Options

options is a financial instrument which gives to the holder a right to buy or sell without any obligation to buy or sell.

The person buying an options contract is known as option holder and the person selling option contract is known as option writer

The price specified in the options contract is known as strike price or exercise price

Just like futures contracts even options contracts on stock and index are highly standardised. options are available on Nifty and sensex also on different shares decided by the stock exchange. The lot size of the options contract is the same as for futures contract.

similarly just as futures contracts even options contracts are cash settled i.e. no deliveries are taken place.

cash settled

Options contract that can be exercised only on maturity date are known as European style options. Options that can be exercised at any time on or before maturity date are american style options.

In India options on stock are American while options on index are european s

Type of investor	investors position	investors pay-off
1. Call option Holder	* Right of buying * No obligation of buying.	* potential for unlimited gain * Loss limited to premium paid
2. Call option writer	* obligation to sell * No right of selling.	* potential for unlimited loss * gain Limited to premium Received
3. put option holder	* Right of selling * No obligation of selling.	* potential for unlimited gain * Limited to premium paid
4. put option writer	* Obligation to buy * No right of buying.	* potential for unlimited loss * gain limited to premium received

1 In the Money (ITM) & Out Of Money (OTM) At the Money (ATM) options.

	Call option	put option
spot price > strike price	ITM	OTM
spot price < strike price	OTM	ITM
spot price = strike price	ATM	ATM

Only ITM options are worth excercisable.

2 At the time of deciding whether an option should be exercised or not premium paid should be ignored.

PURE OPTIONS STRATEGY:

Future Expectation	option Holder	option writer
share price / index shall rise above the strike price.	buy call option	wgb / sell option
share price / index fall below the strike price	buy put option	income = pre... sell call option

Options Premium :
At the time of entering in to options contract up front premium is to be paid.

- This options premium comprised of money an option holder can immediately on exer (i.e. intrinsic value) and opportunity cost option writer i.e. time value.

Options premium = Intrinsic value + Time value

where intrinsic value is —

(a) for ~~call~~ put option
Higher of (strike price - spot price or 0)

(b) for ~~put~~ call option
Higher of (spot price - strike price or 0).

settlement of options contract

1. An investor may wait till the maturi On that date by comparing the spot / strike price decide whether the option s be exercised if it is ITM or allow expire.

2 Before the maturity of the option an investor can squared up the option. Squaring up means taking a position opposite to the earlier position. For instance, if earlier call option was purchased then for squaring up call option shall be sold.

In case of squaring up it is the difference between option premium which shall decide the gain or loss. In real market close to 99% of the option are squared up and never exercised.

COMBINATION OPTION STRATEGES.

1. ~~STRADDLE~~ STRADDLE
It is combination of one call and one put with both option having same strike price and expiration date.

2. ~~STRAP~~ STRAP
It is a combination of two calls and one put with all three options having same strike price and expiration date.

3 STRIP.
It is a combination of one call and two put with all three options having same strike price and expiration date

4. STRANGLE

It is a combination of one call one put having same expiration da[te] but with strike price of call higher [than] strike price of put.

Option strategy to be selected

	Option holder	Option w[riter]
share price ↑	buy call	sell pu[t]
share price ↓	Buy put	sell ca[ll]

Expected future scenario	Options Holder	Option writer
1. equal chance of share prices rising or falling.	Long straddle [Buy 1 call + Buy 1 put]	short st[raddle] [sell 1 c[all] + sell 1 [put]]
2. more chance of share price to rise	Long strap [buy 2 call + buy 1 put]	short s[trap] [sell 2 [call] + sell 2 [put]]
3. more chance of share price to fall	Long strip [buy 1 call + buy 2 put]	short [strip] [sell 2 [call] + sell 1 [put]]

Long strangle

classmate
Date ______
Page ______

Spread strategy
spread strategy involve simultaneous buying & selling of same option i.e. either buying and selling call option or buying & selling put option

1 BULL SPREAD
This is a spread strategy in which the strike price of option purchased is lower than strike price of option sold.

2 BULL CALL SPREAD.
Bull spread involving call option is known as Bull call spread. This strategy is preferred when there is higher chance of share prices increasing then decline in share prices.

e.g. buy a 400 call and sell a 450 call.

For a bull call spread maximum loss is a net premium paid. Similarly gain is restricted to

[Higher strike price − lower strike price] − Net premium paid

3 BULL PUT SPREAD
A bull spread involving put option is known a bull put spread. under this strategy a put option is purchased at lower strike price than put option sold. However, bull put spread is not a popular strategy

4 BEAR SPREAD STRATEGY

This is a spread strategy in which the strike price of option purchased is higher t the strike price of option sold.

5. BEAR PUT SPREAD

Bear spread involving put option is known as bear put spread. This is a strategy which put option is purchased at a s price higher than the strike price of put sold.

Bear put spread is preferred when the is a higher chance of fall in share pric

e.g. buy a 650 put and sell a 600 put

In the above case, Maximum loss is ne premium paid. Similarly gain shall be restricted to

[higher strike price − lower strike price] − Net premium paid

9 BEAR CALL SPREAD

A bear spread involving call options is known as bear call spread. This is strategy of buying call option at a s price higher than the strike price of the call option sold. However, bear

6. BUTTERFLY SPREAD
A spread strategy which is a combination of bull spread & bear spread is known as butterfly spread. Butterfly spreads are preferred when there is an equal chance of share prices moving in either direction.

7. Butterfly call spread.
It is a strategy of buying two call options one of a lower strike price and another higher strike price and selling two call options at a strike price exactly at the centre of strike prices of the call options purchased.

For e.g. buy 1 call for Rs 400, sell 2 call for Rs 450 and buy one call of Rs

For the above strategy maximum loss shall be net premium paid.

similarly gain shall be restricted to —

[Equal distance between the strike prices − Net premium paid]

8. Butterfly put spread.
Instead of call option if the spread involves put option as described above then it is known as butterfly put spread.

classmate
Date
Page

Other option strategy

1. COVERED CALL OPTION

A call option that is covered by shares owned, is known as covered call option. In case shares are not already owned at the time of selling call option one can simultaneously buy shares.

Buy share
+
sell call

Thus, covered call option one takes a long position in stock market and a short position in derivative market. Hence, this also works as hedging strategy. The idea behind covered call option writing is to eliminate the risk of potential loss for call option sold through gains on the stock market.

e.g. a trader purchases shares of Rs 500 and sells a call option at a strike price of ... On expiration date share price rises to 700. In this case trader has lost 200 for the call option sold. However, value of shares has increased by Rs 200. The loss of call option of Rs 200 is adjusted against gain of Rs 200.

2. PROTECTIVE PUT STRATEGY

This is a strategy which involves buying put option for shares already purchased. The idea behind protective put strategy is to recover the loss on the stock market due to fall in share prices by exercising put option in the derivatives market.

Buy shares
+
Buy put.

e.g. If shares are purchased for ₹ 1000 a trader may simultaneously buy put option at strike price of ₹ 1000. In case share price falls to 400 then the trader has lost ₹ 600 on shares purchased. However, the put option can be exercised resulting in a gain of ₹ 600

(P.T.O.)

Factors affecting value of options

			Value of call	Value of put
1	Spot price	↑	↑	↓
		↓	↓	↑
2	Strike price	↑	↓	↑
		↓	↑	↓
3	Dividend	Received	↓	↑
		Not received	↑	↓
4	Volatility	high	↑	↑
		low	↓	↓
5	Time to expiration	↑	↑	↑
		↓	↓	↓
6	Interest rate	high	↑	↓
		low	↓	↑