

OPTIONS TRADING (ADVANCED) MODULE

➤ **Options – A Backgrounder**

- A. Derivative Types
- B. Continuous Compounding
- C. Option Valuation
- D. Option Pricing Band
 - i. Upper Bound: Call Option
 - ii. Upper Bound: Put Option
 - iii. Lower Bound: Call Option
 - iv. Lower Bound: Put Option
- E. Put-Call Parity: European Options
 - i. Position A undervalued
 - ii. Position B Undervalued
- F. Put-Call Parity: American Options
- G. Dividends

➤ **Quantitative Concepts – A Backgrounder**

- A. Normal Distribution
- B. Share Prices – Lognormal Distribution
- C. Linkages that arise from the Distribution
- D. Volatility (s)

➤ **Binomial Option Pricing Model**

- A. Single Period Binomial
- B. Multiple Period Binomial
- C. European Put Option
- D. Binomial Model for American Options
- E. Role of Volatility in 'u' and 'd'

➤ **Black-Scholes Option Pricing Model**

- A. European Call Option
- B. European Put Option
- C. Dividends
- D. American Options

➤ **Option Greeks**

- Delta
 - 1. European Call on non-dividend paying stock
 - 2. European Put on non-dividend paying stock
 - 3. European Call on asset paying a yield of q
 - 4. European Put on asset paying a yield of q
- Gamma
 - 1. European Call / Put on non-dividend paying stock
 - 2. European Call / Put on asset paying a yield of q
- Theta
 - 1. European Call on non-dividend paying stock
 - 2. European Put on non-dividend paying stock
 - 3. European Call on asset paying yield of q .
 - 4. European Put on asset paying yield of q
- Vega

1. European Call / Put on non-dividend paying stock
 2. European Call / Put on asset paying yield of q
- Rho
 1. European Call on non-dividend paying stock
 2. European Put on non-dividend paying stock

➤ **Volatility**

- Historical Volatility (s)
- ARCH(m) Model
- Exponentially Weighted Moving Average (EWMA)
- GARCH Model
- Implied Volatility

➤ **Basic Option & Stock Positions**

A. Pay-off Matrix for Basic Option Positions

- Long Call
- Short Call
- Long Put
- Short Put

B. Pay-off Matrix for Position in the Share

- Long Stock
- Short Stock

C. Assumptions

D. A Few Option Contract Intricacies

➤ **Option Trading Strategies**

A. The Strategies

1. Single Option, Single Stock
 - i. Protective Put

- ii. Covered Put
- iii. Covered Call
- iv. Protective Call

2. Multiple Options of Same Type

- i. Bull Spread
- ii. Bear Spread
- iii. Butterfly Spread
- iv. Calendar Spread
- v. Diagonal Spread

3. Multiple Options of Different Types

- i. Straddle
- ii. Strangle
- iii. Collar
- v. Range Forward - Long
- vi. Range Forward – Short
- vii. Box Spread
- viii. Condor

B. Option Chain

C. Contract Fundamentals

D. Option Trading Intricacies

- 1. Choice of Strike Price
- 2. Choice of Expiry
- 3. Roll Over and Covered Calls

➤ **Exotic Options**

A. Asian Option

B. Bermudan Option

C. Compound Option

- D. Binary Option
- E. Barrier Option
- F. Look back Option
- G. Shout Option
- H. Chooser Option

➤ **Market Indicators**

- A. Put-Call Ratio
- B. Open Interest
- C. Roll-over
- D. Volatility