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**NISM SERIES VIII : Equity Derivatives Certification Examination Details**

<b>Total Questions</b>	<b>100 X 1 Marks</b>
<b>Type</b>	<b>Multiple Choice</b>
<b>Pass Score</b>	<b>60%</b>
<b>Duration</b>	<b>2 Hours</b>
<b>Negative marks</b>	<b>-0.25</b>

**Chapterwise Weightages**

<b>Unit 1: Basics of Derivatives</b>	<b>10 marks</b>
<b>Unit 2: Understanding Index</b>	<b>5 marks</b>
<b>Unit 3: Introduction to Forwards and Futures</b>	<b>20 marks</b>
<b>Unit 4: Introduction to Options</b>	<b>20 marks</b>
<b>Unit 5: Strategies using Equity Futures and Equity Options</b>	<b>10 marks</b>
<b>Unit 6: Trading Mechanism</b>	<b>10 marks</b>
<b>Unit 7: Clearing, Settlement and Risk Management</b>	<b>10 marks</b>
<b>Unit 8: Legal and Regulatory Environment</b>	<b>5 marks</b>
<b>Unit 9: Accounting and Taxation</b>	<b>5 marks</b>
<b>Unit 10: Sales Practices and Investor Protection Measures</b>	<b>5 marks</b>

**Youtube Video Links for Individual Topics are given below**

[Who Should pass NISM Equity Derivatives exam ?](#)

[Should one attend or leave the unknown questions in NISM exam ?](#)

[NISM Equity Derivatives Chapterwise Weightages](#)

[Property Market & Derivatives Markets - A Comparison](#)

[Types of Derivatives | Forwards, Futures, Options & Swaps](#)

[How is a Stock Market Index Calculated ? - Types of Indices](#)

[Index Applications in Mutual Funds, Derivatives, Stock Markets](#)

[NISM ED - Bid Offer Spread / Bid Ask Spread](#)

[How to Measure the Liquidity of a Stock ? - Impact Cost](#)

[Positions in Derivatives | Open Position | Calendar Spread | Long & Short Positions](#)

[Definition of Futures Contract Explained with Example](#)  
[How is a Futures contract Closed ? | Squared-off & Exercise](#)  
[Long and Short Positions in Futures](#)  
[Derivatives Terminology - FUTSTK, FUTIDX, OPTSTK, OPTIDX](#)  
[What are the Features / Specifications of Future Contracts ?](#)  
[Payoff for Futures](#)  
[Meaning of a Call Option](#)  
[Meaning of a Put Option](#)  
[American & European Style Options](#)  
[Option Formula](#)  
[Option Calculation Table](#)  
[Futures & Options Settlement](#)  
[How are Futures Contracts settled on daily basis ? MTM](#)  
[Hedging, Arbitraging & Speculation](#)  
[Hedging](#)  
[What is Basis in futures ? What is Tick Size ?](#)  
[What is Cost of Carry in Futures / Equity Derivatives / Commodity markets?](#)  
[What is Convenience Yield ?](#)  
[What is Open Interest & Volume in Derivatives Market ?](#)  
[Price Risk and its Types - Explained](#)  
[How does Beta measure a Stock's Market Risk ?](#)  
[Option Pricing](#)  
[Option Pricing Models](#)  
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[Corporate Hierarchy](#)  
[Order Types](#)  
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[Eligibility Criteria for Stocks](#)  
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[Eligibility Criteria for Indices](#)  
[Corporate Actions](#)  
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[How to do Accounting for Equity Derivatives trading ?](#)  
[How to Pass NISM Equity Derivatives Exam ?](#)

## **Chapter 1: Basics of Derivatives**

Derivative is a contract or a product whose value is derived from value of some other asset known as underlying. Derivatives are based on the following underlying assets :

- Metals such as Gold, Silver, Aluminium, Copper, Zinc, Nickel, Tin, Lead
- Energy resources such as Oil and Gas, Coal, Electricity
- Agri commodities such as wheat, Sugar, Coffee, Cotton, Pulses and
- Financial assets such as Shares, Bonds and Foreign Exchange.

Some of the factors driving the growth of financial derivatives are:

- Increased fluctuations in underlying asset prices in financial markets.
- Integration of financial markets globally.
- Use of latest technology in communications has helped in reduction of transaction costs.
- Enhanced understanding of market participants on sophisticated risk management tools to manage risk.
- Frequent innovations in derivatives market and newer applications of products.

### **Types of Derivatives**

**Forwards** - It is a contractual agreement between two parties to buy/sell an underlying asset at a certain future date for a particular price that is pre-decided on the date of contract. Both the contracting parties are committed and are obliged to honour the transaction irrespective of price of the underlying asset at the time of delivery. Since forwards are negotiated between two parties, the terms and conditions of contracts are customized. These are OTC contracts.

**Futures** - A futures contract is similar to a forward, except that the deal is made through an organized and regulated exchange rather than being negotiated directly between two parties. Indeed, we may say futures are exchange traded forward contracts.

**Options** - is a contract that gives the right, but not an obligation, to buy or sell the underlying on or before a stated date and at a stated price. While buyer of option pays the premium and buys the right, writer/seller of option receives the premium with obligation to sell/ buy the underlying asset, if the buyer exercises his right.

**Swaps** - A swap is an agreement made between two parties to exchange cash flows in the future according to a prearranged formula. Swaps are series of forward contracts. Swaps help market participants manage risk associated with volatile interest rates, currency exchange rates and commodity prices.

Market Participants are of three types in the derivatives market - hedgers, traders (also called speculators) and arbitrageurs

### **Types of Derivatives Markets**

**OTC Derivatives Market** have following features compared to exchange traded derivatives:

- Contracts are tailor made to fit in the specific requirements of dealing counterparties.
- The management of counter-party (credit) risk is decentralized and located within individual institutions.
- There are no formal centralized limits on individual positions, leverage, or margining.
- There are no formal rules or mechanisms for risk management to ensure market stability and integrity, and for safeguarding the collective interest of market participants.
- Transactions are private with little or no disclosure to the entire market.

**Exchange Traded Derivatives Market** - Exchange-traded contracts are standardized, traded on organized exchanges with prices determined by the interaction of buyers and sellers through anonymous auction platform. A clearing house/ clearing corporation, guarantees contract performance (settlement of transactions).

### **Significance of Derivatives Market**

- Derivatives market helps in improving **price discovery** based on actual valuations and expectations.
- Derivatives market helps in **transfer of various risks** from those who are exposed to risk but have low risk appetite to participants with high risk appetite. For example hedgers want to give away the risk where as traders are willing to take risk.
- Derivatives market helps **shift of speculative trades from unorganized market to organized market**. Risk management mechanism and surveillance of activities of various participants in organized space provide stability to the financial system

Market participants, who trade in derivatives are advised to carefully read the **Model Risk Disclosure Document**, given by the broker to his clients at the time of signing agreement.

**Model Risk Disclosure Document** is issued by the members of Exchanges and contains important information on trading in Equities and F&O Segments of exchanges. All prospective participants should read this document before trading on Capital Market/Cash Segment or F&O segment of the Exchanges.

## **Chapter 2: Understanding Index**

1. Index is a statistical indicator that measures changes in the economy in general or in particular areas.
2. An index is a portfolio of securities that represent a particular market or a portion of a market.
3. Each Index has its own calculation methodology and usually is expressed in terms of a change from a base value. the percentage change is more important than the actual numeric value.
4. Financial indices are created to measure price movement of stocks, bonds, T-bills and other type of financial securities.
5. A stock index is created to provide market participants with the information regarding average share price movement in the market. Broad indices are expected to capture the

overall behaviour of equity market and need to represent the return obtained by typical portfolios in the country

### Significance of Index

- A stock index is an indicator of the performance of overall market or a particular sector.
- It serves as a benchmark for portfolio performance - Managed portfolios, belonging either to individuals or mutual funds; use the stock index as a measure for evaluation of their performance.
- It is used as an underlying for financial application of derivatives – Various products in OTC and exchange traded markets are based on indices as underlying asset.

### Types of Stock Market Indices

**Market capitalization weighted index** - In this method of calculation, each stock is given weight according to its market capitalization. So higher the market capitalization of a constituent, higher is its weight in the index.

**Free-Float Market Capitalization Index** - if we compute the index based on weights of each security based on free float market cap, it is called free float market capitalization index. Indeed, both Sensex and Nifty, over a period of time, have moved to free float basis

**Price-Weighted Index** - A stock index in which each stock influences the index in proportion to its price. Stocks with a higher price will be given more weight and therefore, will have a greater influence over the performance of the index.

**Equal Weighted Index** An equal-weighted index is one in which all stocks included in the index have the same weightage. The number of shares of each stock is adjusted in such a way that the weight of each stock in the index is the same. Subsequently, if there is any change in the market price of each stock, the weight of each stock will change. In order to maintain the same equal weights as earlier, the fund manager needs to sell those stocks that have increased in price and buy the stocks that have fallen in price.

The difference between the best buy and the best sell orders is called **bid-ask spread**. The “bid-ask spread” therefore conveys transaction cost for small trade

**Percentage degradation** ( From an Ideal Price ) that occurs when shares are bought or sold, is called **impact cost**. Impact cost varies with transaction size. Also, it would be different for buy side and sell side.

NSE indices are managed by a separate company called **NSE Indices Limited**. A good index is a trade-off between diversification and liquidity. A well diversified index reflects the behaviour of the overall market/ economy

**Index Funds** invest in a specific index with an objective to generate returns equivalent to the return on index. These funds invest in index stocks in the proportions in which these stocks exist in the index. For instance, Sensex index fund would get the similar returns as that of Sensex index.

**Exchange Traded Funds (ETFs)** are a basket of securities that trade like individual stock, on an exchange. They can be bought and sold on the exchange. Since ETFs are traded on exchanges intraday transaction is possible.

### **Index Derivatives**

- Index Derivatives are derivative contracts which have the index as the underlying asset.
- Index Options and Index Futures are the most popular derivative contracts worldwide.
- Index derivatives are useful as a tool to hedge against the market risk.

## **Chapter 3: Introduction to Forwards and Futures**

Essential features of a forward are:

- It is a contract between two parties (Bilateral contract).
- All terms of the contract like price, quantity and quality of underlying, delivery terms like place, settlement procedure etc. are fixed on the day of entering into the contract

Forwards are bilateral over the counter (OTC) transactions where the terms of the contract, such as price, quantity, quality, time and place are negotiated between two parties to the contract. Any alteration in the terms of the contract is possible if both parties agree to it. Corporations, traders and investing institutions extensively use OTC transactions to meet their specific requirements.

### **Major limitations of forwards**

**Liquidity Risk** - Liquidity is nothing but the ability of the market participants to buy or sell the desired quantity of an underlying asset

**Counterparty risk** - Counterparty risk is the risk of an economic loss from the failure of counterparty to fulfil its contractual obligation. In addition to the illiquidity and counterparty risks, there are several issues like lack of transparency, settlement complications as it is to be done directly between the contracting parties

### **Future Contract Specifications**

**Underlying instrument and underlying price** - The underlying instrument refers to the index or stock on which the futures contract is traded. The underlying price is the spot price or the price at which the underlying asset trades in the cash market.

**Spot Price:** The price at which an asset trades in the cash market

**Futures Price:** The price of the futures contract in the futures market.

**Contract Cycle:** It is a period over which a contract trades. Index and stock futures contracts follow a three-month trading cycle. - the near month (Current Month), the next month and the far month. The NSE and BSE offers trading on monthly as well as weekly futures contracts.

**BSE Sensex futures - Monthly contracts:** last Friday of the contract month **Weekly contracts:** Friday expiry

**Expiration Day:** The day on which a derivative contract ceases to exist. It is last trading day of the contract. On expiry date, all the contracts are compulsorily settled. New contract is introduced on the trading day following the expiry day of the near month contract.

**Tick Size** - It is minimum move allowed in the price quotations. Exchanges decide the tick sizes on traded contracts as part of contract specification. Tick size for Nifty futures is 5 paise. Bid price is the price buyer is willing to pay and ask price is the price seller is willing to sell.

**Contract multiplier or Contract Size:** Futures contracts are traded in lots. The lot size or contract size for the index and stock futures is determined by the exchange. Contract sizes are different for each stock and index traded in the derivatives segment. The lot size for Index futures & Options shall be fixed in such a manner that the contract value of the derivative on the day of review is within Rs. 15 lakhs to Rs. 20 lakhs.

**Daily settlement price:** The exchange follows a daily settlement procedure for open positions in equity index and stock futures contracts. All open positions are settled daily based on the daily settlement price of the futures contracts, which is calculated by the exchange on the basis of the last half-an-hour weighted average price of that futures contract. Thus, the daily settlement price is different for each futures contract of a different expiry month

**Final settlement price** is the price at which all open positions in the near-month futures contracts are finally settled on the expiration day of the near-month futures contract. The final settlement price is the closing price of the relevant underlying index or stock in the cash segment on the last trading day of the futures contract

**Trading hours** : Trading holidays are days on which no trading is possible as the exchanges are closed while clearing holidays are days on which the exchanges are open, and trading is possible but no clearing and settlement takes place as banks are closed

**Basis** - The difference between the spot price and the futures price is called basis. If the futures price is greater than spot price, basis for the asset is negative. Similarly, if the spot price is greater than futures price, basis for the asset is positive. During the life of the contract, the basis may become negative or positive, as there is a movement in the futures price and spot price. Further, whatever the basis is, positive or negative, it turns to zero at maturity of the futures contract i.e. there should not be any difference between futures price and spot price at the time of maturity/ expiry of contract

**Cost of Carry** is the relationship between futures prices and spot prices. It measures the storage cost (in commodity markets) plus the interest that is paid to finance or 'carry' the asset till delivery less the income earned on the asset during the holding period. For equity derivatives, carrying cost is the interest paid to finance the purchase less (minus) dividend earned.

**Margin Account** - As exchange guarantees the settlement of all the trades, to protect itself against default by either counterparty, it charges various margins from brokers. Brokers in turn charge margins from their customers



**Initial Margin** - The amount one needs to deposit in the margin account at the time entering a futures contract is known as the initial margin

**Marking to Market (MTM)** - In futures market, while contracts have maturity of several months, profits and losses are settled on day-to-day basis – called mark to market (MTM) settlement. The exchange collects these margins (MTM margins) from the loss making participants and pays to the gainers on day-to-day basis.

**Open Interest and Volumes Traded** - An open interest is the total number of contracts outstanding (yet to be settled) for an underlying asset. The level of open interest indicates depth in the market.

**Long position** Outstanding/ unsettled buy position in a contract is called “Long Position”.

**Short Position** Outstanding/ unsettled sell position in a contract is called “Short Position”.

**Open position** Outstanding/ unsettled either long (buy) or short (sell) position in various derivative contracts is called “Open Position”

**Naked positions** - Naked position in futures market simply means a long or short position in any futures contract without having any position in the underlying asset.

**Calendar spread position** is a combination of two positions in futures on the same underlying - long on one maturity contract and short on a different maturity contract. For instance, a short position in near month contract coupled with a long position in far month contract is a calendar spread position.

Calendar spread position is computed with respect to the near month series and becomes an open position once the near month contract expires or either of the offsetting positions is closed. A calendar spread is always defined with regard to the relevant months i.e. spread between August contract and September contract, August contract and October contract and September contract and October contract etc.

### **Cash and Carry Model for Futures Pricing**

Cash and Carry model is also known as **non-arbitrage model**. This model assumes that in an efficient market, arbitrage opportunities cannot exist. In other words, the moment there is an opportunity to make money in the market due to mispricing in the asset price and its replicas, arbitrageurs will start trading to profit from these mispricing and thereby eliminating these opportunities. This trading continues until the prices are aligned across the products/ markets for replicating assets.

When an underlying asset is not storable i.e. the asset is not easy to hold/maintain, then one cannot carry the asset to the future. The cash and carry model is not applicable to these types of underlying assets.

in case of natural disaster like flood in a particular region, people start storing essential commodities like grains, vegetables and energy products (heating oil) etc. As a human tendency we store more than what is required for our real consumption during a crisis. If every person

behaves in similar way then suddenly a demand is created for an underlying asset in the cash market. This indirectly increases the price of underlying assets. In such situations people are deriving convenience, just by holding the asset. This is termed as **convenience return or convenience yield**.

If futures price is higher than spot price of an underlying asset, market participants may expect the spot price to go up in near future. This expectedly rising market is called "Contango market". Similarly, if futures price are lower than spot price of an asset, market participants may expect the spot price to come down in future. This expectedly falling market is called "**Backwardation market**".

**Price risk** is nothing but change in the price movement of asset, held by a market participant, in an unfavourable direction. This risk broadly divided into two components - specific risk or unsystematic risk and market risk or systematic risk.

**Unsystematic Risk** - Specific risk or unsystematic risk is the component of price risk that is unique to particular events of the company and/or industry. This risk is inseparable from investing in the securities. This risk could be reduced to a certain extent by diversifying the portfolio.

**Systematic Risk** - An investor can diversify his portfolio and eliminate major part of price risk i.e. the diversifiable/unsystematic risk but what is left is the non-diversifiable portion or the market risk-called systematic risk. Variability in a security's total returns that are directly associated with overall movements in the general market or economy is called systematic risk

**Beta** - A measure of systematic risk of a security that cannot be avoided through diversification. It measures the sensitivity of a scrip/ portfolio vis-a-vis index movement over a period of time, on the basis of historical prices. Suppose a stock has a beta equal to 2. This means that historically a security has moved 20% when the index moved 10%, indicating that the stock is more volatile than the index. Scrips/ portfolios having beta more than 1 are called aggressive and having beta less than 1 are called conservative scrips/ portfolios.

To find the number of contracts for perfect hedge 'hedge ratio' is used.

Hedge ratio is calculated as:

**Number of contracts for perfect hedge =  $V_p * \beta_p / V_i$**

$V_p$  – Value of the portfolio  $\beta_p$  – Beta of the portfolio  $V_i$  – Value of index futures contract

**Long hedge** is the transaction when we hedge our position in cash market by going long in futures market.

**Short hedge** is a transaction when the hedge is accomplished by going short in futures market

**Cross hedge** - When futures contract on an asset is not available, market participants look forward to an asset that is closely associated with their underlying and trades in the futures market of that closely associated asset, for hedging purpose. They may trade in futures in this asset to protect the value of their asset in cash market. This is called cross hedge.

**Hedge contract month** is the maturity month of the contract through which we hedge our position

**Arbitrage opportunities in futures market** - Arbitrage is simultaneous purchase and sale of an asset or replicating asset in the market in an attempt to profit from discrepancies in their prices. Arbitrage involves activity on one or several instruments/assets in one or different markets, simultaneously. Important point to understand is that in an efficient market, arbitrage opportunities may exist only for shorter period or none at all. The moment an arbitrageur spots an arbitrage opportunity, he would initiate the arbitrage to eliminate the arbitrage opportunity. Arbitrage occupies a prominent position in the futures world as a mechanism that keeps the prices of futures contracts aligned properly with prices of the underlying assets.

The objective of arbitrageurs is to make profits without taking risk, but the complexity of activity is such that it may result in losses as well

Arbitrage in the futures market can typically be of three types:

- **Cash and carry arbitrage:** Cash and carry arbitrage refers to a long position in the cash or underlying market and a short position in futures market.
- **Reverse cash and carry arbitrage:** Reverse cash and carry arbitrage refers to long position in futures market and short position in the underlying or cash market.
- **Inter-Exchange arbitrage:** This arbitrage entails two positions on the same contract in two different markets/ exchanges.

**Inter-market arbitrage** This arbitrage opportunity arises because of some price differences existing in same underlying at two different exchanges. If August futures on stock Z are trading at Rs. 101 at NSE and Rs. 100 at BSE, the trader can buy a contract at BSE and sell at NSE. The positions could be reversed over a period of time when difference between futures prices squeeze. This would be profitable to an arbitrageur.

#### **Chapter 4: Introduction to Options**

Options may be categorized into two main types:- • Call Options • Put Options

Option, which gives buyer a right to buy the underlying asset, is called **Call option** and the option which gives buyer a right to sell the underlying asset, is called **Put option**

**Option Premium:** It is the price which the option buyer pays to the option seller

**Writer of an option** - The writer of an option is one who receives the option premium and is thereby obliged to sell/buy the asset if the buyer of option exercises his right.

**American option** - The owner of such option can exercise his right at any time on or before the expiry date/day of the contract.

**European option** - The owner of such option can exercise his right only on the expiry date/day of the contract. In India, Index & stock options are European

**Strike price or Exercise price** - Strike price is the price per share for which the underlying security may be purchased or sold by the option holder

**Assignment of Options** means the allocation of exercised options to one or more option sellers

**Time value** - It is the difference between premium and intrinsic value, if any, of an option. ATM and OTM options will have only time value because the intrinsic value of such options is zero.

**Open Interest** is the total number of option contracts outstanding for an underlying asset.

**Tick size:** It is the minimum move allowed in the price quotations. the tick size for index and stock option contracts is **5 paisa**.

**BSE Sensex Option Contracts** -

7 serial weekly, 3 monthly, 3 quarterly and 8 semi-annually maturing contracts

**Expiry Day** - Monthly, Quarterly and Semi-annually – last Friday of the contract  
Weekly contracts – Friday expiry

### **Moneyness of the Options**

**In the money (ITM) option** - This option would give holder a positive cash flow, if it were exercised immediately. A call option is said to be ITM, when spot price is higher than strike price. And, a put option is said to be ITM when spot price is lower than strike price.

**At the money (ATM) option** - At the money option would lead to zero cash flow if it were exercised immediately. Therefore, for both call and put ATM options, strike price is equal to spot price. ATM option can also be defined as an option with a strike price which is closest to the spot price.

**Out of the money (OTM) option** - Out of the money option is one with strike price worse than the spot price for the holder of option. In other words, this option would give the holder a negative cash flow if it were exercised immediately. A call option is said to be OTM, when spot price is lower than strike price. And a put option is said to be OTM when spot price is higher than strike price.

**Intrinsic value ( IV ) and time value ( TV) of an option** - The option premium, defined above, consists of two components - intrinsic value and time value.

The intrinsic value of an option refers to the amount by which the option is in-the-money i.e., the amount an option buyer will realize, before adjusting for premium paid, if he exercises the option instantly.

<b>Premium</b>	<b>=</b>	<b>Intrinsic Value + Time Value</b>
<b>Intrinsic Value of Call Option</b>	<b>=</b>	<b>Maximum of ( 0, Spot price – Strike Price )</b>
<b>Intrinsic Value of Put Option</b>	<b>=</b>	<b>Maximum of ( 0, Strike price – Spot Price )</b>
<b>Time Value</b>	<b>=</b>	<b>0 at Expiry</b>

**IV is always  $\geq 0$**

The intrinsic value of an option can never be negative because an option holder is not bound to exercise an option if such exercise will result in a loss to him

If the stock price goes up, the buyer of the call gains in proportion to the rise in the stock's value, thereby giving **asymmetric pay off**. Futures have symmetric risk exposures (**symmetric pay off**).

**Leverage** An option buyer pays a relatively small premium for market exposure in relation to the contract value. This is known as leverage. Leverage also has downside implications. If the underlying price does not rise/fall as anticipated during the lifetime of the option, leverage can magnify the investment's percentage loss. Options offer their owners a predetermined, set risk

	<b>Risk / Loss</b>	<b>Return / Profit</b>
Long	Premium paid	Unlimited
Short	Unlimited	Premium received

There are five fundamental parameters on which the option price depends:

- 1) Spot price of the underlying asset
- 2) Strike price of the option
- 3) Volatility of the underlying asset's price
- 4) Time to expiration
- 5) Interest rates

**Spot price of the underlying asset** - If price of the underlying asset goes up the value of the call option increases while the value of the put option decreases. Similarly if the price of the underlying asset falls, the value of the call option decreases while the value of the put option increases.

**Strike Price** - If all the other factors remain constant but the strike price of option increases, intrinsic value of the call option will decrease and hence its value will also decrease. On the other hand, with all the other factors remain constant, increase in strike price of option increases the intrinsic value of the put option which in turn increases its option value.

**Volatility** - It is the magnitude of movement in the underlying asset's price, either up or down. It affects both call and put options in the same way. Higher the volatility of the underlying stock, higher the premium because there is a greater possibility that the option will move in-the-money during the life of the contract.

Higher volatility = Higher premium, Lower volatility = Lower premium (for both call and put options).

**Time to expiration** - The effect of time to expiration on both call and put options is similar to that of volatility on option premiums. Generally, longer the maturity of the option greater is the uncertainty and hence the higher premiums. If all other factors affecting an option's price remain same, the time value portion of an option's premium will decrease with the passage of time. This is also known as **time decay**. Options are known as 'wasting assets', due to this property where the time value gradually falls to zero. high interest rates will result in an increase in the value of a call option and a decrease in the value of a put option.

## Options Pricing Models

**The Binomial Pricing Model** - This is a very accurate model as it is iterative, but also very lengthy and time consuming

**The Black & Scholes Model** - It is one of the most popular, relative simple and fast modes of calculation. Unlike the binomial model, it does not rely on calculation by iteration.

## Option Greeks

**Delta ( $\delta$  or  $\Delta$ )** - The most important of the 'Greeks' is the option's "Delta". This measures the sensitivity of the option value to a given small change in the price of the underlying asset. It may also be seen as the speed with which an option moves with respect to price of the underlying asset. Delta = Change in option premium/ Unit change in price of the underlying asset.

Delta for call option buyer is positive

Delta for put option buyer is negative

**Gamma ( $\gamma$ )** - It measures change in delta with respect to change in price of the underlying asset. This is called a second derivative option with regard to price of the underlying asset. It is calculated as the ratio of change in delta for a unit change in market price of the underlying asset. Gamma = Change in an option delta/ Unit change in price of underlying asset

**Theta ( $\theta$ )** - It is a measure of an option's sensitivity to time decay. Theta is the change in option price given a one-day decrease in time to expiration. It is a measure of time decay. Theta is generally used to gain an idea of how time decay is affecting your option positions. Theta = Change in an option premium/ Change in time to expiry

**Vega ( $v$ )** - This is a measure of the sensitivity of an option price to changes in market volatility. It is the change of an option premium for a given change (typically 1%) in the underlying volatility. Vega = Change in an option premium/ Change in volatility

**Rho ( $\rho$ )** - Rho is the change in option price given a one percentage point change in the risk-free interest rate. Rho measures the change in an option's price per unit increase in the cost of funding the underlying. Rho = Change in an option premium/ Change in cost of funding the underlying

## Chapter 5: Option Trading Strategies

**Option Spreads** - Spreads involve combining options on the same underlying and of same type (call/ put) but with different strikes and maturities. These are limited profit and limited loss positions. They are primarily categorized into three sections as:

• Vertical Spreads • Horizontal Spreads • Diagonal Spreads

**Vertical Spreads** are created by using options having same expiry but different strike prices. Further, these can be created either using calls as combination or puts as combination. These can be further classified as:

- **Bullish Vertical Spread**

- o Using Calls
- o Using Puts

- **Bearish Vertical Spread**

- o Using Calls
- o Using Puts

**Horizontal Spread** involves same strike, same type but different expiry options. This is also known as time spread or calendar spread.

**Diagonal spread** involves combination of options having same underlying but different expiries as well as different strikes. Again, as the two legs in a spread are in different maturities, it is not possible to draw payoffs here as well.

**Straddle** - This strategy involves two options of same strike prices and same maturity. A long straddle position is created by buying a call and a put option of same strike and same expiry whereas a short straddle is created by shorting a call and a put option of same strike and same expiry.

**Strangle** is similar to straddle in outlook but different in implementation, aggression and cost.

**Long Strangle** - As in case of straddle, the outlook here (for the long strangle position) is that the market will move substantially in either direction, but while in straddle, both options have same strike price, in case of a strangle, the strikes are different. Also, both the options (call and put) in this case are out-of-the-money and hence the premium paid is low.

**Short Strangle** - This is exactly opposite to the long strangle with two out-of-the-money options (call and put) shorted. Outlook, like short straddle, is that market will remain stable over the life of options

**Covered Call** - This strategy is used to generate extra income from existing holdings in the cash market. If an investor has bought shares and intends to hold them for some time, then he would like to earn some income on that asset, without selling it, thereby reducing his cost of acquisition.

**Protective Put** - Any investor, long in the cash market, always runs the risk of a fall in prices and thereby reduction of portfolio value and MTM losses. A protective put payoff is similar to that of long call. This is called synthetic long call position. Its like buying insurance to protect your portfolio against market falls.

**Collar** - A collar strategy is an extension of covered call strategy. in case of covered call, the downside risk remains for falling prices; i.e. if the stock price moves down, losses keep increasing (covered call is similar to short put). To put a floor to this downside, we long a put option, which essentially negates the downside of the short underlying/futures (or the synthetic short put)



**Butterfly Spread** - As collar is an extension of covered call, butterfly spread is an extension of short straddle. Downside in short straddle is unlimited if market moves significantly in either direction. To put a limit to this downside, along with short straddle, trader buys one out of the money call and one out of the money put. Resultantly, a position is created with pictorial pay-off, which looks like a butterfly and so this strategy is called “Butterfly Spread”. Butterfly spread can be created with only calls, only puts or combinations of both calls and puts.

**Delta-hedging** -the delta of the option measures the sensitivity of the option value to a given small change in the price of the underlying asset. Option traders use the concept of delta to hedge their portfolio of option positions. the trader has to keep buying or selling futures contracts in order to maintain the delta of the combined position near zero. This process is known as ‘delta hedging’. It is the option trader’s way of managing the risk of his short option position

**Put-call ratio:** This is the ratio of trading volume of put options to call options. The ratio is calculated either on the basis of options trading volumes or on the basis of their open interest. The put-call ratio is generally treated as a contrarian indicator. If the PCR is less than one, it means that the open interest of calls exceeds that of puts. It also means that option traders prefer to sell more calls than puts. This indicates that option sellers do not expect the index to rise in the near future. Thus, a PCR less than one signals a bearish trend. A PCR greater than one, say 1.25, means that the open interest of puts is higher than that of calls. This is taken as a bullish signal, because it shows that option sellers do not expect a fall in the market.

### **Chapter 6: Introduction to Trading Systems**

All the exchanges in India (BSE, NSE and MCX-SX) provide a fully automated screen-based trading platform for index futures, index options, stock futures and stock options. These trading systems support an order driven market and simultaneously provide complete transparency of trading operations. Derivative trading is similar to that of trading of equities in the cash market segment

#### **Entities in the trading system**

Broadly there are four entities in the trading system

- Trading Members
- Trading cum Clearing Members
- Self Clearing Member (SCM)
- Professional Clearing Members and
- Participants

**Authorised Persons (APs):** SEBI had earlier allowed spread of sub-brokership as well as Authorised Person’s network to expand the brokers’ network. However, SEBI Board in its meeting held on June 21, 2018 decided that sub-brokers as an intermediary shall cease to exist with effect from April 01, 2019. All existing sub-brokers would migrate to become Authorised Persons (APs) or Trading Members if the sub-brokers meet the eligibility criteria



**Corporate Hierarchy** - In the Futures and options trading software, trading member will have a provision of defining the hierarchy amongst users of the system. This hierarchy comprises:

- Corporate Manager
- Branch Manager and
- Dealer

### Order Types

#### Time conditions

**Day order:** A Day order is an order which is valid for a single day on which it is entered. If the order is not executed during the day, the trading system cancels the order automatically at the end of the day. **Immediate or cancel (IOC):** User is allowed to buy/sell a contract as soon as the order is released into the trading system. An unmatched order will be immediately cancelled. Partial order match is possible in this order, and the unmatched portion of the order is cancelled immediately.

#### Price condition

**Limit order:** It is an order to buy or sell a contract at a specified price. The user has to specify this limit price while placing the order and the order gets executed only at this specified limit price or at a better price than that

**Market order:** A market order is an order to buy or sell a contract at the bid or offer price currently available in the market. Price is not specified at the time of placing this order.

### Order Matching Rules

In India, F&O platforms offer an order driven market, wherein orders match automatically on price time priority basis. Orders, as and when they are received, are first time stamped and then immediately processed for potential match. If a match is not found, then the orders are stored in different 'books'.

Orders are stored in price-time priority in various books in the following sequence:

- Best Price
- Within Price, by time priority.

The best buy order will match with the best sell order. An order may match partially with another order resulting in multiple trades. For order matching, the best buy order is the one with highest price and the best sell order is the one with lowest price. This is because the computer views all buy orders available from the point of view of a seller and all sell orders from the point of view of the buyers in the market.

**Price Band** - There are no price bands applicable in the derivatives segment. However, in order to prevent erroneous order entry, operating ranges and day minimum/maximum ranges are kept as below:

- For Index Futures: at 10% of the base price
- For Futures on Individual Securities: at 10% of the base price
- For Index and Stock Options: A contract specific price range based on its delta value is computed and updated on a daily basis.

### **Eligibility criteria of stocks**

- a) The stock shall be chosen from amongst the top 500 stock in terms of average daily market capitalization and average daily traded value in the previous 6 months on a rolling basis.
- b) The stock's median quarter-sigma order size (MQSOS) over the last six months shall be not less than Rs.75 Lakhs . For this purpose, a stocks 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.
- c) Market wide position limit in the stock shall not be less than Rs.1500 crores on a rolling basis.
- d) The Average daily delivery value in cash market shall not be less than Rs.35 crores in the previous six months on a rolling basis.
- e) If an existing security fails to meet aforesaid continued eligibility criteria for 3 months consecutively, then no fresh month contract shall be issued on that security. However, the existing unexpired contracts may be permitted to trade till expiry and new strikes may also be introduced in the existing contract months.

**Re-introduction of excluded stocks** - Once a stock is excluded from the derivatives segment, it shall not be considered for re-inclusion for a period of one year from its last trading day in the derivatives segment.

**Eligibility criteria of Indices** - The Exchange may consider introducing derivative contracts on an index, if weightage of constituent stocks of the index, which are individually eligible for derivatives trading, is at least 80%. However, no single ineligible stock in the index shall have a weightage of more than 5% in the index.

The corporate actions may be broadly classified under stock benefits and cash benefits as follows: Bonus, Rights, Merger/De-merger, Amalgamation, Splits, Consolidations, Hive-off, Warrants, Secured Premium Notes (SPNs), Extraordinary dividends

**Dividends** - Dividends which are below 2% of the market value of the underlying stock would be deemed to be ordinary dividends and no adjustment in the strike price would be made for ordinary dividends. For extra-ordinary dividends, above 2% of the market value of the underlying stock, the Strike Price would be adjusted.

**Trading costs** - A participant in the equity derivatives market incurs different trading costs which can be broadly classified into user charges, statutory charges and impact cost.

**User charges:** Brokerage is the commission charged by brokers who place the orders for their clients. Brokerage is usually lower for intra-day trades. Rates of brokerage differ widely according to the additional services offered by the broker. Just as brokers charge brokerage from their clients, the stock exchanges also collect transaction charges from brokers who are the members of the exchange.

**Statutory charges:** These include the Securities Transaction Tax (STT), Goods and Services tax (GST), Stamp Duty and SEBI Turnover fees and applicable GST on it.

**Securities Transaction Tax (STT)** - Trading member has to pay securities transaction tax on the transaction executed on the exchange shall be as under:

**STT rates**

1. Sale of an option in securities → 0.10 per cent
2. Sale of an option in securities, where option is exercised → 0.125 per cent ( Paid by Purchaser)
3. Sale of futures in securities → 0.02 per cent

STT is applicable on all sell transactions for both futures and option contracts

**IPFT Charges** – The IPFT (Investor Protection Fund Trust) is created by the stock exchanges to make up for investors' claims when defaulters' trading member assets are not enough to cover the Investor claims. The IPFT charges for NSE are as follows:

NSE Equity and NSE futures - ₹10 per crore of traded value + 18% GST

NSE Equity options - ₹50 per crore of premium value for NSE Equity options + 18% GST

**Algorithmic trading** is a process of executing orders utilizing automated and pre-programmed trading instructions to account for variables such as price, timing and volume. An algorithm is a set of directions for solving a problem. It is basically a mathematical model developed by programmers and is fed into a computer. The model considers the changing market conditions such as security prices, traded volumes, time of the day, etc. and dynamically places buy and sell orders in the market. The biggest advantage of algorithmic trading is that because placing of buy-sell orders is automatic and computer-driven, the individual trader's emotions are not allowed to affect his/her trading decisions. Another huge advantage is that algorithmic trading reduces the overall time taken for order execution, because computers can place orders at far higher speeds than human operators sitting at trading terminals. High-frequency trading is an offshoot of algo trading which allows a trader to make tens of thousands of trades per second. Algo trading is mainly used by institutional investors and large brokers to cut down their trading costs. Some large brokers in India also allow their retail clients to use algo trading strategies in the derivatives market

**Investor Risk Reduction Access (IRRA)** platform is designed to protect investors from technical glitches and unforeseen outages that can make a trading member's site inaccessible. It's intended to provide an alternative when both the primary trading platform and the disaster recovery sites are experiencing challenges.

It is a joint platform developed by the exchanges to provide the investors an opportunity to square off/close the open positions and /or cancel pending orders in case of disruption of trading services provided by the Trading Member.

The IRRA service shall support multiple segments across multiple exchanges.

## **Chapter 7: Introduction to Clearing and Settlement System**

<b>Trading cum Clearing Member</b>	<ul style="list-style-type: none"><li>• Can do both clearing &amp; Trading</li><li>• Can clear for other trading members also</li></ul>
<b>Professional Clearing Member</b>	<ul style="list-style-type: none"><li>• Can only do Clearing</li><li>• No Trading</li></ul>
<b>Self Clearing Member</b>	<ul style="list-style-type: none"><li>• Can Clear Own trades only</li><li>• Can not clear others trades</li></ul>
<b>Custodian</b>	<ul style="list-style-type: none"><li>• Can only do Clearing</li><li>• Settles accounts of a client of Trading member</li></ul>

Clearing Members handle the responsibility of clearing and settlement of all deals executed by Trading Members, who clear and settle such deals through them. Clearing Members perform the following important functions:

Clearing: Computing obligations of all his trading members i.e., determining positions to settle.

Settlement: Performing actual settlement.

Risk Management: Setting position limits based on upfront deposits / margins for each TM and monitoring positions on a continuous basis.

### **Clearing Member Eligibility Norms**

- Net-worth of at least Rs.300 lakhs. The Net-worth requirement for a Clearing Member who clears and settles only deals executed by him is Rs. 100 lakhs.
- Deposit of Rs. 50 lakhs to clearing corporation which forms part of the security deposit of the Clearing Member.
- Additional incremental deposits of Rs.10 lakhs to clearing corporation for each additional TM, in case the Clearing Member undertakes to clear and settle deals for other TMs.

### **Clearing Mechanism**

The first step in clearing process is calculating open positions and obligations of clearing members.

The open position of a CM is arrived at by aggregating the open positions of all the trading members (TMs) and all custodial participants (CPs) clearing through him, in the contracts which they have traded.

The open position of a TM is arrived at by adding up his proprietary open position and clients' open positions, in the contracts which they have traded. While entering orders on the trading system, TMs identify orders as either proprietary (Pro) or client (Cli).

Proprietary positions are calculated on net basis (buy-sell) for each contract and that of clients are arrived at by summing together net positions of each individual client.

A TM's open position is the sum of proprietary open position, client open long position and client open short position.

### **Settlement Mechanism - Settlement of Futures Contracts**

In Futures contracts, both the parties to the contract have to deposit margin money which is called as initial margin. Futures contract have two types of settlements, the MTM settlement which happens on a continuous basis at the end of each day, and the final settlement which happens on the last trading day of the futures contract.

**Mark to Market (MTM) Settlement** Mark to Market is a process by which margins are adjusted on the basis of daily price changes in the markets for underlying assets. The profits/ losses are computed as the difference between:

1. The trade price & the day's settlement price for contracts executed during the day but not squared up.
2. The previous day's settlement price & current day's settlement price for brought forward contracts.
3. The buy price and the sell price for contracts executed during the day and squared up.

**Settlement price for daily MTM:** The daily settlement price for futures contracts is based on the last 30 minutes volume weighted average price of such contract across exchanges. In case of futures contracts which are not traded during the last half an hour on a day, a theoretical daily settlement price is computed as:  $F = S * e^{rt}$ , where: F = theoretical futures price, S = value of the underlying index/individual security, r = rate of interest (may be the relevant MIBOR rate or such other rate as may be specified) and t = time to expiration.

**Final Settlement** - On expiration day of the futures contracts, after the close of trading hours, clearing corporation marks all positions of a clearing member to the final settlement price. All long positions are automatically assigned to short positions with the same series, on a random basis, for either cash settlement or for delivery settlement, whichever is applicable.

**Settlement of Options Contracts** - 1) Daily premium settlement, 2) Final settlement

**Daily Premium Settlement** - The buyer of an option pays the premium, while the seller receives the same. The amount payable and receivable as premium are netted to compute the net premium payable or receivable amount for each client for each option contract.

The clearing members who have a premium payable position are required to pay the premium amount to the clearing corporation and in turn this amount is passed on to the members who have a premium receivable position. This is known as daily premium settlement. The premium payable amount and premium receivable amount are directly credited/ debited to the clearing member's clearing bank account on T+1 day, where T is the trade date

**Final Exercise Settlement** - All the in-the-money (ITM) stock options contracts are automatically exercised on the expiry day. ITM contracts are those that have some intrinsic value on the expiry day.

**Net settlement of cash segment and F&O segment on expiry** - mechanism of net settlement of cash and F&O segments on expiry of stock derivatives has been introduced to ensure better

alignment of cash and derivatives segment, reduce the price risk and allow netting efficiencies to market participants. Under the net settlement mechanism, on expiry of F&O positions, a client's obligations arising out of cash segment settlement and physical settlement of F&O positions can be settled on a net basis.

**Settlement of Admitted Deals** - Admitted deals executed on a trading day, shall be cleared on a netted basis, by the Clearing Corporation. The clearing members are responsible for all obligations arising out of such trades including the payment of margins, penalties, any other levies and settlement of obligations of the trades entered by them as trading members and also of those trading members and custodial participants for whom they have undertaken to settle as a clearing member

#### Settlement Price for derivatives

Product	Settlement	Price
Futures Contracts on Index OR Individual Security	Daily Settlement	Closing price of the futures contracts on the trading day (closing price for a futures = last half an hour volume weighted average price of such contract).
Un-expired illiquid futures contracts	Daily Settlement	Theoretical Price computed as per formula $F = S * e^{rt}$
Futures Contracts on Index or Individual Securities	Final Settlement	Closing price of the relevant underlying index / security in the Capital Market segment of exchanges on the last trading day of the futures contracts.
Options Contracts on Index and Individual Securities	Final Exercise Settlement	Closing price of such underlying security (or in-dex) on the last trading day of the options contract.

**Risk Management** - The most critical component of risk containment mechanism for F&O segment is the margining system and on-line position monitoring. The actual position monitoring and margining is carried out on-line through Parallel Risk Management System (PRISM) using SPAN® (Standard Portfolio Analysis of Risk) system for the purpose of computation of on-line margins, based on the parameters defined by SEBI.

**Initial margin** - Margins are computed by clearing corporation upto client level with the help of SPAN. Clearing corporation collects initial margin for all the open positions of a Clearing Member based on the margins computed. Margins are required to be paid up-front on gross basis at individual client level for client positions and on net basis for proprietary positions. A Clearing Member collects initial margin from TM whereas TM collects from his clients.

Initial margin requirements are based on 99% value at risk over a one day time horizon. However, in the case of futures contracts (on index or individual securities), where it may not be possible to collect mark to market settlement value, before the commencement of trading on the next day, the initial margin is computed over a two-day time horizon, applying the appropriate statistical formula

**Premium Margin** - Along with Initial Margin, Premium Margin is also charged at client level. This margin is required to be paid by a buyer of an option till the premium settlement is complete.



**Assignment Margin for Options on Securities** - Along with Initial Margin and Premium Margin, assignment margin is required to be paid on assigned positions of Clearing Members towards final exercise settlement obligations for option contracts on individual securities, till such obligations are fulfilled.

Assignment margin is levied on assigned positions of the clearing members towards final exercise settlement obligations for option contracts on index and individual securities which are settled in cash. Assignment margin shall be the net exercise settlement value payable by a clearing member towards final exercise settlement. Assignment margin shall be levied till the completion of pay-in towards the exercise settlement.

### **Intra-day crystallised Losses**

Clearing Corporation calculates and levy Intraday Crystallised Losses (ICMTM) in the following manner:

- a) ICMTM is computed for all trades which are executed and results into closing out of open positions.
- b) ICMTM is calculated based on weighted average prices of trades/positions
- c) ICMTM is computed only for futures contracts.
- d) ICMTM is part of initial margin and shall be adjusted against the liquid assets of clearing member on a real time basis.
- e) Crystallised losses at a contract level for a client are adjusted against crystallised profits, if any, from another contract for the same client to arrive at client level profit or loss.
- f) All client level losses across all trading members including losses on proprietary positions of trading members, if any, are grossed up to arrive at clearing member level ICMTM.
- g) ICMTM so blocked/ collected is released on completion of daily / final mark to market settlement pay-in

**Delivery Margins** - Delivery margins are levied on lower of potential deliverable positions or in-the-money long option positions, four days prior to expiry of derivative contract, which has to be settled through delivery.

Delivery margins are part of the initial margins of the clearing member and are computed at a client level settlement obligation for all positions to be settled through delivery. Client level potential in-the-money long option positions are computed on daily basis. In-the-Money options are identified based on the closing price of the security in the underlying Capital Market segment on the respective day

**Exposure Margins** - The VAR and Extreme Loss percentage as computed in the Capital Market segment shall be applied on client level settlement obligations. The margins rate shall be updated for every change in margin rate in Capital Market segment. Clearing members are subject to exposure margins in addition to initial margins

**Net Option Value** is computed as the difference between the long option positions and the short option positions, valued at the last available closing price of the option contract and is updated intraday at the current market value of the relevant option contracts at the time of generation of risk parameters. The Net Option Value is added to the Liquid Net Worth of the clearing member.

**Client Margins** - Clearing corporation intimates all members of the margin liability of each of their client. Additionally members are also required to report details of margins collected from clients to clearing corporation, which holds in trust client margin monies to the extent reported by the member as having been collected from their respective clients.

### Cross Margin

1. Cross margining is available across Cash and Derivatives segment.
2. Cross margining is available to all categories of market participants.
3. The positions of clients in both the Capital market and derivatives segments to the extent they offset each other only are considered for the purpose of cross margining.
4. When a Clearing Member clears for client/ entities in Cash and Derivatives segments, he is then required to intimate client details through a Collateral Interface for Members (CIM) to benefit from Cross margining.
5. When different Clearing Members clear for client/entities in Cash and Derivatives segments they are required to enter into necessary agreements for availing cross margining benefit.
6. Clients who wish to avail cross margining benefit in respect of positions in Index Futures and Constituent Stock Futures only, their clearing member in the Derivatives segment needs to provide the details of the clients.

### Limits in Derivatives Market

	Index Options	Index Futures	Stock Options	Stock Futures
<b>Client level / FPI category III / MF Schemes</b>	Higher of --> 1% of the free float market cap OR 5% of the open interest in the derivative contracts on a particular underlying stock			
<b>Trading Member / FPI Cat I &amp; II / Mutual Fund</b>	Higher of Rs.500 crores OR 15% of the total open interest in the market in equity index option contracts	Higher of Rs.500 crores OR 15% of the total open interest in the market in equity index futures contracts	The position limits of Trading members / FPIs (Category I & II) / Mutual Funds in individual stocks is related to the market-wide position limit for the individual stocks. The combined futures and options position limit shall be 20% of the applicable Market Wide Position Limit (MWPL).	
<b>Market wide</b>	No MWPL for Index Options	No MWPL for Index Futures	At the end of each day the Exchange disseminates the aggregate open interest across all Exchanges in the futures and options on individual scrips along with	



		<p>the market wide position limit for that scrip and tests whether the aggregate open interest for any scrip exceeds 95% of the market wide position limit for that scrip. If yes, the Exchange takes note of open positions of all client/ TMs as at the end of that day in that scrip, and from next day onwards the client/ TMs should trade only to decrease their positions through offsetting positions till the normal trading in the scrip is resumed.</p> <p>The normal trading in the scrip is resumed only after the aggregate open interest across Exchanges comes down to 80% or below of the market wide position limit.</p>
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#### **Settlement of running account of Client's funds lying with the TM:**

With a view to prevent any misuse of a client's funds by the broker, SEBI has made it mandatory for brokers to settle the running account of client funds on a monthly or quarterly basis as per the mandate of the client. The TM (Trading Member), after considering the End of the Day (EOD) obligation of funds across all the Exchanges, shall settle the running accounts at the choice of the clients on quarterly and monthly basis, on the dates stipulated by the Stock Exchanges. To ensure uniformity and clarity on dates of such monthly and quarterly settlement of client accounts; Stock exchanges shall, jointly, issue the annual calendar for the settlement of running account (quarterly and monthly) at the beginning of the financial year.

#### **Standard Operating Procedure (SOP) for handling stock exchange outage**

Scenarios	Extension of trading hours
Resumption of normal trading atleast 1 hour before scheduled market closure	No change of trading hours required
Trading does not resume to normalcy within 1 hour before the scheduled market closure	All stock exchanges should extend their trading hours by one and half hours for that day

Outage happens during the last trading hour of normal operation and latest before 15 minutes of normal scheduled market closure	All stock exchanges should extend their trading hours by one and half hours for that day
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SEBI has recently notified a detailed **CSCRF** for the **SEBI Regulated Entities (REs)** that shall come into effect starting from January 1, 2025 onwards. The key objective of CSCRF is to address evolving cyber threats, to align with the industry standards, to encourage efficient audits, and to ensure compliance by SEBI Regulated entities. As per the CSCRF, the following REs are constituted as the **Market Infrastructure Institutions (MIIs)**:

- a. Stock Exchanges
- b. Depositories
- c. Clearing Corporations
- d. KYC Registration Agencies (KRAs)
- e. Qualified Registrars and Transfer Agents (QRTAs)

### **Chapter 8: Legal and Regulatory Environment**

#### **Securities Contracts (Regulation) Act, 1956**

The Act aims to prevent undesirable transactions in securities. It governs the trading of securities in India. The term “securities” has been defined in the Section 2(h) of SCRA.

According to the act “Derivatives” is defined as:-

- A security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security.
- A contract which derives its value from the prices, or index of prices, of underlying securities.
- Commodity derivatives, and Such other instruments as may be declared by the Central Government to be derivatives.
- Section 18A provides that notwithstanding anything contained in any other law for the time being in force, contracts in derivative shall be legal and valid if such contracts are:
  - Traded on a recognized stock exchange
  - Settled on the clearing house of the recognized stock exchange, in accordance with the rules and bye-laws of such stock exchanges.

#### **Regulation in Trading**

- The derivatives exchange/segment should have a separate governing council and representation of trading/clearing members shall be limited to maximum of 40% of the total members of the governing council.
- The Exchange should have a minimum of 50 members
- SEBI has prescribed min. contract value in the range of Rs. 15 to 20 lakhs from Nov 2024
- The min. net worth for clearing members of the derivatives segment shall be Rs.300 Lakhs
- The net worth requirement is Rs. 1 crore for a self-clearing member.

Responsibilities of the Clearing Corporation include:

- Collection of Margins on timely basis
- Smooth operation of the Market
- Daily Clearing and Settlement
- To act as a legal counterparty for every contract
- To monitor positions in derivatives and cash segments
- Deciding Daily Settlement Prices
- Keep consistent record of margins at client level
- Take care not to appropriate client margins against brokers dues

The Clearing Corporation can transfer client positions from one broker member to another broker member in the event of a default by the first broker member.

**Main objectives of Trade Guarantee Fund (TGF):**

- To guarantee settlement of bonafide transactions of the members of the exchange.
- To inculcate confidence in the minds of market participants.
- To protect the interest of the investors in securities.

All active members of the Exchange are required to make initial contribution towards Trade Guarantee Fund of the Exchange.

**Eligibility criteria for membership on derivatives segment**

- **Balance Sheet Networth Requirements:** SEBI has prescribed a networth requirement of Rs. 3 crores for clearing members. The clearing members are required to furnish an auditor's certificate for the networth every 6 months to the exchange. The networth requirement is Rs. 1 crore for a self-clearing member. SEBI has not specified any networth requirement for a trading member.
- **Liquid Networth Requirements:** Every clearing member (both clearing members and self-clearing members) has to maintain at least Rs. 50 lakhs as Liquid Networth with the exchange / clearing corporation.
- **Certification requirements:** The Members are required to pass the certification programme approved by SEBI. Further, every trading member is required to appoint atleast two approved users who have passed the certification programme. Only the approved users are permitted to operate the derivatives trading terminal.

## **Chapter 9: Accounting and Taxation**

**When forward contract is for hedging**

- The premium or discount (difference between the value at spot rate and forward rate) should be amortized over the life of contract.
- Exchange difference (difference between the value of settlement date/ reporting date and value at previous reporting date/ inception of the contract) is recognized in Profit & Loss statement of the year.
- Profit/ loss on cancellation/ renewal of forward contract are recognized in P&L of the year.

### **When forward contract is for trading/ speculation**

- No premium or discount is recognized.
- A gain or loss i.e. the difference between the forward rate as per contract/ previous year end valuation rate and the forward rate available at the yearend (reporting date) for remaining maturity period should be recognized in the P&L of the period.
- Profit/ loss on cancellation / renewal of forward contract are recognized in P&L of the year.

### **Taxation of Profit/Loss on derivative transaction in securities**

Prior to Financial Year 2005–06, transaction in derivatives were considered as speculative transactions for the purpose of determination of tax liability under the Income -tax Act.

Finance Act, 2005 has amended section 43(5) so as to exclude transactions in derivatives carried out in a “recognized stock exchange” for this purpose. This implies that income or loss on derivative transactions which are carried out in a “recognized stock exchange” is not taxed as speculative income or loss. Thus, loss on derivative transactions can be set off against any other income during the year (except salary income). In case the same cannot be set off, it can be carried forward to subsequent assessment year and set off against any other non-speculative business income of the subsequent year. Such losses can be carried forward for a period of 8 assessment years.

## **Chapter 10: Sales Practices and Investors Protection Services**

**Churning** refers to when securities professionals making unnecessary and excessive trades in customer accounts for the sole purpose of generating commissions. Investors should be careful to review their monthly account statements and investigate any abnormally high trading activity.

**The Risk Disclosure Document** highlights the risk involved in trading on stock exchanges, and the rights and obligations of the broker and their clients. Brokers are required to make their clients understand the risks involved in trading derivatives and get a copy of the Risk Disclosure Document signed by their clients at the time of client on-boarding

### **Customer Due Diligence**

- Obtaining sufficient information in order to identify persons who beneficially own or control securities account
- Verify the customer’s identity using reliable, independent source documents, data or information
- Conduct ongoing due diligence and scrutiny, i.e. perform ongoing scrutiny of the transactions and account throughout the course of the business relationship to ensure that the transactions being conducted are consistent with the registered intermediary’s knowledge of the customer, its business and risk profile, taking into account, where necessary, the customer’s source of funds

### **Clients of special categories (CSC)**

- Non resident clients.
- High networth clients.
- Trust, Charities, NGOs and organizations receiving donations.

- Companies having close family shareholdings or beneficial ownership.
- Politically exposed persons (PEP) of foreign origin.
- Companies offering foreign exchange offerings.
- Clients in high risk countries
- Non face to face clients.
- Clients with dubious reputation as per public information available.etc.

**Investors Grievance Mechanism** - Investor Grievance Redressal Mechanism / Investor Service Department is a very important department and is considered as a key regulatory function of SEBI in terms of monitoring exchanges under SECC Regulation 2012. Further, having a proper mechanism of investor grievance redressal is a must and is an ongoing condition for eligibility of membership of the Exchange under Brokers Regulation 1992.

Investors can approach the Investors Grievance Division (IGD) of the exchange for redressal of their grievances.

### **Arbitration**

- Arbitration is a quasi judicial process of settlement of disputes between Trading Members, Investors, Sub-brokers & Clearing Members and between Investors and Issuers (Listed Companies).
- The parties to arbitration are required to select the arbitrator from the panel of arbitrators provided by the Exchange. The arbitrator conducts the arbitration
- proceeding and passes the award normally within a period of 4 months from the date of initial hearing.
- The arbitration award is binding on both the parties. However, the aggrieved party, within 15 days of the receipt of the award from the arbitrator, can file an appeal to the arbitration tribunal for re-hearing the whole case.
- On receipt of the appeal, the Exchange appoints an Appellate Bench consisting of 5 arbitrators who re-hear the case and then give the decision. The judgment of the Bench is by a 'majority' and is binding on both the parties. The final award of the Bench is enforceable as if it were the decree of the Court.
- Any party who is dissatisfied with the Appellate Bench Award may challenge the same in a Court of Law.

### **SEBI Complaints Redress System (SCORES) ( <https://scores.sebi.gov.in/> )**

SEBI's web based complaints redressal system is called SCORES (Sebi Complaints REDress System). SCORES is a centralized grievance management system with tracking mechanism to know the latest updates and time taken for resolution.

### **IMPORTANT NOTE :**

1. Attend **ALL** Questions.
2. For the questions you don't know the right answer – Try to eliminate the wrong answers and take a guess on the remaining answers.

3. DO NOT MEMORISE the questions & answers. It's not the right to way to prepare for any NISM exam. Good understanding of Concepts is essential.

April 2025

Scan the following QR code for NISM Equity Derivatives Training Videos



*All the Best ☺*

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