CHAPTER - VII
SEBI AND FINANCIAL DERIVATIVES MARKET
CHAPTER VII
SEBI AND FINANCIAL DERIVATIVES MARKET

I. INTRODUCTION:

Derivatives involving agricultural commodities and precious metals like gold and silver have been in existence for a very long time, perhaps for centuries. It is said that derivatives, particularly forwards, have been around as long as there has been commerce that involves business risk. Derivatives trading initially started with commodity derivatives, which became very popular over time.

The concept of derivatives:

As the name indicates, a derivative is a financial instrument that derives its value from the price of its underlying asset, commodity, security, or other such items. A derivative has no independent value as such. According to the L.C. Gupta Committee, "a derivative means forwards, futures or option contracts of pre-determined fixed duration, linked for the purpose of contract fulfillment to the value of the specified real or financial asset or to index of securities". In terms of this definition, derivatives mainly include forwards, futures and options. A combination of two or more of these derivative instruments can also be used to create new instruments. For example, forwards and options are two basic derivative instruments, which can be innovatively combined to create a wide range of new derivatives. The actual design of any derivative instrument depends on its purpose. Derivatives are mostly customized or tailor-made as per the requirements of the investors, so many derivative products are highly complex in design.

II. FUNCTIONS OF THE DERIVATIVES MARKET:

The primary function of the derivatives market is to enable investors to manage their risks by hedging or insuring themselves against adverse price movements in volatile markets.
The functions of the derivatives market are as follows:

- To facilitate the transfer of risk from risk-averse investors (hedgers) to risk-takers (speculators).
- To help in discovering prices of derivatives as well as of underlying assets.
- To increase the volume of trade in the cash market.
- To make the capital market vibrant and thereby help business units raise funds at ease and on favourable terms.
- To increase the savings and investments in the economy.

III. TYPES OF DERIVATIVES:

There are many kinds of derivative products in the market. Broadly, they are classified as financial derivatives, commodity derivatives and currency derivatives. Derivatives may also be classified as over-the-counter (OTC) derivatives and exchange-traded derivatives, or as forward contracts, futures and options. Over-the-counter derivatives, also known as OTC derivatives, are bilaterally negotiated contracts between two parties. Exchange-traded derivatives are standardized contracts traded on recognized exchanges; the prices of these are determined by the interplay of demand and supply forces in the market.

Financial forward contracts:

A financial forward contract is a financial contract to buy or sell on a specified future date a certain quantity of a financial product (for example, shares, bonds, currency) at a price determined at the time of the contract. A forward contract locks the price of the underlying security. Whatever the price of the underlying security on the date of maturity of the forward contract, the contract is executed on the date of maturity at the agreed-upon price.
Financial futures:

Financial futures are standardized, legally enforceable forward contracts traded on designated exchanges called futures exchanges. Futures are standardized with regard to the contract size and also the maturity period of the contract. In order to avoid default risk, futures contracts entail the depositing of margins. The margin requirements, daily settlement and delivery procedure are all standardized. Although the price of the futures is negotiable between the parties, it is regulated by the futures exchange. Futures price movements are regulated by imposing certain limits to avoid speculative excesses.

IV. TYPES OF FINANCIAL FUTURES:

Financial futures are of different kinds such as stock futures, stock index futures and currency futures. These may be illustrated as belows:

Stock futures:

A stock futures contract is a futures contract that involves trading of equity shares of a company.

Stock index futures:

Stock index futures are a type of contract that involves a stock index as an underlying asset. Similar to other financial futures, a stock index futures contract involves the buying and selling of standardized units of a particular index at a predetermined price and at a fixed date in the future.

Currency futures:

A currency futures contract is a type of contract that involves exchanging one currency against another currency at a specified exchange rate and on a specified date in the future. Currency futures can be used for speculative purpose as well.
Interest rate futures:

Interest rate futures are a type of standardized interest rate derivative contract traded on recognized stock exchanges to buy or sell a notional security or any other interest-bearing instrument or an index of such instruments or interest rates on a specified future date at a price determined at the time of the contract.

V. USES OF FORWARDS AND FUTURES:

Forwards and futures are used for hedging, speculation or arbitrage. A brief description of each of them is given here.

Hedging:

Hedgers use futures for protection against adverse future price movements of the underlying asset. The primary purpose of hedging is to transfer the price risk faced by a person or organization to others who are willing to bear the risk for windfall gains. Thus, hedgers seek to eliminate the price risk they face in their regular business activities.

Speculation:

Compared to hedgers who perform regular business activities in which they face risk, speculators do not perform such activities. In other words, speculators do not have risk requiring derivatives. But they seek risk or assume risk in the hope of making windfall gains or supernormal profits.

Arbitrage:

Arbitrage refers to the simultaneous buying and selling of a security or commodity to make a profit on the in the prices prevailing in two markets (i.e., cash and derivative markets). Such profit is known as arbitrage profit. In general, if the futures price is less than the spot price plus the cost of carry or if the futures price is greater than the spot price plus the cost of carry, arbitrage opportunities exist.
Options:

Options and futures have many similarities and serve similar purposes but the risk profile of an option is asymmetric. An option is a contract that gives the holder the right but not the obligation to buy or sell the underlying asset or security at a predetermined price within or at the end of a specified period. The price at which the option is to be exercised is called the strike price or the exercise price. Since the right to buy or sell a security is valuable, the purchaser of an option pays an upfront price called the option premium to the party who has sold the option. Options are traded both on exchanges and over the counter. Exchange-traded options are standardized with regard to market lot, trading cycle, expiration date and strike price. On the other hand, the options traded over the counter are private and customized contracts to meet the specific needs of the counterparties. That is, OTC options are tailored to meet the needs of both the buyer and the seller of the options. Thus, there may be many different option contracts trading for a given stock at any point of time. All the options contracts with the same expiration date and strike price are considered as one option series. Options are of two types—call option and put option. A call option gives its owner a right to buy the underlying asset or security and the put option gives its owner a right to sell the underlying asset or security. Options are also classified as American and European. American options are exercisable at any time prior to the expiration date while European options can be exercised only at the expiration date. As such, American options have more value than the corresponding European options. In case the option is a put option, the investor has the right to sell the underlying stock at the strike price. A call option holder exercises his option only if the price of the underlying securities rises above the exercise price and the put option holder only if the price falls below the exercise price. Thus, a call option becomes more valuable if the price of the
underlying security rises and a put option becomes more valuable if the price of the underlying security falls.

VI. TYPES OF OPTIONS:

Financial options may also be classified as equity options, stock index options and currency options.

Equity options:

Equity options are options on the common stock of companies. These options are traded on the exchanges and OTC worldwide.

Stock index options:

An option with a stock index as an underlying asset is known as an index option. Index options are generally European style, that is, they can be exercised or assigned only on the expiry date.

Currency options:

A currency option gives the right to buy or sell one currency for another currency at a specified exchange rate. Currency call options are used to lock in a maximum price to be paid for a currency in future. In contrast, a currency put option makes known the minimum price at which the option holder can sell one currency against another currency in the future. Currency options can be used both for hedging and speculation.

Credit Default Swap (CDS):

A credit default swap is a credit derivative that provides protection against a credit risk. In a credit default swap, one party (buyer) contracts to make a payment to the other party (seller) in exchange for the pay-off if an underlying financial instrument has exposure to default during a certain period of time. The underlying securities in CDS may be asset-backed securities, corporate debt, collateralized debt or indexes of companies. A CDS
is also called protection as it provides the buyer with protection against default, credit rating downgrade or another negative credit event.

**VII. GOVERNMENT INITIATIVES:**

The Indian financial market had been largely sheltered till the early 1990s. The economic reforms initiated at the beginning of 1990s not only created a plethora of opportunities but also exposed the investors and institutions to new risks. The integration of financial markets and the cross-country mobility of capital have thrown open several opportunities for investors but with new kinds of challenges or risks. This has brought risk management to the centre stage of financial management. There is no denying the fact that financial derivatives representing financial innovation have definite uses. As hedging tools as well as means of speculation, they make financial markets more vibrant and efficient. However, trading in derivatives inherently involves high leverage. Traders with little capital, who can be considered as inadequately capitalized traders or speculators, may be induced to do risky business in the derivatives market. Speculation is necessary for every market, but excess speculation is always dangerous. Moreover, some market participants may not fully understand derivatives and fail to use them appropriately. Therefore, there is a need for a vibrant regulatory system to minimize these dangers. Accordingly, the government has initiated several measures and the important ones are brought out in the following sections.

**The L.C. Gupta Committee:**

Lifting the prohibition on trading in options on securities in 1995 marked the launch of derivatives in the Indian stock market. As a follow-up, SEBI appointed a 24-member committee under the chairmanship of L.C. Gupta in November 1996 to develop an appropriate regulatory framework for derivatives trading in India. The committee examined several aspects of derivatives trading and made far-reaching recommendations. The committee
conducted a survey to assess the nature of the need and interest in various types of financial derivatives among potential market participants. According to the survey, stock index futures ranked as the most popular and preferred type of equity derivative, followed by stock index options and options on individual stocks. Individual stock futures contracts were favoured much less. Of course, only a few countries in the world have futures on individual stocks. According to the committee, any stock index is much less volatile than individual stock prices. Therefore, lower capital adequacy and margins are required in the case of stock index futures than compared to futures on individual stocks. The committee was of the opinion that stock index futures would be the best starting point for equity derivatives in India. It favoured the introduction of other types of equity derivatives such as options on stock index and options on individual stocks as the derivatives market in India grew and the market players acquired familiarity with its operations. The committee made the following recommendations on the regulatory framework. From the purely regulatory angle, a separate exchange for futures trading seems to be a better arrangement. However, in view of certain infrastructural constraints, the existing stock exchanges with cash trading may be permitted to trade derivatives, provided they meet the following minimum eligibility conditions:

- Trading should take place through an online screen-based trading system, which also has a disaster recovery site.
- The clearing of the derivatives market should be done by an independent clearing corporation that satisfies the conditions laid down by the committee.
- The exchange must have online surveillance capability that monitors positions, prices and volumes in real time so as to deter
market manipulation. Price and position limits should be used for improving market quality.

- Information about trades, quantities and quotes should be disseminated by the exchange in real time over at least two information vending networks that are accessible to investors across the country.
- The exchange should have at least 50 members to start derivatives trading.
- If derivatives trading is to take place at an existing cash market, it should be done in a separate segment with a separate membership.
- The derivatives market should have a separate governing council.
- The chairman of the governing council of the derivatives division/exchange shall be a member of the governing council.
- The exchange should have an arbitration and investor grievances redressal mechanism operative from all the four areas/regions of the country.
- The exchange should have adequate inspection capability.
- No trading/clearing member should be allowed to be on the governing council of both the derivatives market and the cash market simultaneously.
- If already existing, the exchange should have a satisfactory record of monitoring its members, handling investor complaints and preventing irregularities in trading.

The committee further stated that the regulatory framework for derivatives trading shall consist of (i) the derivatives exchange's own operational rules and regulations and (ii) SEBI rules and regulations with
which the exchange and its members must comply. The exchange level regulations should pertain to entry of traders/members, derivatives contracts, broker-client relationship, trading and reporting procedures, internal risk control systems, margining, clearing, settlement and dispute resolution. The derivative exchanges should necessarily get their rules, by-laws and regulations approved by SEBI before commencement of trading. As far as SEBI is concerned, the committee made the following recommendations.

- SEBI should immediately create a special derivatives cell because derivatives demand special knowledge.

- A derivatives advisory council may also be created to tap outside expertise for independent advice on many problems that are bound to arise from time to time with regard to derivatives.

- SEBI should urgently consider the creation of an economic research wing.

For other major aspects of the subject, the committee made the following observations and recommendations.

1. The committee felt that the derivatives market will have to be subjected to more stringent requirements than is the case with present cash markets.

2. For effectively ensuring capital adequacy, principal reliance has to be placed on the capital and margins actually deposited by the brokers/dealers with the exchange.

3. The clearing members of the derivatives exchange should have a minimum net worth of INR 30 million as per SEBI's definition and shall make a deposit of INR 5 million with the exchange/clearing corporation in the form of liquid assets such as cash and fixed deposits pledged in the name of the exchange or other securities.
4. The broker-members, salespersons/dealers in the derivatives market must have passed a certification programme that is considered adequate by SEBI.

5. Brokers/dealers of the derivatives exchange/division should be required to be registered as such with SEBI.

6. The clearing mechanism should be organized as a separate and independent entity, preferably in the form of a clearing corporation.

7. The clearing corporation will collect the initial (i.e., upfront) margin to which the exposure limits of the broker/dealer would be linked. The clearing corporation will enforce the mark-to-market margin system.

8. The requirements for capital adequacy and upfront margin should be set taking into account the volatility of the underlying market.

9. Since market volatility changes over time, the clearing corporation should continuously analyze this problem and may modify the margin requirements to safeguard the market.

10. The clearing corporation should be an independent corporation. Its governing board should be immune to any interference or direct/indirect pressure by trading interests.

11. Ideally, an independent centralized clearing corporation for the stock exchanges would be the most effective arrangement. The committee urged SEBI to take initiatives with potential promoters to set up a national-level clearing corporation.

12. Apart from the minimum net worth requirement, there should be a maximum exposure limit computed on a gross basis for each broker/dealer.
13. Even the system of mark-to-market margins on a daily basis will not be adequate for safeguarding the market's integrity unless the margins are actually collected before the start of the next day's trading. Even a day's delay in actual collection of the mark-to-market margin can pose a serious threat to the market's integrity. Therefore, the aim should be to collect mark-to-market margins before the next day's trading starts. The capital adequacy requirement for derivatives trading should be finally decided after taking into account both the extent of volatility and the time taken for funds transfer from dealers/members to the exchange.

14. The collection of initial and mark-to-market margins by brokers from their clients should be insisted on in the case of derivatives trading. Margin collection from clients should not be left to the discretion of brokers/dealers.

15. The clearing corporation should segregate the upfront/initial margins deposited by clearing members for trades on their own account from the margins deposited with it on the client account.

16. The clearing corporation must have SEBI approval for its functioning.

17. Derivatives brokers/dealers are expected to know their clients and exercise care to ensure that the derivative product being sold by them to a particular client is suitable to his understanding and financial capabilities.

18. The SEBI (Mutual Fund) Regulations prohibited the use of derivatives by mutual funds. The committee was of the opinion that mutual funds needed the hedging facility. They would be among the most important users of equity hedging through stock
index derivatives. Hence, the regulatory prohibition should be removed.

19. Mutual funds should be allowed to use financial derivatives for hedging purposes (including anticipated hedging) and portfolio re-balancing within a policy framework and rules laid down by their board of trustees who should specify what derivatives are allowed to be used, within what limits, for what purposes, for which schemes and the authorization procedure.

According to the committee, risk and complexity among derivative products vary. While some derivatives are relatively simple, many others, especially options, could be highly complex and would require additional safeguards from the investors' viewpoint. In due course, a derivatives exchange may decide to introduce options on stock indexes or individual stocks. Options are a more complex derivative product than index futures because evaluating the fairness of option premium, which is not apparent, is a complex matter.

VIII. SEBI GUIDELINES FOR DERIVATIVES TRADING

SEBI accepted the recommendations of the L. C. Gupta Committee in May 1998 and approved the phased introduction of derivatives trading in India, beginning with stock index futures. Based on the recommendations of the committee, SEBI has framed certain guidelines, the highlights of which are presented in the following sections.

Eligibility for exchanges and clearing house:

SEBI has laid down the following eligibility conditions for a derivative exchange/segment and its clearing corporation/house.

1. Derivatives trading shall take place through an online screen-based trading system.
2. The derivatives exchange/segment shall have online surveillance capability to monitor positions, prices and volumes on a real time basis so as to deter market manipulation.

3. The derivatives exchange/segment shall have arrangements for dissemination of information about trades, quantities and quotes on a real time basis through at least two information vending networks, which are easily accessible to investors across the country.

4. The derivatives exchange/segment shall have a satisfactory system of monitoring investor complaints and preventing irregularities in trading.

5. The clearing corporation shall have the capacity to monitor the overall position of members across both the derivatives market and the underlying securities market for those members who are participating in both.

6. The clearing corporation shall have capabilities to segregate initial margins deposited by clearing members for trades on their own account and on account of his client. The clearing corporation/house shall hold the client's margin money in trust for the client's purposes only and not allow its diversion for any other purpose.

7. The clearing corporation/house shall have a separate trade guarantee fund for trades executed on the derivative exchange/segment.

The exchanges that fulfill the eligibility criteria may seek approval from SEBI to start derivatives trading. The derivatives exchange/segment shall have a separate governing council and representation of trading/clearing
members shall be limited to a maximum of 40 per cent of the total members of the governing council. The clearing and settlement of derivatives trades shall be through a SEBI-approved clearing corporation/house. Derivatives brokers/dealers and clearing members shall also seek registration from SEBI. This shall be in addition to their registration as brokers of existing stock exchanges. The minimum net worth for clearing members of the derivatives clearing corporation/house shall be INR 30 million. The minimum contract value shall not be less than INR 0.1 million.

**Membership and requirements:**

The following are different types of membership in the derivatives market.

1. Trading member: A trading member is a member of a derivatives exchange who can trade on his own behalf and on behalf of his clients.

2. Clearing member: A clearing member is permitted to settle his own trades as well as the trades of other non-clearing members known as trading members who have agreed to settle the trades through the clearing member.

3. Self-clearing member: A self-clearing member can clear and settle only his own trades.

Every clearing member is required to maintain a net worth of INR 30 million. The clearing members shall furnish an auditor's certificate for the net worth every six months to the exchange. The net worth requirement is INR 10 million for a self-clearing member. Every clearing member, including self-clearing members, shall maintain at least INR 5 million as the liquid net worth with the exchange/clearing corporation. The liquid net worth for this purpose is defined as the total liquid assets deposited with the clearing corporation towards initial margin and capital adequacy, less initial margin
applicable to the total gross open positions at any given point of time on all trades to be cleared through the clearing member. Liquid assets would include cash, fixed deposits, bank guarantees, T-bills and government securities or dematerialized securities pledged in favour of the clearing corporation or bank guarantee. At least 50 per cent of the total liquid assets shall be in the form of cash equivalents, that is, cash, bank guarantees, fixed deposits, T-bills and dated government securities. The members are required to pass the certification programme approved by SEBI. Further, every trading member is required to appoint at least two approved users who have passed the certification programme. Only the approved users are permitted to operate the derivatives trading terminal.

**Eligibility for stocks and indices:**

SEBI in its circular dated December 2, 2002, stated the following eligibility criteria (revised) for stocks and indices.

1. The stock shall be chosen from among the top 500 stocks in terms of average daily market capitalization and average daily traded value in the prescribed month on a rolling basis.

2. The stock's median quarter sigma order size over the last six months shall be not less than INR 0.1 million. For this purpose, a stock's quarter-sigma order size shall mean the order size (in value terms) required to cause a change in the stock price equal to one-quarter of a standard deviation.

3. The market-wide position limit in the stock shall not be less than INR 50 million. Since the market-wide position limit for a stock is computed at the end of every month, the exchange shall ensure that stocks comply with this criterion before the introduction of new contracts. Further, the market-wide position limit (which is in
number of shares) shall be valued taking the closing prices of stocks in the underlying cash market on the date of expiry of the contract in the month.

A stock can be included for derivatives trading as soon as it becomes eligible. However, if the stock does not fulfill the eligibility criteria for three consecutive months after being admitted to derivatives trading, then derivatives contracts on such a stock would be discontinued. Derivatives contracts may be permitted on an index if 80 per cent of the index constituents are individually eligible for derivatives trading. However, no single ineligible stock in the index shall have a weightage of more than 5 per cent in the index. The index is required to fulfill the eligibility criteria even after trading in derivatives on the index has begun. If the index does not fulfill the criteria for three consecutive months, then derivative contracts on such an index would be discontinued.

**Contract size and lot size:**

SEBI originally prescribed that the value of a derivative contract shall not be less than INR 0.2 million at the time of introducing the contract in the market. For stock-based derivative contracts, the lot size will be in multiples of 100 and the fractions, if any, shall be rounded off to the next higher multiple of 100. Subsequently, SEBI in February 2004 revised the rule position with regard to derivatives contract size. Accordingly, for derivative contracts with contract size/value of INR 0.4 million and above, the lot size/multiplier shall be reduced to half of the existing lot size/multiplier. For derivative contracts with contract size/value of INR 0.8 million and above, the lot size/multiplier shall be reduced to one-fourth of the existing lot size/multiplier. Similarly, where the contract size of the derivative contracts is less than INR 0.2 million, for the sake of standardization, the existing lot
size/multiplier shall be increased so as to bring the size to INR 0.2 million. The increase shall be carried out by increasing the lot size/multiplier in multiples of 2. To facilitate the above measures, the stipulation that the lot size/multiplier should be in multiples of 100 stands revoked. Lot size refers to the number of underlying securities in one contract. The lot size is determined keeping in view the minimum contract size requirement at the time of introduction of derivative contracts on a particular underlying.

**Structure of derivatives market:**

Trading in derivatives may take place either on a separate and independent derivatives exchange or on a separate segment of an existing stock exchange. Derivatives exchanges/segments function as self-regulatory organizations. The clearing and settlement of all trades shall be through a clearing corporation/house that is independent in governance and membership from the derivatives exchange/segment. SEBI provides overall supervision and guidance to the derivatives exchanges/segments and acts as the regulator of the last resort.

**Margining system:**

The margining methodology specified is consistent with the managing system used in developed financial markets worldwide. The derivatives exchanges/segments are given the freedom to either develop their own margin computation system or adapt the systems available internationally to the requirements of SEBI. SEBI has also prescribed risk containment measures for the stock index futures market based on the recommendations of the J.R. Vanna Committee. SEBI has asked all the derivatives exchanges/derivatives segments of the exchanges and the clearing corporations of exchanges for index futures trading and settlement to implement the risk containment measures.
Risk containment measures:

A portfolio-based margining approach shall be adopted, which takes an integrated view of the risk involved in the portfolio of each individual client comprising his positions in all derivative contracts—index futures, index options, stock options and single stock futures. The parameters for such a model shall include the following.

The initial margin requirements are based on worst-scenario loss of a portfolio of an individual client to cover 99 per cent VaR over a one-day horizon across various scenarios of price changes and volatility shifts. For index products, the price scan range is specified at three standard deviation and the volatility scan range at 4 per cent. For stock option contracts, the price scan range is specified at three and a half standard deviation and the volatility scan range at 10 per cent. There is also a minimum margin requirement. For index futures contracts, it is specified that in no case shall the initial margin be less than 5 per cent of the value of the contract. For index options, a short option minimum charge of 3 per cent of the notional value of all short index options is prescribed and in the case of stock option contracts, a short option minimum charge of 7.5 per cent of the notional value of all short stock option contracts is prescribed. In the case of single stock futures, the initial margin is computed as the worst-scenario loss of a portfolio comprising all the positions of a client in all the futures and options contracts.

Exchange-traded options and futures on indices:

SEBI set up a technical group headed by J.R. Vanna to formulate risk containment measures for options on index. Based on the recommendations of the group, SEBI has prescribed the following risk containment measures to be adopted by the derivative exchange/segment and the clearing house/corporation for trading and settlement of both index futures and index option contracts.
1. The index option contracts to be traded on the derivative exchanges/segments shall have prior approval of SEBI.

2. Initially the exchanges shall introduce premium-style index options and European-style index options, which shall be settled in cash.

3. The index option contracts shall have a minimum contract size of INR 0.2 million at the time of introduction in the market and they shall have maximum maturity of 12 months and a minimum of three strikes (in the money, near the money and out of the money).

4. The initial margin requirement shall be based on worst-case loss of a portfolio of an individual client to cover a 99 per cent VaR over a one-day horizon. The initial margin requirement shall be netted at the level of the individual client and it shall be on a gross basis at the level of the trading/clearing member. The initial margin requirement for the proprietary position of a trading/clearing member shall also be on net basis.

5. A portfolio-based margining approach shall be adopted, which will take an integrated view of the risk involved in the portfolio of each individual client comprising his positions in index futures and index options contracts.

6. The margin for a calendar spread would be the same as specified for index futures. However, the margin shall be calculated on the basis of delta of the portfolio in each month. Further, as in the index futures market, a calendar spread would be treated as a naked position in the far month contract as the near month contract approaches expiry.
7. The short option minimum margin equal to 3 per cent of the notional value of all short index options shall be charged if the sum of the worst-scenario loss and the calendar spread margin is lower than the short option minimum margin.

8. The net option value shall be calculated as the current market value of the option times the number of options (positive for long options and negative for short options) in the portfolio. This net option value shall be added to the liquid net worth of the clearing member. This means that the current market value of short options will be deducted from the liquid net worth and the market value of long options will be added thereto. Thus, mark-to-market gains and losses on option positions will get adjusted against the available liquid net worth. Since the options are premium style, mark-to-market gains and losses will not be settled in cash for option positions.

9. For options positions, the premium shall be paid in by the buyers in cash and paid out to the sellers in cash on T+1 day.

10. Until the buyer pays the premium, the premium due shall be deducted from the available liquid net worth on a real time basis.

11. The mark-to-market gains/losses for the index futures position shall continue to be settled in cash.

12. The existing position limits in the index futures market shall be applicable to index options also on the basis of notional value.

13. The computation of worst-scenario loss has two components. The first is the valuation of each option contract under 16 scenarios using an appropriate option pricing model. The second is the application of these scenario contract values to the actual positions.
in a portfolio to compute the portfolio values and the worst-scenario loss. For computational ease, exchanges are permitted to update the scenario contract value only at discrete points of time every day. However, the latest available scenario contract values would be applied to member/client portfolios on a real time basis.

**Single stock futures:**

SEBI constituted an advisory committee on derivatives under the chairmanship of J.R. Varma to work out the modalities for the introduction of single-stock futures in Indian stock markets. SEBI considered the recommendations of the committee and granted in-principle approval in September 2001 for the introduction of single-stock futures on 31 stocks, in which options contracts had been permitted on BSE and the NSE. Single-stock futures shall be permitted up to a maximum maturity of 12 months. Initially, a single-stock futures contract shall have maturity of three months and at the time of its introduction, three contracts of maturity of one month, two months and three months would be introduced simultaneously. Therefore, at any point in time, at least three single-stock futures contracts on a particular underlying would be available for trading. The exchanges shall initially introduce single-stock futures contracts, which shall be settled in cash.

**Exchange-traded options on stocks:**

On the recommendations of the technical group headed by J.R. Vanna, SEBI introduced exchange-traded options on stocks and prescribed the following risk containment measures to be adopted by the derivatives exchange/segment and the clearing house/corporation.

1. The stock option contracts to be traded on the derivative exchange/segment shall have prior approval of SEBI.
2. The exchanges shall introduce premium-settled American-style stock options, which shall be settled in cash at exercise for an initial period of six months; thereafter the stock options, at exercise, shall be settled by delivery.

3. The stock option contract shall have a minimum contract size of INR 0.2 million at the time of its introduction in the market.

4. The stock option contract shall have a maximum maturity of 12 months and a minimum of three strikes.

5. The initial margin requirements shall be based on worst-case loss of a portfolio of an individual client to cover 99 per cent VaR over a one-day horizon. The initial margin requirement shall be netted at the level of the individual client and on gross basis at the level of the trading/clearing member. The initial margin requirement for the proprietary position of the trading/clearing member shall also be on net basis.

6. A portfolio-based margining approach shall be adopted, which would take an integrated view of the risk involved in the portfolio of each individual client comprising his positions in derivative contracts.

Position limits:

For index-based products, there is a disclosure requirement for clients whose position exceeds 15 per cent of the open interest of the market in index products. For stock-specific products, the gross open position across all derivative contracts on a particular underlying of a customer/client shall not exceed the higher of 1 per cent of the free float market capitalization (in terms of number of shares) or 5 per cent of the open interest in the derivative contracts on a particular underlying stock (in terms of number of contracts).
These position limits are applicable on the combined position in all derivative contracts on an underlying stock at an exchange. The exchanges are required to achieve client level position monitoring in stages. The client level position limit for interest rate futures contracts is specified at INR 1000 million or 15 per cent of the open interest, whichever is higher. The trading member position limits for index options are INR 2500 million or 15 per cent of the total open interest in index options, whichever is higher, and for index futures the limits are INR 2500 million or 15 per cent of the total open interest in index futures, whichever is higher. For stock-specific products, the trading member position limit is 20 per cent of the market-wide limit subject to a ceiling of INR 500 million. It is also specified that once a member reaches the position limit in a particular underlying security, the member shall be permitted to take only offsetting positions (which result in lowering the open position of the member) in derivative contracts on that underlying security. In the event the position limit is breached due to the reduction in the overall open interest in the market, the members are required to take only offsetting positions (which result in lowering the open position of the member) in a derivative contract in that underlying and fresh positions shall not be permitted. The position limit at the trading member level is required to be computed on a gross basis across all clients of the trading member. There are no market-wide limits for index products. For stock-specific products, the market-wide limit of open positions (in terms of the number of underlying securities) on an option and futures contract on a particular underlying stock would be less than 30 times the average number of shares traded daily during the previous calendar month in the cash segment of the exchange or 20 per cent of the number of shares held by non-promoters, that is, 20 per cent of the free float in terms of number of shares of a company.
Participation of FIIS in exchange traded derivative contracts:

The Reserve Bank of India has permitted foreign institutional investors to trade in exchange-traded index futures contracts on the derivative segment of BSE and the F&O segment of the NSE, provided the overall open interest of the FII does not exceed 100 per cent of the market value of the concerned FII's total investment. SEBI has permitted FIIs to trade in all exchange-traded derivatives and laid down position limits for trading by the FIIs and their sub-accounts. RBI in its circular dated September 1, 2003, specified that FIIS may trade in all exchange-traded derivative contracts approved by SEBI from time to time subject to the limits prescribed by SEBI. The position limits for FIIs in equity index derivatives shall be as follows.

1. The FII position limit in all index options contracts on a particular underlying index shall be INR 2500 million or 15 per cent of the total open interest of the market in index options, whichever is higher, per exchange. This limit would be applicable on open positions in all futures contracts on a particular underlying index.

2. The FII position limit in all index futures contracts on a particular underlying index shall be INR 2500 million or 15 per cent of the total open interest of the market in index futures, whichever is higher, per exchange. This limit would be applicable on open positions in all futures contracts on a particular underlying index.

In addition to the above, FIIS shall take exposure in equity index derivatives subject to the following limits.

1. Short positions in index derivatives (short futures, short calls and long puts) not exceeding (in notional value) the FII's holding of stocks.
2. Long positions in index derivatives (long futures, long calls and short puts) not exceeding (in notional value) the FII's holding of cash, government securities, T-bills and similar instruments.

The position limits for stock-based derivatives in case of a trading member/FIIs/mutual funds are as follows.

1. For stocks with an applicable market-wise position limit of INR 5000 million or more, the combined futures and options position limit shall be 20 per cent of an applicable market-wise position limit, or INR 3000 million, whichever is lower and within which the stock futures position cannot exceed 10 per cent of the applicable market-wise position limit or INR 1500 million, whichever is lower.

2. For stocks with an applicable market-wise position limit less than INR 5000 million, the combined futures and option position limit would be 20 per cent of an applicable market-wise position limit or INR 500 million, whichever is lower.

NRIs are also permitted to invest in exchange-traded derivatives contracts subject to the margin and other requirements that are in place for other investors. In addition, NRIS are subject to the following position limits. For index-based contracts, a disclosure requirement for any person or persons acting in concert who together own 15 per cent or more of the open interest of all derivatives contracts on a particular underlying index. For stock option and single stock futures contracts, the gross open position across all derivatives contracts on a particular underlying stock of an NRI shall not exceed the higher of 1 per cent of the flee float market capitalization (in terms of number of shares) or 5 per cent of the open interest in the derivative contracts on a particular underlying stock (in terms of number of contracts).
Adjustment of corporate actions for stock options:

The companies may take certain decisions that result in stock benefits and cash benefits. The various stock benefits include bonus, rights, merger/demmerger, splits, consolidation, hive-off and warrants. They are all known as corporate actions. Therefore, adjustment for corporate actions is essential in order to maintain the value of the position of the market participants on cum and ex-date. This facilitates retaining the relative status of positions, viz. in the money, at the money and out of money. According to SEBI, any adjustment for corporate actions shall be carried out on the last day on which a security is traded on cum basis in the underlying cash market. Adjustments shall refer to modifications in positions and/or contract specifications (strike price, position and market lot/multiplier) so that the basic premise of adjustment is satisfied.