



## Introduction to Option

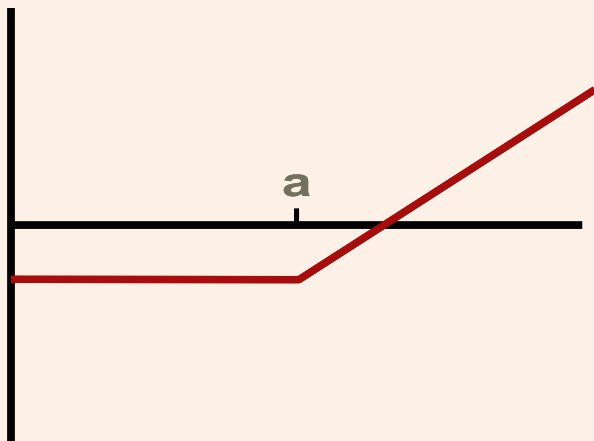
"An Options contract confers the right but not the obligation to buy (call option) or sell (put option) a specified underlying instrument or asset at a specified price - the Strike or Exercise price, until or at specified future date - the Expiry date. The price is called Premium and is paid by buyer of the option to the seller or writer of the option."

The option buyer has the right and option seller has the obligation i.e. option buyer may or may not exercise the option given, but, if option buyer decides to exercise the option, option seller has no choice but to honour the obligation.

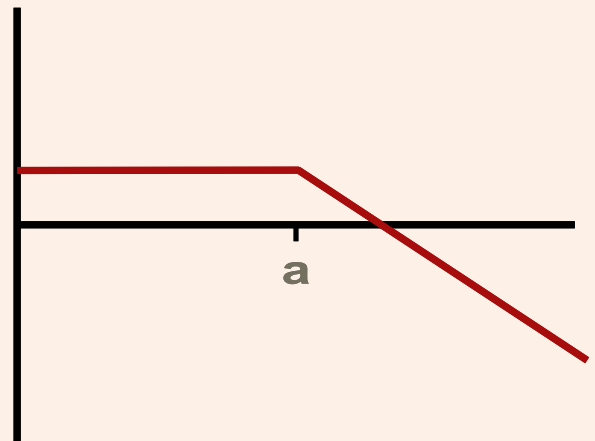
### CALL

A call option gives the holder the right to buy an underlying asset by a certain date for a certain price. The seller is under an obligation to fulfil the contract and is paid a price of this, which is called "the call option premium or call option price".

Long Call



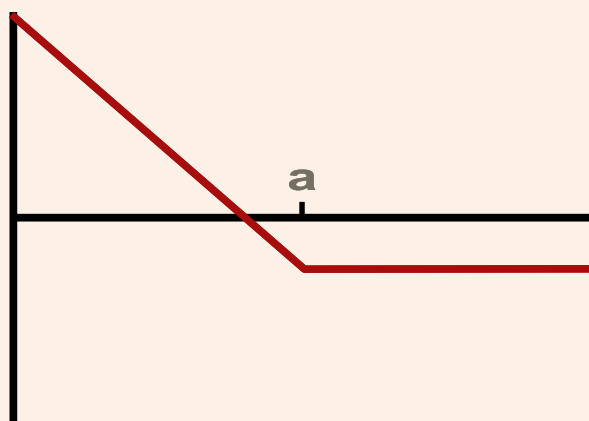
Short Call



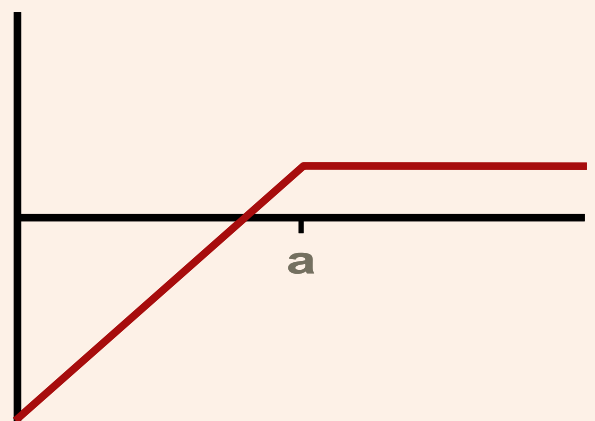
### PUT

A put option, on the other hand gives the holder the right to sell an underlying asset by a certain date for a certain price. The seller is under an obligation to fulfil the contract and is paid a price for this, which is called "the put option premium or put option price".

Long Put



Short Put





## Key Jargons

Before diving deep in the option market lets understand the key terms in option trading, which are repeatedly used and also the factors that influence the option price.

**Strike Price:** - The stated price per share for which underlying stock may be purchased (for a call) or sold (for a put) by option holder upon exercise of the option contract.

**Expiration Date:** - The date on which option expires is expiration date or the maturity date. It is the last day on which option can be exercised. Active Options normally have a monthly or quarterly expiration cycle.

**Option Price:** - Option price is the price, which the option buyer pays to the option seller. It is also referred to as option premium. The premium depends on various factors like Strike price, Stock price, Expiration date, Volatility, Interest rate. The buyer pays premium to seller, seller has the obligation to fulfil the option terms when assigned to him

**American option:** - American options are option that can be exercised any time up to the expiration date. Most exchange-traded options are American. Options on individual stocks are normally American. E.g. Reliance CA, Tata Steel PA, SBI CA

**European option:** - European options are option that can be exercised only on the expiration date. Index based option are European option. E.g. NIFTY CE, NIFTY PE

Where;

CA: Call American

PA: Put American

CE: Call European

PE: Put European

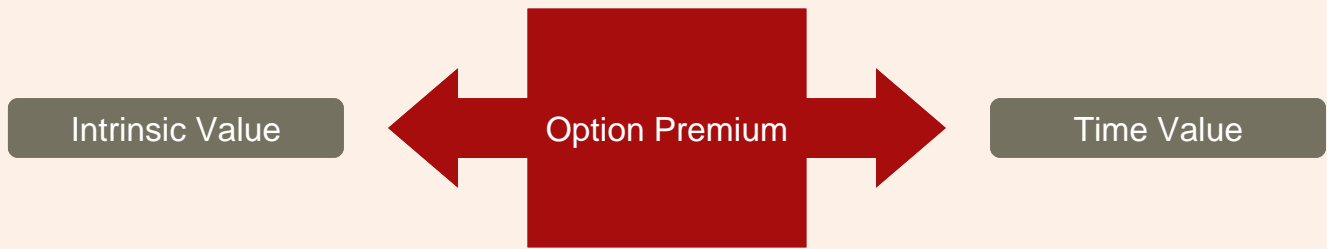
**In-the-money:** An in-the-money (ITM) option is an option that would lead to positive cash flows to the holder if it was exercised immediately. A call option is ITM when spot price is greater than strike price. If the difference is huge it is called deep in the money

**At-the-money:** An at-the-money (ATM) option will lead to zero cash flow if exercised immediately. Option is at the money if strike price is equal to spot price.

**Out-of-the-money:** An out of money (OTM) option will lead no cash flow if exercised immediately. In case of call option if strike price is greater than spot price than it is OTM. Whereas in case of put option if strike price is less than spot price it is OTM



## Option Premium



**Intrinsic Value of an option:** Intrinsic value means how much is option ITM. Deeper is the option in the money more is the intrinsic value of an option. If the option is OTM or ATM its intrinsic value is zero.

For a call option intrinsic value is

$$\text{Max}(0, (S_t - K)) \text{ and}$$

For a put option intrinsic value is

$$\text{Max}(0, (K - S_t))$$

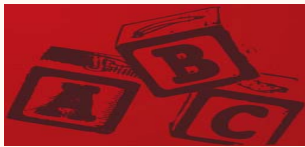
(Where,  $S_t$  - Stock Price  $K$  - Strike Price)

In other words Intrinsic value can only be positive or zero.

**Time Value of an option:** Time value is difference between option premium and intrinsic value. It comprises of

1. Risk free rate
2. Volatility
3. Time to Expiry

The time value of an option is always positive and declines exponentially with time, reaching zero at the expiration date. At expiration, where the option value is simply its intrinsic value, time value is zero.



# Money Basics - Series 2

09 September 2010

Aditya Birla Money



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