\text{Basis} = \text{Spot Price} - \text{Future Price}$$

In a normal market, spot price will be less than future price as future price includes cost of carrying also. Further, apart from carrying cost the future price may also change due to dividends etc. So,

$$\text{Future price} = \text{Spot price} + \text{carrying cost} - \text{returns (dividends etc.)}$$

Cost of carrying normally means interest charge for the period of holding. In case of derivatives, interest is calculated on the basis of **continuous compounding rate**. In the case of annual compounding, forward price is calculated by the formula:

$$A = P (1+r/100)^t$$

Where A is the terminal value for an investment of P at r rate of interest per annum for t years. In case interest is compounded n times in a year, then,

$$A = P (1+r/100n)^{nt}$$

In case the compounding is more than once on daily basis, then the formula stands modified as:

$$A = P e^{rn}$$

Where e is called epsilon, a constant and its value is taken as 2.72. In the above formula, no income flows from investment of P have been considered. In case any income flows are there, then they are to be deducted and the formula will be:

$$A = (P - I) e^{rn}$$

Where I is the present value of income inflow.

However, if the income accretion is in the form % yield y (like in index futures) then the formula is:

$$A = P e^{(r-y)n}$$

Options: An option is a claim without any liability. It is a claim contingent upon the occurrence of certain conditions and, therefore, option is a contingent claim. More specifically, an option is a contract that gives the holder a right, without any obligation, to buy or sell an asset at an agreed price on or before a specified period of time. The option to buy an asset is known as a call option and the option to sell an asset is called put option. The price at which option can be exercised is called as exercise price or strike price. The person who sells options is called Writer or Grantor. Based on exercising the option, primarily options are classified into two categories:

European Option: Option is to be exercised only on the maturity date.

American Option: Option is exercised any time before its maturity date.

When an option holder exercises his right to buy or sell it may have three possibilities.

- a. An option is said to be **in the money** when it is advantageous to exercise it.
- b. When exercise is not advantageous it is called **out of the money**.
- c. When option holder does not gain or lose it is called **at the money**.

Intrinsic and Time Value of Options: Intrinsic value of an option and the time value of an option are primary determinants of an option's price. By being familiar with these terms and knowing how to use them, one will find himself in a much better position to choose the option contract that best suits the particular investment requirements.

Intrinsic value is the value that any given option would have if it were exercised today. This is defined as the difference between the option's strike price (x) and the stock's actual current price ($c.p$). In the case of a call option, one can calculate the intrinsic value by taking $CP-X$. If the result is greater than Zero, then the result will be intrinsic value, else, it will be zero as the value of an option cannot be negative. To determine the intrinsic value of a put option, simply reverse the calculation to $X - Cp$.

Time Value: This is the second component of an option's price. It is defined as any value of an option other than the intrinsic value. From the above example, if Wipro is trading at Rs.105 and the Wipro 100 call option is trading at Rs.7, then we would conclude that this option has Rs.2 of time value ($Rs.7$ option price – $Rs.5$ intrinsic value = $Rs.2$ time value).

Options that have zero intrinsic value are comprised entirely of time value. Time value is basically the risk premium that the seller requires to provide the option buyer with the right to buy / sell the stock upto the expiration

date. This component may be regarded as the Insurance premium of the option. This is also known as "Extrinsic value."

Time value of option decays over time. In other words, the time value of an option is directly related to how much time an option has until expiration. The more time an option has until expiration, greater the chances of option ending up in the money.

TIME IS THE ALLY OF WRITER AND ENEMY OF OPTION BUYER SINCE IN THE LONG RUN GOOD STOCKS WILL USUALLY DO BETTER.

Swaptions: Swaptions have the features of two derivatives, viz. Swap and Option. A swaption is an option on an interest rate swap. It gives the buyer of the swaption the right but not obligation to enter into an interest rate swap of specified parameters (maturity of the option, notional principal, strike rate, and period of swap). Swaptions are traded over the counter, for both short and long maturity expiry dates, and for wide range of swap maturities.

The price of a swaption depends on the strike rate, maturity of the option, and expectations about the future volatility of swap rates.

The swaption premium is expressed as basis points.

Uses of Swaptions:

- a. Swaptions can be used as an effective tool to swap into or out of fixed rate or floating rate interest obligations, according to a treasurer's expectation on interest rates.
- b. Swap traders can use them for speculation purposes or to hedge a portion of their swap books. It is a valuable tool when a borrower has decided to do a swap but is not sure of the timing, especially while participating in tenders.
- c. Swaptions have become useful tools for hedging embedded option which is common in the natural course of many businesses.
- d. Swaptions are useful for borrowers targeting an acceptable borrowing rate. By paying an upfront premium, a holder of a payer's swaption can guarantee to pay a maximum fixed rate on a swap, thereby hedging his floating rate borrowings.

Valuation of Options: Options are valued under the following methods:

- A. **Binomial Model:** Under this method, option period is broken into several small time intervals. The price of a stock can go either up or down. Based on probabilities future prices of option at each time interval is ascertained and a decision tree is drawn. When the number of high and low value projections are numerous, the tree shall represent all possible paths that the stock price could take during the life of the option. At the end of the tree - i.e. at expiration

of the option - all the terminal option prices for each of the final possible stock prices are known as they simply equal their intrinsic values. The advantage of the binomial model over the Black-Scholes model is that it can be used to accurately price American options.

- B. **Risk neutral method:** The basic principle in the risk neutral approach is that since the valuation of options is based on arbitrage, it is therefore independent of risk preferences; one should be able to value options assuming any set of risk preferences and get the same answer as by using Binomial Model.
- C. **Black-Scholes Model:** As per this method, option price is equal to the amount an option writer requires as compensation for writing a call and completely hedging the risk of buying stock. The hedger's view about future stock prices is irrelevant as he will totally hedge and becomes risk neutral. So, if two investors disagree on the return they can expect on a stock, they will always agree on the fair value of the option of the underlying asset, provided they agree on volatility and the risk free rate. It means that all derivatives can be valued by assuming that the return from their underlying assets is the risk free rate. This model is based on the following assumptions:
 - a. European Options are considered.
 - b. No transaction costs
 - c. Short term interest rates are known and are constant
 - d. Stocks do not pay dividend.
 - e. Stock price movement is similar to a random walk.
 - f. The variance of the return is constant over the life of an Option

The formula for option price is:

$$OP = S N(d1) - X N(d2) / e^{rt}, \text{ And}$$

$$d1 = [\ln (S/X) + (r + v^2 / 2) t] / v t^{1/2}$$

$$d2 = [\ln (S/X) + (r - v^2 / 2) t] / v t^{1/2} = d1 - vt^{1/2} \text{ where,}$$

S = Current Stock Price

X = Strike Price,

r = Continuously Compounded Risk free Interest Rate

t = Balance period of option expressed as percentage,

N(d1) = Normal distribution of d1

n(d2) = Normal distribution of d2

ln = Natural Logarithm

e = exponential constant with value 2.72,

v = Volatility of stock, i.e. Standard Deviation

N(d1) is the hedge ratio of stock to options, to keep the writer hedged and N(d2) / e^{rt} is Present Value of the borrowing.

Greeks: Greeks are statistical values expressed in percentages which help the investor to take better decisions and adopt right strategies. As these are based on historical values, limitations of using historical data exist and future may not replicate history.

- a. **Delta:** This indicates the degree to which an option price will change for a small change in the price of the stock. A deeply out-of-the-money call will have a delta very close to zero; a deeply in-the-money call will have a delta very close to 1.

Delta is usually called hedge ratio and calculated by the formula:

$$d1 = [\ln (S/X) + (r + v^2 / 2) t] / v t^{1/2}$$

of Black Schole. Call deltas are positive and put deltas are negative.

- b. **Gamma:** It measures how fast the delta changes for small changes in the underlying stock price. i.e. the delta of the delta. This should be as low as possible since any high value of this will lead the hedge (Delta) to go for a toss.
- c. **Theta:** This shows the change in option price given a one day decrease in time to expiration. Basically it is a measure of time decay.
- d. **Rho:** This shows the change in option price given a one percentage point change in the risk-free interest rate. It is sensitivity of option value to change in interest rate.
- e. **Vega:** This shows the Sensitivity of option value to change in volatility. Vega indicates an absolute change in option value for a one percent change in volatility.

Straddles: This is an options strategy with which the investor holds a position in both a call and put with the same strike price and expiration date. Straddles are a good strategy to pursue if an investor believes that a stock's price will move significantly, but is unsure as to which direction. The stock price must move significantly if the investor is to make a profit. If it does not move, investor will end up making premium payment.

Strangle: This options strategy involves buying an out-of-the-money call and an out-of-the-money put option. A strangle is generally less expensive than a straddle as the contracts are purchased out of the money.

For example, imagine a stock currently trading at Rs. 50 a share. To employ the strangle option strategy a trader enters into two option positions, one call and one put. Say the call is for Rs. 55 and costs Rs. 300 (Rs. 3.00 per option x 100 shares) and the put is for Rs. 45 and costs Rs. 285 (Rs. 2.85 per option x 100 shares). If the price of the stock stays between Rs. 45 and Rs. 55 over the life of the option the loss to the trader will be Rs. 585 (total

cost of the two option contracts). The trader will make money if the price of the stock starts to move outside the range.

Butterflies: An option strategy combining a bull and bear spread. It uses three strike prices. The lower two strike prices are used in the bull spread, and the higher strike price in the bear spread. Both puts and calls can be used. This strategy has limited risk and limited profit.

Interest rate Swap: A swap is a contractual agreement between two parties to exchange, future payment streams based on differences in the returns to different securities or changes in the price of some underlying item. Interest rate swaps constitute the most common type of swap agreement. In an interest rate swap, the parties to the agreement, termed the swap counterparties, agree to exchange payments indexed to two different interest rates. Total payments are determined by the specified notional principal amount of the swap, which is never actually exchanged. Financial intermediaries, such as banks, pension funds, and insurance companies, as well as non-financial firms use interest rate swaps to effectively change the maturity of outstanding debt or that of an interest-bearing asset. Swaps grew out of parallel loan agreements in which firms exchanged loans denominated in different currencies.

Suppose Aiswarya with good credit rating can borrow @ fixed rate of 10% or at variable rate of LIBOR + .3% and intends to borrow at variable rate. Abhishek with lesser credit rating can borrow @ 11% fixed rate or @ LIBOR + .5% variable rate and intends to borrow at fixed rate.

Now, both parties can benefit by a swap arrangement as under:

Aiswarya borrows @ fixed rate of 10%.

Abhishek borrows @ LIBOR + .5%.

Both parties borrow equal amounts.

Aiswarya and Abhishek agree for swapping of their interest commitments.

Abhishek will pay fixed interest @ 10.1% to Aiswarya and receives LIBOR From Aiswarya.

For Aiswarya:

Borrowing rate	10%
Received from Abhishek	10.1%
Pays to Abhishek	LIBOR
So, net interest cost	10.1% - 10% - LIBOR
	LIBOR - .1%

Therefore Savings is .4%

For Abhishek:

Borrowing rate LIBOR + .5%

Received from Aiswarya LIBOR

Paid to Aiswarya 10.1%

So, net interest cost LIBOR + .5% + 10.1% - LIBOR
= 10.6%

Therefore, savings .40%

Thus, both Aiswarya and Abhishek get benefitted by swapping.

Generic Swap (Plain Vanilla Swap): This is the earliest kind of derivatives. It implies simple swapping of fixed rate and floating rate interest payments. In the case of generic swaps, fixed interest payments are based on 30/360 days count convention. In case of an All In Cost (AIC) swap, fixed interest payment is calculated by the formula:

$$\text{Fixed Interest Payment} = N * AIC * 180 / 360$$

Where N denotes notional principal amount.

Floating interest payment is calculated by the formula:

$$\text{Floating Interest Payment} = N * LIBOR * d_t / 360$$

Where, d_t indicates days lapsed since the last settlement.

In case, the payments are settled on net basis, then only the difference of interests is exchanged between the parties.

Merchant Bankers: The basic function of merchant banker or investment banker is marketing of corporate and other securities. In the process, he performs a number of services concerning various aspects of marketing, viz., origination, underwriting, and distribution, of securities. Now, merchant bankers are designing innovative instruments and perform a number of other services both for the issuing companies as well as the investors. The activities or services performed by merchant bankers, in India, today include:

- a. Project promotion services.
- b. Project finance.
- c. Management and marketing of new issues.
- d. Underwriting of new issues.
- e. Syndication of credit.

- f. Leasing services.
- g. Corporate advisory services.
- h. Providing venture capital.
- i. Operating mutual funds and off shore funds.
- j. Portfolio management services.
- k. Bought out deals.
- l. Providing assistance for technical and financial collaborations and joint ventures.
- m. Management of and dealing in commercial paper.
- n. Investment services for non-resident Indians.

(Also see the note in Financial services chapter)

Securitisation:

Securitisation is a process of transformation of illiquid asset into security which may be traded later in the open market. It is the process of transformation of the assets of a lending institution into negotiable instruments. The term 'securitisation' refers to both switching away from bank intermediation to direct financing via capital market and / or money market (i.e. conversion of loans into equity), and the transformation of a previously illiquid asset like automobile loans, mortgage loans, trade receivables, etc. into marketable instruments.

This is a method of recycling of funds. It is beneficial to financial intermediaries, as it helps in enhancing lending funds. Future receivables, EMIs and annuities are pooled together and transferred to a special purpose vehicle (SPV). These receivables of the future are shifted to mutual funds and bigger financial institutions. This process is similar to that of commercial banks seeking refinance with NABARD, IDBI, etc.

Debt Securitisation: Assets generating steady cash flows are packaged together and against this assets pool market securities can be issued. The process can be classified into the following three functions.

The origination function: A borrower seeks a loan from finance company, bank or housing company. On the basis of credit worthiness repayment schedule is structured over the life of the loan.

The pooling function: Similar loans or receivables are clubbed together to create an underlying pool of assets. This pool is transferred in favour of a SPV (Special Purpose Vehicle), which acts as a trustee for the investor. Once, the assets are transferred they are held in the organisers portfolios.

The securitisation function: It is the SPV's job to structure and issue the securities on the basis of asset pool. The securities carry coupon and an expected maturity, which can be asset based or mortgage based. These are generally sold to investors through merchant bankers. The investors interested in this type of securities are generally institutional investors like mutual fund, insurance companies etc. The originator usually keeps the spread.

Generally, the process of securitisation is without recourse i.e. the investor bears the credit risk of default and the issuer is under an obligation to pay to investors only if the cash flows are received by issuer from the collateral.

Buyback of Shares: Initially buyback of shares was not permitted by Indian laws as it amounts to reduction share capital. Now the buyback of shares is permitted subject to compliance of certain guidelines of the Government and as per the provisions of the Companies Act.

Buyback is done under two methods Viz., tender method and / or open purchase from market method. The company, under the tender method, offers to buy back shares at a specific price during a specified period which is usually one month. Under the open market purchase method, a company buys shares from the secondary market over a period of one year subject to a maximum price fixed by the management. Companies seem to now have a distinct preference for the open market purchase method as it gives them greater flexibility regarding time and price.

Due to buyback, the P/E ratio may change. The P/E ratio may rise if investors view buyback positively or it may fall if the investors regard buyback negatively.

Buyback is done due to various reasons:

- a. To return excess cash to shareholders, in absence of appropriate investment opportunities.
- b. To give a signal to the market that shares are undervalued.
- c. For efficient allocation of resources.
- d. For ensuring price stability in share prices.
- e. To change the capital structure.
- f. For taking tax advantages.
- g. For exercising control over the company.
- h. For saving from hostile takeover.
- i. To provide capital appreciation to investors this may otherwise be not available.

This, however, has some disadvantages also like, manipulation of share prices by its promoters, speculation, collusive trading etc.

This procedure was / is being adopted by Reliance, Bajaj Auto, Ashok Leyland etc.

Insider Trading: The insider is any person who accesses the price sensitive information of a company before it is published to the general public. The meaning of insider is wide and includes corporate officers, directors, owners of firm etc. who have substantial interest in the company. Even, persons who have access to non-public information due to their relationship with the company such as internal or statutory auditor, agent, advisor, analyst consultant etc. Could be treated as insiders.

Insider trading is the act of buying or selling or dealing in securities by a person having unpublished inside information with the intention of making abnormal profits and avoiding losses.

This inside information includes dividend declaration, issue or buy back of securities, amalgamation, mergers or take over, major expansion plans etc.

Insider trading practices are lawfully prohibited. The regulatory bodies in general are imposing different fines and penalties for those who indulge in such practices. Based on the recommendation of Sachar Committee and Patel Committee, SEBI has framed various regulations and implemented the same to prevent the insider trading practices.

Insider trading which is an unethical practice resorted by those in power in corporates has manifested not only in India but elsewhere in the world causing huge losses to common investors thus driving them away from capital market. Therefore, it is punishable.

Stock Lending: In 'stock lending', the legal title of a security is temporarily transferred from lender to borrower. However, the lender retains all the benefits of ownership like dividends, bonus etc. Except the voting rights. The borrower is entitled to utilize the securities as required but is liable to the lender for all benefits.

A securities lending programme is used by the lenders to maximize yields on their portfolio. Borrowers use the securities lending programme to avoid settlement failures. Securities lending provide income opportunities for security-holders and creates liquidity to facilitate trading strategies for borrowers. It is particularly attractive for large institutional shareholders as it is an easy way of generating income to offset custody fees and requires little involvement of time. It facilitates timely settlement, increases the settlements, reduces market volatility and improves liquidity.

The borrower deposits collateral securities with the approved, intermediary. In case the borrower fails to return the securities, he will be declared a

defaulter and the approved intermediary will liquidate the collateral deposited with it. In the event of default, the approved intermediary is liable for making good the loss caused to the lender. The borrower cannot discharge his liabilities of returning the equivalent securities through payment in cash or kind.

National Securities Clearing Corporation Ltd. (NSCCL) launched its stock lending operations (christened Automated Lending & Borrowing Mechanism – ALBM) on February 10, 1999. Stock Holding Corporation of India, Deutsche Bank and Reliance are the other three stock lending intermediaries registered with SEBI.

Under NSCCL system only dematerialized stocks are eligible for lending. The NSCCL'S stock lending system is screen based, thus instantly opening up participation from across the country wherever there is an NSE trading terminal. The transactions are guaranteed by NSCCL and the participating members are the clearing members of NSCCL. The main features of NSCCL system are:

- a. The session will be conducted every Wednesday on NSE screen where borrowers and lenders enter their requirements either as a purchase order indicating an intention to borrow or as sale, indicating intention to lend.
- b. Previous day's closing price of a security will be taken as the lending price of the security.
- c. The fee or interest that a lender gets will be market determined and will be the difference between the lending price and the price arrived at the ALBM session.
- d. Corresponding to a normal market segment, there will be an ALBM session.
- e. Funds towards each borrowing will have to be paid in on the securities lending day.
- f. A participant will be required to pay-in-funds equal to the total value of the securities borrowed.
- g. The same amount of securities has to be returned at the end of the ALBM settlement on the day of the pay-out of the ALBM settlement.
- h. The previous day's closing price is called the lending price and the rate at which the lending takes place is called the lending fee. This lending fee alone is determined in the course of ALBM session.
- i. Fee adjustment shall be made for any lender not making full delivery of a security. The lender's account shall be debited for the quantity not delivered.
- j. The borrower account shall be debited to the extent of the securities not lend on account of funds shortage.

ESOS Vs. ESPS:

Sl. #	Feature	E S O S	E S P S
1	Meaning	Co. Grants an option to the employee to buy shares	Co. Offers shares to employees on firm allotment basis as part of a public issue.
2	Auditor Certificate	Auditor Certificate is to be placed at each AGM	No such requirement.
3	Transferability	Not transferrable	Transferrable after lock in period.
4	Consequences of failure	If the option is not vested due non fulfilment of conditions, The amount payable may be refunded.	Not applicable.
5	Lock in Period	Minimum period of 1 year shall be there between the grant and vesting of options. Company is free to specify the lock in period for the shares issued pursuant to exercise of option.	One year from the date of allotment. If the ESPS is part of public issue and the shares are issued to employees at the same price as in the public issue, the shares issued to employees pursuant to ESPS shall not be subject to any lock in.

Advantages of holding securities in Demat Form: Shares can be transacted on stock exchanges only in demat (scripless) form. We have two depositories viz., NSDL & CDSL. The investor has to open a demat account with any or both of these to participate in primary and / or secondary markets. With depositories in place, several problems that were encountered earlier have been overcome. Following are the advantages:

- a. It is speedier and avoids delay in transfers.
- b. It avoids lot of paper work.
- c. Enhances safety of holdings and turnovers in stock market.
- d. Reduction in transaction costs.
- e. Eliminates forgeries and counterfeit certificates. (D C Case)
- f. It saves on stamp duty, however attracts STT on transfers.
- g. Savings in printing certificates, postage expenses.
- h. Easy monitoring of buying / selling patterns in securities, increasing ability to stop takeover attempts and attempts at price rigging.
- i. No bad deliveries.
- j. Facilitates stock lending.
- k. Odd lots problem is overcome.
- l. Even single shares can be bought or sold.

- m. Reduces the cost of secretarial department.
- n. Facilitates easy reconciliation of shares.
- o. Enhances the efficiency of registrars and transfer agents.
- p. Communication with members is easy for corporate.
- q. Can be easily pledged as securities with authentication (D C Case)

Depository: A depository is an organization where the securities of a shareholder are held in the form of electronic accounts in the same way as a bank holds money. The depository holds electronic custody of securities and also arranges for transfer of ownership of securities on the settlement dates. The depositories in India are NSDL & CDSL. The depository is a safe keeper of securities for and on behalf of the investors. All corporate benefits such as Dividends, Bonus, Rights etc. are issued to security holders as were used to be issued in case of physical form.

Major players of Depository System:

- a. Depository;
- b. Depository participant;
- c. Corporate;
- d. Investors,
- e. Stock brokers,
- f. Clearing corporation;
- g. Government,
- h. Banks & Financial institutions,

Depository Participant: Depository participant (DP) is an intermediary between the investor and the depository. DPs' are brokers through whom investors can participate in primary and secondary markets. Further, it is through DPs' we can dematerialise or rematerialise our holdings.

Arbitrage Operations: Arbitrage is the buying and selling of the same commodity or share or currency etc. in two different markets with a view to make profits due to price differentials. As the purchase and sale transactions are entered simultaneously, risk on investment in these transactions is very low with only positive returns. For example, a customer can gain from arbitrage operation by purchase of Infosys shares in Indian market and selling Infy shares at Nasdaq. Similarly, he can buy USD in India and sell them in London if price difference is favourable.

LIBOR: LIBOR stands for London Inter Bank Offer Rate. This is the indicative rate at which interbank loans are transacted in London. This rate is fixed by a small group of individuals once in a day. Other features are:

- a. It is used as the base rate for a large number of financial products

such as options and swaps.

- b. Banks also use the LIBOR as the base rate when setting the interest rate on loans, savings and mortgages.
- c. It is monitored by a large number of professionals and private individuals world-wide.

Marking to Market: This is the process of recording the investments in traded securities (shares, debt-instruments, etc.) at a value, which reflects the market value of securities on the reporting date. Future contracts are marked to market on daily basis. Marking to market essentially means that at the end of a trading session, all outstanding contracts are repriced at the settlement price of that session. Unlike the forward contracts, the future contracts are repriced every day. Any loss or profit resulting from repricing would be debited or credited to the margin account of the broker. This provides an opportunity to calculate the extent of liability on the basis of repricing. This enables to exercise better risk management on future contracts as compared to forward contracts.

Suppose on 1st day we take a long position, say at a price of Rs. 100 to be matured on 7th day. Now on 2nd day if the price goes up to Rs. 105, the contract will be repriced at Rs. 105 at the end of the trading session and profit of Rs. 5 will be credited to the account of the buyer. This profit of Rs. 5 may be drawn and thus cash flow also increases. This marking to market will result in three things – one, you will get a cash profit of Rs. 5; second, the existing contract at a price of Rs. 100 would stand cancelled; and third you will receive a new futures contract at Rs. 105. In essence, the marking to market feature implies that the value of the futures contract is set to zero at the end of each trading day.

Generally margin is calculated by the formula:

$$\text{Initial margin} = D + 3 SD$$

Where, D = Daily Avg. Price, and SD is Standard Deviation of the instrument. Further maintenance margin is fixed below (say 25% below) initial margin and whenever, margin in the account falls below maintenance margin, it has to be replenished by the investor to bring it back to initial margin level.

COMMODITY DERIVATIVES

Unlike stock markets where shares are traded, in commodity exchanges, commodities like metals, energy, oils, pulses, produce etc. Are traded. Following attributes are essential for trading in commodity derivatives:

- a. Commodity should be durable and it should be possible to store it;
- b. Units must be homogeneous;

- c. Commodity must be subject to frequent price fluctuations with wide amplitude;
- d. supply and demand must be large;
- e. Supply must flow naturally to market

We have 4 commodity exchanges in India.

- a. National Commodity and Derivatives Exchange (NCDEX)
- b. Multi Commodity Exchange (MCX):
- c. Indian Commodity Exchange (ICEX):
- d. National Multi-Commodity Exchange of India (NMCE):

Special characteristics/benefits of Commodity derivatives trading are:

- a. To complement investment in companies that use commodities;
- b. To invest in a country's consumption and production;
- c. No dividends, only returns from price increases

Some of the advantages of commodity markets are:

- a. Most money managers prefer derivatives to tangible commodities;
- b. Less hassle (delivery, etc);
- c. Allows indirect investment in real assets that could provide an additional hedge against inflation risk.

OTC DERIVATIVES

An over the counter (OTC) derivative is a derivative contract which is privately negotiated. OTC trades generally do not go through a clearing corporation. Every derivative product can either be traded on OTC (i.e., through private negotiation), or on an exchange. OTC derivatives are:

- a. Over-the-counter (OTC) interest rate derivatives include instruments such as forward rate agreements (FRAs), interest rate swaps, caps, floors, and collars.
- b. Forward Rate Agreements (FRA) is an agreement between two parties through which a borrower/ lender protects itself from the unfavourable changes to the interest rate.
- c. Swaps
- d. Swaptions etc.

Caps, Floors and Collars

Cap: It is a series of call options on interest rate covering a medium-to-long term floating rate liability. Purchase of a Cap enables borrowers to fix in advance a maximum borrowing rate for a specified amount and for a

specified duration, while allowing him to avail benefit of a fall in rates. The buyer of Cap pays a premium to the seller of Cap. Eg. An Indian entity borrowing on million USD may enter into cap contract to fix the interest payments.

Floor: It is a put option on interest rate. Purchase of a Floor enables a lender to fix in advance, a minimal rate for placing a specified amount for a specified duration, while allowing him to avail benefit of a rise in rates. The buyer of the floor pays the premium to the seller. Eg. An investor depositing one million dollars in a US Bank as FD may enter into a floor contract to protect the interest receipts over the duration of the deposit.

Collars: It is a combination of a Cap and Floor. The purchaser of a Collar buys a Cap and simultaneously sells a Floor. A Collar has the effect of locking the interest payments into a floating rate of interest that is bounded on both high side and the low side. Collars limit the buyer to take benefit when the interest rates decline significantly. In a way this is similar to the position of a person having a strangle contract though not exactly.

Caps and Floors Versus Swaptions

Caps and floors have multiple exercise dates whereas swaption has only one exercise date.

Once a swaption is exercised, all the cash flows on the underlying IRS of the swaption will occur. But in case of caps and floors there will be multiple cash flows

Another difference between the instruments is the fact that once a swaption is exercised, the holder has entered into a swap. This swap will have been entered into at a favourable rate, but the holder can still lose money if the rates move against him. When a cap is exercised, the holder can never lose money.

Questions:

1. Write a note about the functions of merchant bankers.
2. Write short note on Asset Securitisation.
3. Write a note on buy-back of shares by companies.
4. Briefly explain 'Buy Back of Securities' and give the management objectives of buying Back Securities.
5. Explain the term 'Insider Trading' and why Insider Trading is punishable.
6. Write short note on Stock Lending Scheme.

7. Write a short note on 'Book building'.
8. Explain the term "Offer for Sale".
9. Explain the terms ESOS and ESPS with reference to the SEBI guidelines for The Employees Stock Option Plans (ESOPs).
10. What is the procedure for the book building process? Explain the recent changes made in the allotment process.
11. Explain briefly the advantages of holding securities in 'demat' form rather than in physical form.
12. Write short note on Debt Securitisation.
13. Write short note on Stock Lending Scheme – its meaning, advantages and risk involved.
14. How is a stock market index calculated? Indicate any two important stock market indices.
15. What is a depository? Who are the major players of a depository system? What advantages does the depository system offer to the clearing member?
16. Write a short note on depository participant.
17. Write short note on Advantages of a depository system.
18. Write short note on Green shoe option.
19. What are derivatives?
20. Who are the users and what are the purposes of use of derivatives?
21. Enumerate the basic differences between cash and derivatives market.
22. What is the significance of an underlying in relation to a derivative instrument?
23. Distinguish between Forward and Futures contracts.
24. Distinguish between Intrinsic value and Time value of an option.
25. What are Stock futures?
26. What are the opportunities offered by Stock futures?
27. How are Stock futures settled?
28. What is a "derivative"?
29. Write short note on Marking to market.
30. What are the reasons for stock index futures becoming more popular financial derivatives over stock futures segment in India?
31. Write short note on Options.
32. What are the features of Futures Contract?
33. Give the meaning of 'Caps, Floors and Collars' options.
34. What do you know about swaptions and their uses?
35. Explain the significance of LIBOR in international financial transactions.
36. Write short note on Embedded derivatives
37. Write short note on Arbitrage operations
38. Write short note on Rolling settlement.
39. Write short note on the functions of a stock exchange.
40. Write short note on Interest Swap



P V Ram,
B. Sc., ACA, ACMA,
Hyderabad
98481 85073