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## 3. Put option

## Definition:

A put option is an option contract in which the buyer has the right but not the obligation to sell a specified quantity of a security at a strike price.

For the seller of a put option, it represents an obligation to buy the underlying security at the strike price if the option is exercised. The put option seller is paid a premium for taking on the risk associated with the obligation.

## Buying Put Options

Put buying is the simplest way to trade put options. When the options trader is bearish on particular security, he can purchase put options to profit from a slide in a security price. The price of the security must move significantly below the strike price of the put options before the option expiration date for this strategy to be profitable.

A Simplified Example is given as following:

Suppose the stock of XYZ Company is trading at $\$ 40$. A put option contract with a strike price of $\$ 40$ expiring in a month's time is being priced at $\$ 2$. You strongly believe that XYZ stock will drop sharply in the coming weeks after their earnings report. So you paid \$200 to purchase a single \$40 XYZ put option covering 100 shares.

Long Put Payoff Diagram


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Say you were spot on and the price of XYZ stock plunges to $\$ 30$ after the company reported weak earnings and lowered its earnings guidance for the next quarter. With this crash in the underlying stock price, your put buying strategy will result in a profit of $\$ 800$.

Let's take a look at how we obtain this figure.

If you were to exercise your put option after earnings, you invoke your right to sell 100 shares of XYZ stock at $\$ 40$ each. Although you don't own any share of XYZ Company at this time, you can easily go to the open market to buy 100 shares at only $\$ 30$ a share and sell them immediately for $\$ 40$ per share. This gives you a profit of $\$ 10$ per share. Since each put option contract covers 100 shares, the total amount you will receive from the exercise is $\$ 1000$. As you had paid $\$ 200$ to purchase this put option, your net profit for the entire trade is $\$ 800$.

This strategy of trading put option is known as the long put strategy.

## Unlimited" Potential

Since stock price in theory can reach zero at expiration date, the maximum profit possible when using the long put strategy is only limited to the striking price of the purchased put less the price paid for the option.

The formula for calculating profit is given below:

- Maximum Profit = Unlimited
- Profit = Strike Price of Long Put - Premium Paid


## Limited Risk

Risk for implementing the long put strategy is limited to the price paid for the put option no matter how high the stock price is trading on expiration date.

The formula for calculating maximum loss is given below:

- Max Loss = Premium Paid + Brokerage charges.
- Max Loss Occurs When Price of Underlying >= Strike Price of Long Put.


## Breakeven Point(s)

The underlying price at which break-even is achieved for the long put position can be calculated using the following formula.

- $\quad$ Breakeven Point $=$ Strike Price of Long Put - Premium Paid

In next chapter we will discuss about Selling of CALL and PUT Options. For any queries related to above chapter feel free to contact us on grovalue@research.in

