"Derivatives are Financial Weapon of Mass Destruction"

Warren Buffett

ABC of Derivatives

Famous Billionaire Investor Warren Buffett once said that Derivatives are weapons of mass destruction. All the players who entered in last one year in stock market will agree with him. The kind of show financial markets have showed in last couple of years, the mayhem that all the participants from early 2008 would certainly have forced all the participants to think on same lines. But here some questions arise: Is really derivatives position responsible for the correction? Is it because of future and options that participants are into deep losses or there is something else that has caused the turmoil in the market? Well, in our opinion, Derivative as an instrument is not responsible for the commotion in the market; it is the greed and desire to earn more and more money from market by doing speculation that caused havoc. Derivative was introduced in the financial market as a tool to hedge the position, as a medium by which one can minimize their losses and maximize returns but more than 80% of the participants use it for speculation. Most of the participants use it to leverage their positions by just paying the margin amount without understanding the implication of the same. Many retail investor doesn't know the implication of buying or selling futures or option but they enter derivative market just by seeing that one of their colleague, friend or relative have made handsome amount by trading in futures and options. In our endeavor to explain about derivative and clarify the myth about the same we are coming up with an educational series on derivative. In this we will cover about future and option, technical tools to gauge market movement and some of the basic strategies one can use to minimize their losses. In this part we will be covering about future and options and in the subsequent issues will cover all other relations topics.

SOME THING ABOUT DERIVATIVES

In the broadest sense, Derivatives are any financial contracts that derive their values from other underlying asset. These underlying assets are of various categories like

- Commodities including grains, coffee beans, etc.
- Precious metals like gold and silver.
- Foreign exchange rate.
- Bonds of different types, including medium to long-term negotiable debt securities issued by governments, companies, etc.
- Equities
- Short-term debt securities such as T-bills.
- Over-The-Counter (OTC) money market products such as loans or deposits.

For example: *A very simple example of derivatives is curd, which is derivative of milk. The price of curd depends upon the Price of milk, which in turn depends upon the demand and supply of milk.*

There are various derivative products traded. They are;

1. Forward
2. Futures
3. Options
4. Swaps
5. Warrants

FORWARD
A forward contract is a customized contract between the buyer and the seller where settlement takes place on a specific date in future at a price agreed today. The rupee-dollar exchange rate is a big forward contract market in India with banks, financial institutions, corporate and exporters being the market participants.

FUTURES
A future is a contract between two parties whereby the one party (the buyer) agrees to buy an underlying asset from the other party (seller) to the contract on a specific future date, and at a price determined at the close of the contract. The underlying asset can be a financial asset such as a bond, a currency such as US dollars, a commodity, etc.

A futures contract is thus
• an agreement between two parties
• to buy and sell
• a standardized type and quantity
• of a specified underlying asset
• with a certain quality
• at a price determined at the closing of the contract
• on a specified date
• through a exchange.

OPTIONS
"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 Exercised price up until or an 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."
• Key Highlights - Option

- Unlike a future, in an option, only one party is committed, the other has an option i.e. a right, but not an obligation.
- The party that has the option (right) is the option buyer. The party that is committed (obliged) is the option writer.
- Option writer earns a premium for taking such a position. Price at which the option buyer can exercise the right is the exercise price / strike price.
- Date on which contract would lapse is the expiration date.
- The option can be to buy (call option) or to sell (put option)

Understand that 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 honor the obligation.

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 fulfill the contract and is paid a price of this, which is called "the call option premium or call option price".

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 buyer is under an obligation to fulfill the contract and is paid a price for this, which is called "the put option premium or put option price".

For Instance,
Suppose Mr. Dhiraj is bullish and feels that the share price of Reliance will rise in future. Therefore he buys Out of money Reliance call at 1050. Spot price is 1040 at a premium outflow of Rs. 20/-. Lot size of reliance is 250. Eventually he lands out paying Rs.5000 /- and leveraged his position. If the stock goes up from Rs. 1050, he makes profit. However if his expectation proves wrong and reliance slides down, his loss is limited to his premium amount. Thus premium is a sunk cost for option buyer.

KEY TERMS IN OPTIONS

Before diving deep in the option market lets understand the key term 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. (Ex Reliance call at 1050)
- **Expiration Date: -** The date on which option expires is expiration date, the Exercised date, the strike date or the maturity date. It is the last day on which option can be exercised. Option normally has a month and/or quarterly expiration cycle. In India last Thursday of the month is normally the expiration date.
- **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. On receiving the premium seller has the obligation to exercise the option when assigned to him
- **American option: -** American options are option that can be exercised any time upon the expiration date.
- **European option:** - European options are option that can be exercised only on the expiration date itself. Index / Stocks based options in India are European option. Ex. NIFTY CE, BANK NIFTY CE, CNXIT PE, RELIANCE PE etx.

  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 negative 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