NIFTY 50

Stock of the nation

S&P CNXNIFTY

Index Options Market

What is an Option ?

An option is a contract which gives the right, but not the obligation, to buy or sell the underlying at a stated date and at a stated price. A call option gives the right to buy and a put option gives the right to sell.

A typical options transaction.

On July 1, 2006, 'A' sells a call option (right to buy), with strike price of Rs.500, which expires after one month on "ABC Ltd." to 'B' for a price of say Rs.3.00. Now 'B' has the right to approach 'A' on July 31, 2006 and buy 1 share of "ABC Ltd." at Rs.500. Here Rs.3.00 is called the option price, Rs.500 is the exercise price and July 31, 2006 is called the expiration date.

'B' does not have to necessarily buy 1 share of "ABC Ltd." on July 31, 2006 at Rs.500 from 'A'. 'B' may find it worthwhile to exercise his right to buy only if "ABC Ltd." trades above Rs.500. If "B" exercises his option, A has to necessarily sell "B" one share of "ABC Ltd." at Rs.500 on July 31, 2006. So if the price of "ABC Ltd." goes above Rs.500 'B' may exercise his option, or else the option may lapse. Then 'B' loses the original option price of Rs.3.00 and 'A' has gained it.

What is the underlying for an Option?

Options can be traded on any underlying like individual stocks, Indices etc. NSE introduced trading in S&P CNX Nifty Options from June 4, 2001 and options on individual securities from July 2, 2001. This booklet tries to bring home certain basic concepts and features of Index options.

How Nifty options would help an investor?

Nifty options allows the investor to trade a large segment of the equities market with one decision and thus provide a different perspective and new dimension to investing in equities. Nifty options helps the investors in reflecting their views on the market-bullish, bearish or neutral, in planning their investment strategies and thus trade efficiently.

Who should trade in Options?

Investors belonging to the following categories, depending on their financial goals and investment objectives generally consider trading in options.

- Investors who want to participate in the market without trading or holding a large stock portfolio.
- Investors who have strong views on the market and its future movement and want to take advantage of the same
- Investors who are following the equities market very closely
- Investors who want to protect the value of their diversified equities portfolio

Why should you trade in Options?

Buying options can be compared to buying insurance. For example to cover the risk of burglary, fire, etc. you buy insurance and pay premium. In the event of any untoward happening, the insurance cover compensates you for the losses. Otherwise, the insurance cover expires after the specific period of time. The insurance premium is the cost for the cover. Similarly, in the case of options, the right to buy or sell the underlying is acquired by payment of a premium. This affords protection against a general fall in market and thus can be attractive to various investors including Mutual Funds, who may like to bundle Nifty funds with Nifty options. The option could be exercised in the event of adverse market movement. Otherwise, the option will expire after the specific period. The cost of the option, i.e. the premium, is paid at the time of purchase. There is no further loss that is generated by the option for the buyer. This feature of option makes it attractive for the market participants.

How Nifty options are settled?

Like Nifty Futures, Nifty options is also cash settled.

How Nifty options will work?

Contract specifications (proposed):

Underlying Index	S&P CNX Nifty
Exchange of Trading	National Stock Exchange of India Limited
Contract size	Permitted lot size shall be 50 or multiples thereof
Price steps	Res.0.05
Strike Price Interval	Rs. 10.00
Price Bands	Not applicable
Trading cycle	The options contracts will have a maximum of three month trading cycle - the near month (one), the next month (two) and the far month (three) New contract will be introduced on the next trading day following the expiry of near month contract
Expiry day	The last Thursday of the expiry month or the previous trading day if the last Thursday is a trading holiday.
Settlement basis	Cash settlement
Style of option	European

Disclaimer

Market conditions can lead to substantial profit or loss. Investors are advised to seek adequate product and market knowledge as well as proper investment advice before trading derivatives.

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What is S&P CNX Nifty?

S&P CNX Nifty (Nifty) is a 50 stock index comprising the largest and the most liquid companies in India. Nifty covers nearly 23 sectors of the economy and a market capitalisation of almost 60% of the total market capitalisation of the Indian stock market. The ownership and management rights of this index rests with India Index Services & Products Ltd. (IISL), a corporate body jointly promoted by NSE and the Credit Rating and Information Services of India Ltd. (CRISIL), a leading rating agency in India. IISL has a co-branding and licensing agreement with Standard & Poor's (S&P) one of the world's leading index services providers. Nifty is a scientifically developed market capitalisation weighted index with the advantage of technical oversight by S&P. Nifty was developed keeping in mind that an index besides being a true reflection of the stock market, should also be used for modern applications such as index funds and index derivatives.

Some basic terminology

Options the right but not the obligation either to buy or sell a specified quantity of the underlying at a fixed exercise price on or before the expiration date.

Call options the right to buy a specified quantity of the underlying at a fixed *exercise price* on or before the *expiration date*

Example: The holder of 'ABC' call option has the right to purchase shares of 'ABC Limited' at the specified exercise price on exercise of the option

Put options the right to sell a specified quantity of the underlying at a fixed *exercise price* on or before the *expiration date*

Example: The holder of 'ABC' put option has the right to sell shares of 'ABC Limited' at the specified exercise price on exercise of the option

Option holder the person who buys the right conveyed by the option

Option writer is obligated if and when assigned an exercise to perform according to the terms of the option. Also referred to as option seller.

Exercise price is the price at which the contract is settled. In the case of options settled by delivery, is the price at which the option holder of the call option has the right to purchase or the price at which the option holder of the put option has the right to sell the underlying, as the case may be. Exercise price is also referred to as 'Strike price'. In the case of cash settled option, exercise price is the base for the determination of the amount of cash, if any, that the option holder is entitled to receive upon exercise.

Options settled by delivery gives the owner the right to receive delivery (if it is a call) or to make the delivery (if it is a put), of the underlying when the option is exercised.

Cash settled options gives the owner the right to receive a cash payment based on the difference between a determined value of the underlying at the time of exercise and the fixed *exercise price* of the option. Nifty options are cash settled.

Example: You bought Nifty November call at a strike price of 1400. On expiry of November options, the expiration level was 1430. The cash settlement will be Rs. 30 per Nifty and for one contract, Rs.6000 (i.e.30*200, the minimum contract size)

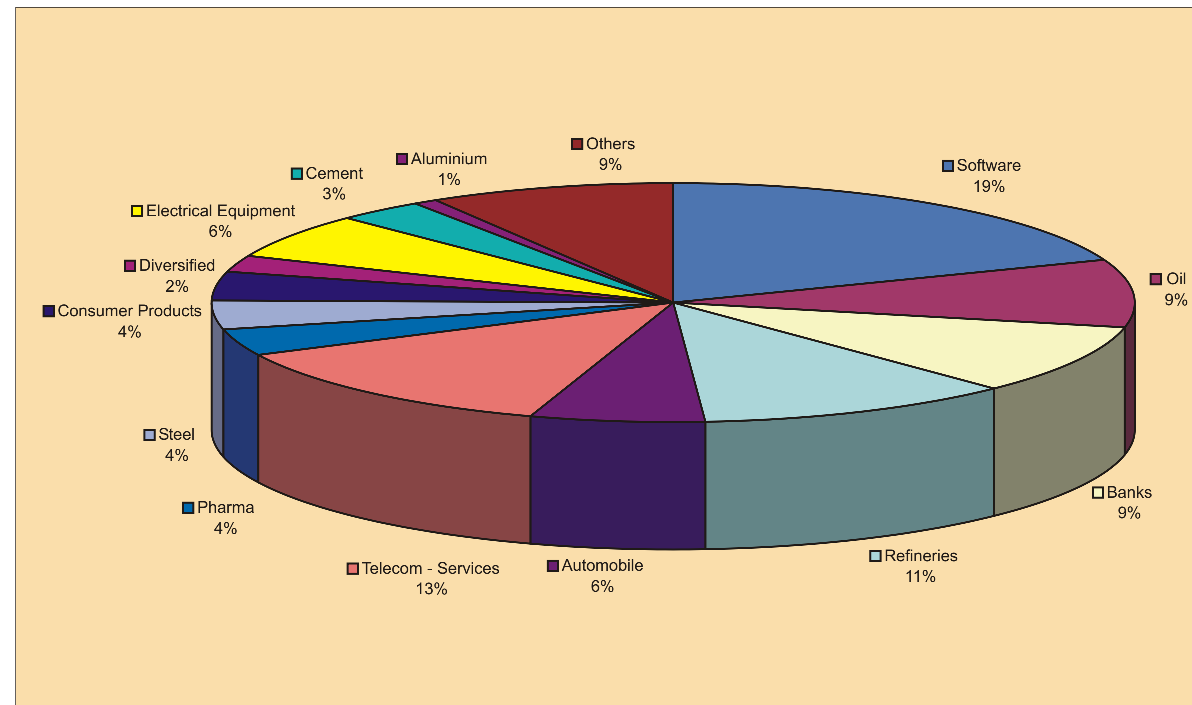
Assigned writer Option writer who has been assigned an exercise is known as an assigned writer

Expiration date the date on which the option expires. If an option has not been exercised prior to its expiration, it ceases to exist after the expiration date, i.e. the option holder shall no longer have any right and the option, no value.

Style of option - refers to the time at/ within which the option is exercisable. Two different styles of options are: American and European

American style Options which may be exercised at any time prior to their expiration.

Composition of Nifty



European style Options which may be exercised only on the expiration date.

Premium the price that the holder of an option pays and the writer of an option receives for the rights conveyed by the option. The premiums are not fixed by the Exchange and are subject to fluctuations in response to market and economic forces. The factors affecting pricing of an option include current value of the underlying, the exercise price, current values of futures on the underlying, style of option, individual opinion and estimates of the future volatility of the underlying, historical volatility of the underlying, the time remaining till expiration, cash dividends payable on the underlying stock, current interest rates, depth of the market, available information, etc.

Opening transaction a purchase or a sale transaction by which a person establishes or increases a position either as the holder or the writer of an option.

Closing transaction - a transaction by which a person reduces or cancels out previous position either as the holder or the writer of that option. For example, an investor, at some point prior to expiration, may make an offsetting sale of an identical option, if he is an option holder or make an offsetting purchase of an identical option, if he is an option writer.

Long and short Long refers to a position as the holder of an option. Short refers to a position as the writer of an option.

At the money means that the current market value of the underlying is the same as the exercise price of the option

Example If the current Nifty is 1400, Nifty 1400 call (strike price is 1400), is at the money.

In the money A call option is said to be in the money if the current market value of the underlying is above the exercise price of the option. A put option is said to be in the money if the current market value of the underlying is below the exercise price of the option.

Example If the current Nifty is 1400, Nifty 1390 call (strike price is 1390) and Nifty 1420 put (strike price is 1420) are in the money.

Out of the money - A call option is said to be out of the money if the current market value of the underlying is below the exercise price of the option. A put option is said to be out of the money if the current market value of the underlying is above the exercise price of the option.

Example If the current Nifty is 1400, Nifty 1420 call (strike price is 1420) and Nifty 1390 put (strike price is 1390) are out of the money.

Intrinsic value and time value The premium of the option may be assumed to consist of two components intrinsic value and time value. Intrinsic value reflects the amount, if any, by which an option is in the money. Time value is the premium of the option, which is in addition to its intrinsic value.

Example: If the current Nifty is 1400, Nifty 1390 call (strike price is 1390) trading at a premium of Rs.50 reflects an intrinsic value of Rs.10 and time value of Rs.40 per Nifty.

Have a view on the market ?

A. Assumption: Bullish on the market over the short term

Possible Action by you: Buy Nifty calls

Example: Current Nifty is 1400. You buy one contract of Nifty near month calls for Rs.30 each. The strike price is 1430, i.e. 2.14% out of the money. The premium paid by you will be (Rs.30 * 200) Rs.6000. Given these, your break-even level Nifty is 1460 (1430 + 30). If at expiration Nifty advances by 5%, i.e. 1470, then

Nifty expiration level	1470.00
Less Strike Price	1430.00
Option value	40.00 (1470 - 1430)
Less Purchase price	30
Profit per Nifty	10
Profit on the contract	Rs.2000 (Rs.10* 200)

Note :

(1) If Nifty is at or below 1430 at expiration, the call holder would not find it profitable to exercise the option and would loose the entire premium, i.e. Rs.6000 in this example. If at expiration, Nifty is between 1430 (the strike price) and 1460 (breakeven), the holder could exercise the calls and receive the amount by which the index level exceeds the strike price. This would offset some of the cost.

(2) The holder, depending on the market condition and his perception, may sell the call even before expiry.

B. Assumption: Bearish on the market over the short term

Possible Action by you: Buy Nifty puts

Example: Nifty in the cash market is 1400. You buy one contract of Nifty near month puts for Rs.23 each. The strike price is 1370, i.e. 2.14% out of the money. The premium paid by you will be Rs.4600 (23*200). Given these, your break-even level Nifty is 1347 (i.e. strike price less the premium). If at expiration Nifty declines by 5%, i.e. 1330, then

Put Strike Price	1370
Nifty expiration level	1330
Option value	40 (1370 - 1330)
Less Purchase price	23
Profit per Nifty	17
Profit on the contract	Rs.3400 (Rs.17* 200)

Note :

1. If Nifty is at or above the strike price 1370 at expiration, the put holder would not find it profitable to exercise the option and would loose the entire premium, i.e. Rs.4600 in this example. If at expiration, Nifty is between 1370 (the strike price) and 1347 (breakeven), the holder could exercise the puts and receive the amount by which the index level exceeds the strike price. This would offset some of the cost.
2. The holder, depending on the market condition and his perception, may sell the put even before expiry.

Assumption: You are concerned about a downturn in the short term in the market and its effect on your portfolio. The portfolio has performed well and you expect it to continue to appreciate over the long term but would like to protect existing profits or prevent further losses.

Possible Action: Buy Nifty puts.

Example: You held a portfolio with say, a single stock, HLL valued at Rs.10 Lakhs (@ Rs.290 each share). Beta of HLL is 1.13. Current Nifty is at 1440.

Nifty near month puts of strike price 1420 is trading at Rs.26. To hedge, you bought 4 puts [800 Nifties, equivalent to Rs.10 lakhs*1.13 (Beta of HLL) or Rs.1130000]. The premium paid by you is Rs.20800, (i.e. 800 * 26). If at expiration Nifty declines to 1329, and Hindustan Lever falls to Rs.275, then

Put Strike Price	1420
Nifty expiration level	1329
Option value	91 (1420 - 1329)
Less Purchase price	26
Profit per Nifty	65
Profit on the contract	Rs.52000 (Rs.65* 800)
Loss on Hindustan Lever	Rs.51724
Net profit	Rs.276

Note: For advanced applications of Nifty options you may like to consult your trading member.