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To Study and Understand the Concept of Futures and Options

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Abstract
The prices in financial markets have increased volatility in recent years. Fluctuations can be caused by bond prices, interest rates, stock prices, and foreign exchange rates. Financial markets have innovated a range of "products" to protect investors and firms from the risk of market price fluctuations. Hedging foreign exchange risk have a popular instrument for a long time, FORWARD CONTRACTS. Forward contracts are used in the hedging and transfer for interest rate risks. Future contracts have become very popular for stock indices, bonds, and currencies that were traded on commodities. Interest rate and swap options have also become very significant in past years in both traded and traditional modes, "over the counter".

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I. Introduction

Derivatives of assets that are traded in the market are known as futures and options. In other words, trading the stock at the predetermined price reduces the future risk of the investors. Derivatives consist of various assets like equity stocks, commodities, or even currencies. It cannot be predicted exactly whether the stock market will go up or down which can either lead to huge profits or losses. The value derivatives depend upon the underlying assets.

OBJECTIVES:

- To study the concept of futures and options in detail.
- To understand the working of hedging.
- To find the profit/loss position of futures buyer and seller and also the option writer and option holder.

FUTURE CONTRACTS

Future contracts have two parties who are obligated to buy and sell the commodities at predetermined prices and dates. The underlying assets must be purchased or sold at a fixed price despite the expiration rate of the current market. The underlying assets can be commodities, bonds, stocks, interest rates, and currencies.

In the beginning, parties put a nominal account known as a margin by the exchange as a part of a contract. In buying and selling party exchange acts as a mediator. The guarantee of all the transactions and the risk of the counterparty is taken by the exchange. Buyers and sellers communicate in a location known as a trading pit designated by the exchange.

The contract specifics

- The product
- Place of delivery
- Time of delivery
- Date and month of delivery
- Quality and Quantity of underlying commodity

Every day the price of the commodity is changed, so the difference is settled daily from the margin. These differences are from the spot price on the day of the delivery. Even though the prices get reduced when buying

and selling the futures contract, one can buy the contract at a lower price than the selling price to receive the benefit of a sell-high, buy-low transaction.

ADVANTAGES OF FUTURES CONTRACT

1. As compared to other investment options commission for trade activities is less.
2. Liquidity provided in these financial instruments is high.
3. It allows you to open short and long positions as well as reverse your position.
4. They provide high leverage to gain maximum profits with a limited investment.

DISADVANTAGES OF FUTURES CONTRACT

1. Risk is high in some investment strategies due to the leverage provided.
2. Only Future contracts facilitate partial hedging.
3. Traders can perform overtrading due to the low prices charged on commission.

EXAMPLE

For example, let us take tata industries. Assume that Mr.Krish is currently trading at Rs1500 per share. He is expecting that the share prices may rise in near future and wish to lock in the current price.
In this case, he is likely to buy a futures contract that obligates him to purchase a share of Rs 1500 at future date, let's say 2 months later.
Since Mr. Krish expects that the prices of the share after 2 months might get higher, this future contract will help him to make a profit by allowing him to purchase a share at Rs 1500 instead of the higher price the share holds at that time.
Another trader, Mr.Vijay expects that the price of the share of TATA industries will fall short. He wants to sell the future contract that obligates him to sell a share of Rs 1500 at future date,2 months later
As Mr.Vijaybelieves that prices of the share may fall, a futures contract can help him to earn a profit by allowing him to sell a share at Rs 1500 instead of the lesser price which can be at that time.
Both Mr.Krish and Mr.Vijay frame a future contract that has 4 main elements:

- Mr.Krish and Mr.Vijay both are obligated at the individual level at the end of the transaction.
- The transaction is done for trading one share of TATA industries.
- The predetermined price for the stock is Rs1500.
- The predetermined date for a stock trade is 2 months from today.

Both Mr.Krish and Mr. Vijay must deposit a percentage of the transaction value to their stock broker to enter into the contract. This amount which is been deposited is termed as 'margin'. This margin sort of acts as a security deposit for entering into the contract. Mr.Vijay sells Mr.Krish the future contract and is obligated to sell the assets. As Mr.Krish is the contract buyer is obligated to buy the underlying stock.
On a predetermined date for the trade that is after 2 months Mr.Krish will have to buy the shares of Rs 1500 even if the share is trading for a lower price, say Rs 1200. Similarly, Mr.Vijay is obligated to sell Mr.Krish the share at Rs 1500 even if the stock price gets higher, sayRs 1700.

OPTIONS

A commodity option is a two-party agreement that gives the buyer the right, but not the obligation, to take a futures position. This prospective position can be either a short or a long position in a designated futures contract (called the underlying futures contract). The futures position will be given at a specified price (called strike or exercise price) and the right exists until a pre-established date (called expiration date). Although expiration dates differ, most options on green futures expire during the last week of the month before the contract month of the underlying futures contract.

An option is purchased from an option seller (called the writer or grantor).
The option writer must provide the option holder with a future position at an agreed strike price. Buyers buy an option at its current market price (called a premium). Options can be used to provide protection related to future positions if the price of green cash moves unfavorably. The option seller is obliged to give you a futures position at the strike price.

On the other hand, you don't want protection attached to your future position if the cash green price is more profitable. Options holders are not required to open a futures position. So options are like buying insurance. You pay a premium but may or may not need to protect your position in the underlying future.

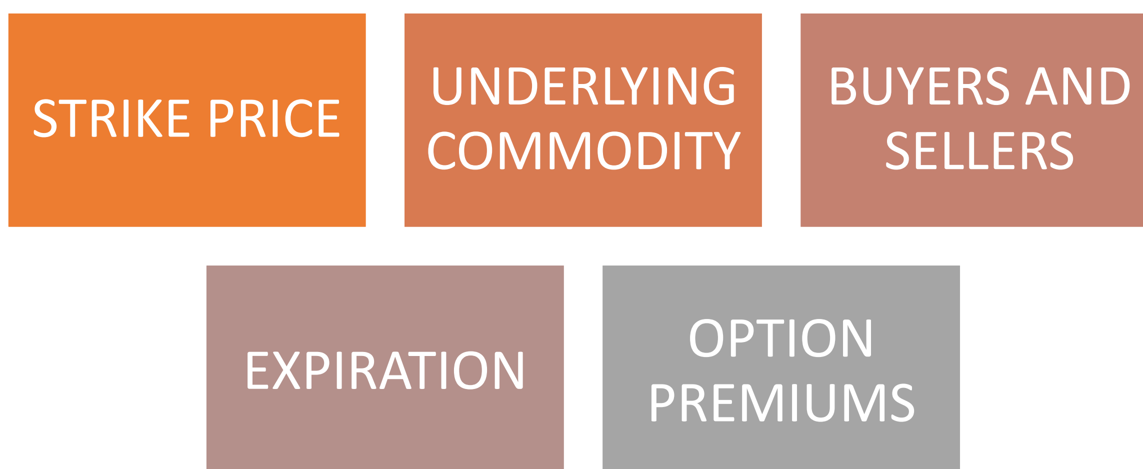
Key features ofoptions are limited loss, high leverage potential, and limited expiration.

TYPES OF OPTIONS
There are many options for both types.
a) Put Option
b) Call Option

The purchase of a put option allows the holder to take a short futures position at the strike price. The put seller must provide the holder with a designated short futures position. Thus, a put option gives the owner the legal right to sell the stock to someone else at a specific price within a specific time frame. Put options are bought by people who want to profit from a decline in the price of a stock.

A call option is an option to purchase stock, which gives the owner the privilege to buy a specific number of shares of a given stock from the producer at a specific price within a specific period.They are bought by people who want to profit from rising stock prices.

IMPORTANT TERMS USED IN OPTIONS CONTRACTS



A) STRIKE PRICE:
The "specified price" in the AREA PRICE-
the option is called the strike price or exercise price. It is the price at which the underlying commodity can be traded and is set for a given option, put or call. There are many options at different prices that are traded at any given time.

B) UNDERLYING COMMODITY:
The underlying commodity of a commodity option is not the commodity itself, but a futures contract for that commodity. For example, an option on Chile in June would be an option on the Chile futures contract for delivery in June.
In this sense, the options are on futures, not a physical commodity.

C) BUYERS AND SELLERS
In the options market, as in other markets, each trade involves both buyers and sellers. The buyer of the option is called the option holder. Option holders can be price insurance seekers or speculators. The seller of an option may be a speculator or someone who is trying to partially protect the price.

D) EXPIRY
Agricultural options have futures contracts because the underlying commodity futures contract has an expected expiration date set in the month of delivery. Similarly, options will have an expiration date and an expiration date. For example, a June Chile option of Rs 5,100 is an option to buy or sell a June Chile futures contract at Rs 5,100.

E) OPTION PREMIUMS
An option (put or 'purchase) where the seller or licensor is willing to commit in exchange for some compensation. The seller of an option is an option seller.
The compensation is called the option premium. Using an insurance analogy, premiums are paid on an insurance policy to obtain the coverage it provides, and options premiums are paid to obtain the rights granted in options.

DIFFERENCE BETWEEN FUTURES AND OPTIONS

FUTURES	OPTIONS
1. Futures create an obligation to make or take delivery at some future date.	1. Options confer rights but not the obligation to do the same
2. No payment is involved in entering into a future contract.	2. Payment is involved and thepremium paidon options isnon-refundable.
3. Futures contracts are usually larger in value.	3. Options are smaller in value.
4. They establish a price.	4. Options set a range within or outside which a position proves profitable.
5. The parties of the contract must perform at the settlement date. They are not obligated to perform before the date.	5. The buyer can exercise the option anytimebefore the expiry date.

HEDGING
- Hedging is a risk management strategy used to offset investment losses by taking opposite positions in an underlying asset.
- Hedging is a balance that supports all types of investments.
- A common form ofhedging is a derivative or contract that measures value in terms of an underlying asset.
- As aninvestment, it protects an individual's finances from exposure to risky situations that could lead to a loss of value.

HOW A HEDGE WORKS
A hedge is somewhat an analog of taking out an insurance policy. If a person owns a house in an earthquake-prone area, they will want to protect that asset from the risk of earthquake—to hedge it, in other words—by taking out earthquake insurance. In this example, you cannot prevent an earthquake, but you can plan ahead of time to mitigate the dangers in the event.

Hedging in the investment world works the same way. Investors and money managers use hedging techniques to reduce and control risk exposure. Proper hedging in the investment world requires the strategic use of a variety of instruments to offset the risk of adverse market movements.

Example
Mr. X bought shares of reliance for Rs 2000, and as per his predictions the value of the claim might fall to Rs 1500.He decided to buy the put option or short the reliance future to hedge his capital.

II. Conclusion

Investors may use futures and options as leverage or risk hedges. Futures and options offer the opportunity to make significant profits through speculation, but also increase the potential for significant losses ifsecurity fails to reach its settlement price level. Therefore, it is essential to enter these markets after carefully examining the securities and the impact of market fluctuations. Investors can start with small investments and gain experience and understanding of these concepts to increase their wealth over the long term.

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